Section A

External Financing Reporting Decisions

A.1) Financial Statements

- I) Objectives of general purpose financial reporting
- II) Income Statement (Statement of Earnings & Comprehensive Income)
- III) Balance Sheet
- IV) Statement of Cash Flows
- V) Statement of Changes in Stockholders' Equity
- VI) Notes to F/S

A.2) Recognition, Measurement, Valuation, and Disclosure

- I) Fair Value Measurements & Disclosures
- II) Accounts Receivable
- III) Inventory
- IV) Investments in Equity & Debt Securities
- V) Tangible Fixed Assets
- VI) Intangible Assets
- VII) Stockholders' Equity
- VIII) Revenue Recognition
- IX) Deferred Taxes
- X) Business Combinations & Consolidations
- XI) Leases
- XII) US GAAP vs. IFRS

EXAM TIP:

Part 1, Section A has only 15% weightage on the CMA Part 1 exams though the content here is very voluminous. Therefore, the following selective study is recommended from Section A [note that this is the only section on the CMA exams where selective studying is recommended]:

- **A.1) Financial Statements**: Study all the 6 sub-topics completely
- A.2) Recognition, Measurement, Valuation, and Disclosure: Study the following sub-topics:
- II) Accounts Receivable
- III) Inventory
- V) Tangible Fixed Assets [focus only on Depreciation]
- VI) Intangible Fixed Assets [focus only on Amortization]
- VIII) Revenue Recognition
- XII) US GAAP vs. IFRS

Section A: External Financial Reporting Decisions

The understanding of the four external financial statements (the balance sheet, income statement, statement of changes in equity, and the statement of cash flows) and the concepts underlying these statements is needed for management accountants to perform their duties. Concepts underlying the four financial statements include recognition, measurement, valuation, and disclosure as well as an understanding of the key differences between US GAAP (Generally Accepted Accounting Principles) and IFRS (International Financial Reporting Standards.

This section covers financial statements, asset and liability valuation, income taxes, lease, equity transactions, revenue and expense recognition, income measurement and determination, and US GAAP and IFRS differences.

This section consists of two topics:

- A.1) Financial Statements
- A.2) Recognition, Measurement, Valuation, and Disclosure

A.1) Financial Statements

The four financial statements discussed in this topic present a basic but useful picture of an entity and are required by the SEC for all publicly traded companies:

- 1. The income statement, which shows the results of business activities over a period. Includes:
 - a. Statement of Earnings
 - b. Statement of Comprehensive Income (which can be presented separately or combined with the Statement of Earnings)
- 2. The balance sheet, which shows an entity's financial position at a point in time.
- 3. The statement of cash flows, which shows an entity's cash receipts, payments, and the cash effects of its operating, investing, and financing activities during the accounting period.
- 4. The statement of changes in equity, which shows owner investments, distribution of profits to owners, and profits retained by the company.

Most entities provide prior year's financial statement information alongside the current year's information to allow analysts to easily compare past performance to present performance and make a determination of future success.

This topic looks at:

- Primary objectives of general purpose financial reporting
- II) Income Statement (Statement of Earnings & Comprehensive Income)
- III) Balance Sheet
- IV) Statement of Cash Flows
- V) Statement of Changes in Stockholders' Equity
- VI) Notes to F/S

I) Primary objectives of general purpose financial reporting Focus is on the informational needs of external users

- Focus on "users" Primary objective is to provide information to existing & potential investors, lenders and creditors to enable them to make decisions about providing resources to the entity
 - Balance Sheet (B/S) reports financial position economic resources and claims against the entity at a point in time
 - **Income Statement (I/S)** reports financial performance over a period of time via accrual accounting
 - ✓ Presents the results of operations (revenues and gains less expenses, losses, and taxes) for an organization over a period of time (fiscal period)
 - Cash flow statement (C/F) reports financial performance via cash flows. Presents the change in cash and cash equivalents classified as either operations, investing, or financing
 - Statement of changes in equity shows the changes in capital received and retained earnings for a fiscal period
 - ✓ Changes in capital received include the issuance and repurchase of shares
 - ✓ Changes in retained earnings include net income and dividends for the period
- Direct & Indirect Information F/S provide B/S
 - **Direct information** about the entity's <u>financial position</u>, entity's <u>financial performance</u> and entity's <u>cash flows</u> **C/F**
 - Indirect information about management's performance

II) Income Statement (Statement of Earnings & Comprehensive Income)

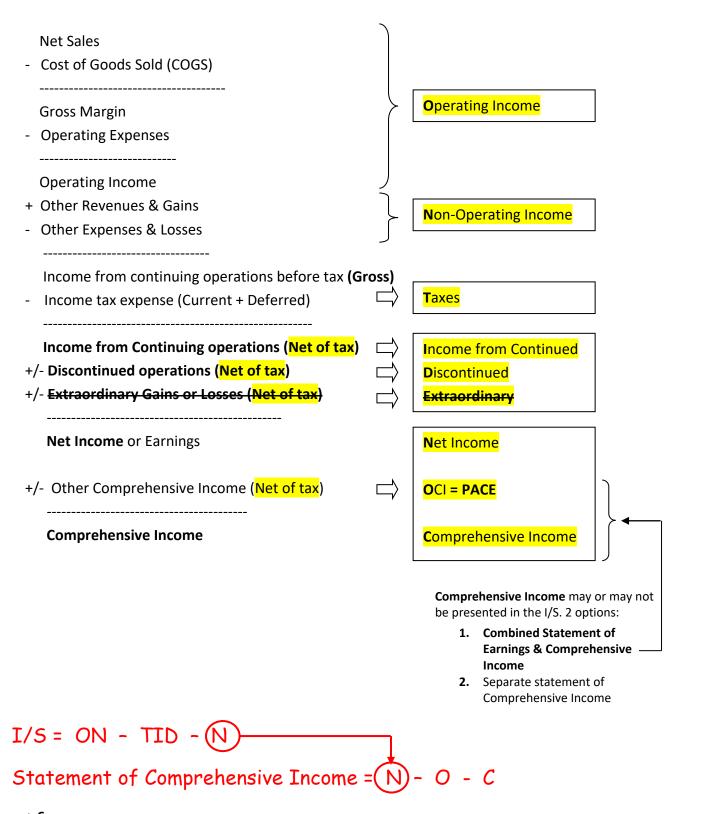
II A) Single-Step Income Statement vs. Multiple-Step Income Statement

Single-Step Income Statement

Comprehensive Income	
Net Income or Earnings +/-) Other Comprehensive Income (Net of tax)	
Income from continuing operations (Net of tax) +/-) Discontinued operations (Net of tax) +/-) Extraordinary Gains or Losses (Net of tax)	Same as Multiple Step Income Statement
Income from continuing operations before tax (Gross) (-) Income tax expense (Current + Deferred)	
Total Revenues (Net Sales + Other Revenues & Gains) (-) Total Expenses (COGS + Operating Expense + Other Expense)	ses & Losses)

Multiple-Step Income Statement

{Mnemonic: ON TID NO C}



MILES Inc. Combined Statement of Earnings & Comprehensive Income for the Year Ended December 31, 2010

for the Year Ended December 31, 2010	1	
Sales		\$100,000
Less: COGS (Cost of goods sold)		(45,000)
Gross Margin		55,000
Less: Operating Expenses		
Selling expenses	\$(9,000)	
General & Administrative expenses	(8,500)	
Impairment loss - public co.	(6,500)	(24,000)
		(24,000)
Operating Income (O)		31,000
Add Other Barance & Caine		
Add: Other Revenues & Gains Interest/Dividend income	5,000	
	7,000	
Gain on sale of equipment/investments Include		12,000
Less: Other Expenses & Losses Unusual AND/OR	(8,000)	,
Interest expense Infrequent	(3,000)	
Unusual or infrequent items	N/A	
Impairment Loss - non-public co.		(11,000)
Income from continuing operations before income tax		32,000
Less: Provision for Income Tax	(10,000)	
Current	(2,000)	
Deferred		(12,000)
		20.000
Income from Continuing operations (I)		20,000
Loss from Discontinued Operations \$7,500, net of tax of \$2,500		(5,000)
Loss from Discontinued Operations \$7,500, net of tax of \$2,500		(=,===,
Extraordinary loss on early retirement of bonds \$1,200, net of tax of \$400		
\sim		
Net Income or Earnings		15,000
Oth or Community Income		/
Other Comprehensive Income Pension - excess adjustment of Pension PBO & FV of Plan assets at year end (net of tax)		(xxx)
Available-for-sale security - net unrealized holding gains during the period (net of tax)		XXX
Currency translation adjustments (net of tax)		XXX
Effective portion of derivative Cash Flow Hedge Gain/Loss (net of tax)		
Other comprehensive income		-xxx
Comprehensive Income (C)		\$xxx,xxx
Formation and the same		
Earnings per share:		\$2.00
Income from continuing operations Income from Discontinued operations		\$2.00 (.50)
Income before Extraordinary items		(.30)
Extraordinary loss		
Net Income per share		\$1.50
		-

II B) Income from Continuing Operations:

- Recognize sales or revenues at gross amount when they are earned AND realized or realizable, Recognize expenses when incurred (Accrual accounting)
- Net Sales = Gross Sales Sales discount Sales Returns/Allowances
- Beginning Inventory
 - (+) Cost of Goods Purchased (Net Purchases + Freight Inwards)
 - (+) Direct Manufacturing Cost (For manufacturing entities;

Includes factory overheads, depreciation on plant)

Cost of Goods Available for Sale

(-) Ending Inventory

Cost of Goods Sold (COGS)

SG&A = Selling, General & Administrative

Operating Expenses

- General & Administrative Expenses includes staff salaries, office expenses, office rent, legal & accounting, insurance, depreciation on office equipment
- Selling Expenses includes <u>freight outwards</u>, advertisement, sales commissions, <u>bad debt expense</u> (may also be considered G&A), depreciation on sales trucks
- R&D Costs includes R&D expenses, depreciation of R&D equipment
- Organization costs includes preopening costs
- Impairment Losses ONLY for <u>SEC registrants</u> (for non-SEC registrants, this goes to Other Expenses & Losses)
- Non-operating Items Other Revenues & Gains and Other Expenses & Losses
 - Includes interest income/expense, dividend income, gain/loss on sale of PP&E or investments, unrealized gain/loss from trading securities, gains / loss from foreign currency transactions, etc.
 - Other Expenses & Losses include impairment losses of non-SEC registrants, etc.
 - Includes unusual OR infrequent items
- Income tax expense (provision for taxes)
 - Current income tax expense = current taxable income X current tax rate
 - Deferred income tax expense = temporary differences X enacted tax rate

Discontinued if BOTH conditions satisfied:

#1 - Component of Entity, AND #2 - Disposed off / Held for sale

II C) Discontinued Operations

- > Component of an entity is Disposed OR Held for Sale
- Conditions for classification as discontinued operations:
 - Component of an entity with operations and cash flows that can be clearly distinguished from the rest of the entity, operationally and for financial reporting purposes; may be
 - ✓ Operating segment
 - ✓ Reportable segment (defined in segment reporting)
 - ✓ Reporting unit (defined in goodwill impairment testing)
 - ✓ Subsidiary
 - ✓ Asset group (to be disposed off together in a single transaction along with directly) associated liabilities)
 - Component is classified as held for sale (unless already disposed during the year) all criteria {Mnemonic: PAC (asset to be 'pac'ked up - reverse count 321)}
 - ✓ Plan Management commits to a plan of disposal

Held for sale = P A C up!

✓ Program - Active program to locate a buyer initiated

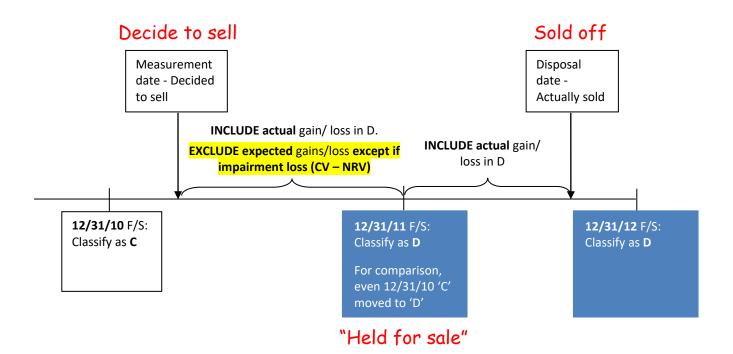
3 2 1 go!

- ✓ Probable Sale is probable within 1 year
- ✓ Available Assets available for immediate sale
 - ✓ Actively marketed Sale of the product is being actively marketed
- ✓ Change is unlikely disposal plan unlikely to change
 - Eliminated from ongoing operations
 - No significant continuing involvement
- Accounting for discontinued operations
 - Costs related to disposal activity included in results of discontinued operations (includes costs for employee termination, lease termination, facilities consolidation, employee relocation)
 - ✓ No longer depreciated or amortized
 - Expected gains or losses from operations in future periods NOT included until the period of occurrence Do not include expected future gains or losses in current year
- loss
- Except for Exception: Indirect recognition of expected losses via impairment testing resulting in writedown to NRV (where NRV = FMV - disposal costs) Impaired if Carrying Value > NRV impairment Write-up (for any subsequent increase in FMV) possible only to the extent of impairment
 - losses recognized earlier
 - ⇒ {Note that held for sale assets are an exception in US GAAP rules where reversal of impairment is allowed in future years; US GAAP does not allow reversal of impairments recognized on held for use assets; however, IFRS always allows reversal of impairment in case of subsequent recovery in value to the extent of the impairment recognized earlier
 - Presentation:

ON-TI(D)E-NO-C

- ✓ Report gain/loss NET of tax with disclosure of tax effect on the face of the income statement; also disclose EPS for discontinued operations
- ✓ For comparative F/S I/S is retroactively adjusted for all prior periods presented to reflect the results of the current discontinued operations as discontinued operations in prior years

Comparative F/S = Optional per US GAAP, but Required by SEC for issuers A-**9**



> Disclosures required:

- Description of assets, carrying amounts of assets, reason for disposal, expected disposal date, business segment affected
- Gain or loss from change in FMV
- Revenues & pretax gain/loss reported

II D) Extraordinary Gains & Loss

Note:

- FASB has issued ASU 2015-01 which eliminates the concept of an extraordinary item from U.S. GAAP. The Board released the new guidance as part of its simplification initiative, which, as explained in the ASU, is intended to "identify, evaluate, and improve areas of US GAAP for which cost and complexity can be reduced while maintaining or improving the usefulness of the information provided to the users of financial statements."
- Extraordinary gains/losses (i.e., gains/losses which are unsual and infrequent) are now reported as part of Non-Operating gains/losses [the N of "ON" in the I/S mnemonic]
- ➤ Unusual AND Infrequent gains or losses which were earlier reported as extraordinary items are now included as part of non-operating gains or losses (the N of "ON" in ON-TID=-NO-C)
- Extraordinary items were never allowed under IFRS; therefore, US GAAP and IFRS rules align with the release of FASB ASU 2015-01

"Non-owner transactions"

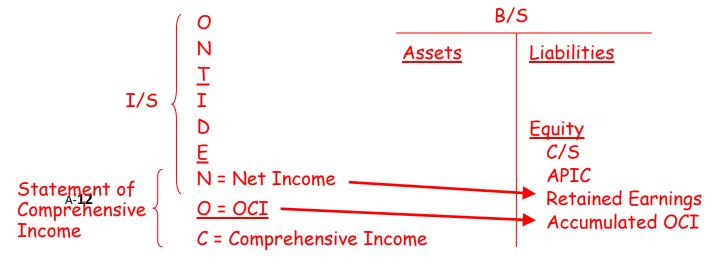
II E) Comprehensive Income

- Comprehensive Income = Net Income + Other Comprehensive Income
 - Includes all changes in equity during a period except those resulting from investments by owners & distribution to owners
- > Other Comprehensive Income for the period

{Mnemonic: PACER}



- ✓ Include all gains/losses, prior service costs, and net transition assets or obligations in the year the changes in funded status of the pension plan occurs
- ✓ Reclassified to net income in subsequent periods
- ✓ IFRS also allows inclusion of certain actuarial gains & losses (NOT reclassified to net income in subsequent periods)
- Available-for-sale debt securities (assuming FV Option is NOT used)
 - ✓ Include unrealized holding gains/losses on available for sale "debt" securities
 - ✓ Reclassified to net income on sale of the security
 - ✓ Additionally, effective Dec 2017, if the entity elects the FV option for financial liabilities, any changes in FV attributable to instrument-specific credit risk is also included in OCI
- **C** Currency <u>Translation</u> Adjustments (under current rate method)
 - ✓ Include gains/losses on foreign currency transactions
 - ✓ Use current rate method, NOT re-measurement method
 - ✓ Reclassified to net income on sale of the investment in the foreign entity
- Effective portion of Derivatives held as <u>Cash Flow Hedges</u>
 - ✓ Include gains/losses on effective portion of cash flow hedges
 - ✓ Reclassified to net income on realization of cash flows associated with the hedged item
- Revaluation Surplus on intangible assets & fixed assets (IFRS only)
 - ✓ Include revaluation surpluses (gains) when intangible assets and fixed assets are revalued
 - ✓ Not reclassified to net income in subsequent periods, but transferred directly to retained earnings when the related asset is used or derecognized
 - Accumulated Other Comprehensive Income
 Cumulative OCI for all periods on B/S
 Component of equity that includes the total of other comprehensive income for the period and
 - Component of equity that includes the total of other comprehensive income for the period and previous periods
 - Reclassification adjustments move other comprehensive income items from <u>accumulated</u> other comprehensive income to <u>I/S</u>; May be displayed on the face of the F/S in which comprehensive income is reported or disclosed in notes to the F/S



- Must be prominently displayed (NET of tax) in any of the 2 ways:
 - Combined Statement of Earnings & Comprehensive Income (similar to the multiple step income statement shown earlier) {Mnemonic: ON-TID-NO-C}

Miles Company				
Statement of Earnings & Comprehensive Income FYE 12/31/2010				
Sales		\$450,000		
COGS		(\$300,000)		
Operating Expenses		(\$40,000)		
Operating Income		\$110,000		
Non-operating Income		\$20,000		
Tax		(\$40,000)		
Income from continuing operations		\$90,000		
D iscontinued Operations, net of tax		\$11,000		
Extraordinary Items, net of tax				
Net Income		\$101,000		
Other Comprehensive Income, net of tax				
Pension Adjustment	\$7,500			
AFS security (unrealized loss)	(\$5,000)			
Currency Translation Adjustment	\$3,000			
Effective portion of cash flow hedges	(\$1,500)			
	·	\$4,000		
Comprehensive Income		\$105,000		

• Separate statement of Comprehensive Income {in this ca

{in this case, I/S presents only ON-TID-N}

Miles Company				
Statement of Earnings FYE 12/31/2010				
Sales	\$450,000			
COGS	(\$300,000)			
Operating Expenses	(\$40,000)			
Operating Income	\$110,000			
Non-operating Income	\$20,000			
Tax	(\$40,000)			
Income from continuing operations	\$90,000			
Discontinued Operations, net of				
tax	\$11,000			
Extraordinary Items, net of tax				
Net Income	\$101,000			

Miles Company		
Statement of Comprehensive Income	FYE 12/31	/2010
N et Income		\$101,000
Other Comprehensive Income, net of tax		
Pension Adjustment	\$7,500	
AFS security (unrealized loss)	(\$5,000)	
Currency Translation Adjustment	\$3,000	
Effective portion of cash flow hedges	(\$1,500)	
		\$4,000
Comprehensive Income		\$105,000



III) Balance Sheet

Miles Company BALANCE SHEET December 31, 20X0

Accepta	December 31, 20X0						
Assets				Liabilities and Stockholders' Equity			
Current assets:				Current liabilities:			
Cash and Cash Equivalents:				Commercial paper and short term notes	\$xxx		
Restricted to current bond maturity	\$xxx			Accounts payable	XXX		
Unrestricted	XXX	\$xxx		Salaries, wages, and commissions	XXX		
Short term investments:				Taxes withheld from employees	XXX		
Marketable securities (Trading)		XXX		Income taxes payable	XXX		
Refundable income taxes		XXX		Dividends payable	XXX		
Receivables from affiliates		XXX		Rent revenue collected in advance	XXX		
Accounts receivable	XXX			Other advances from customers	XXX		
Less allowance for doubtful accounts	<u>(xx)</u>	XXX		Current portion of long term debt	XXX		
Notes receivable due in 2012		XXX		Current obligations under capital leases	XXX		
Installment notes due in 2012		XXX		Short term portion of accrued warranty	XXX		
Interest receivable		XXX		Other accrued liabilities	XXX		
Creditors' accounts with debit balances		XXX		Total current liabilities			\$xxx
Advances to employees		XXX					
Inventories (carried at LCM)				Non-current liabilities:			
Finished goods	XXX			Notes payable due after 2012			
Work in process	XXX			Long term bonds:		XXX	
Raw materials	XXX	XXX		10% debentures due 2022	XXX		
Prepaid expenses:				9% collateralized obligations maturing 2014	XXX		
Prepaid rent	XXX			8% convertible debentures due 2027	XXX		
Prepaid insurance	XXX	XXX		Less unamortized discounts net of premiums	<u>(xx)</u>		
Total current assets			\$ххх	Accrued pension cost		XXX	
				Obligations under capital leases		XXX	
Long term investments:				Deferred tax liability		XXX	
Investments in marketable securities		XXX		Long term portion of accrued warranty		XXX	
(available for sale)				Total noncurrent liabilities		XXX	<u>\$xxx</u>
Investments in bonds (held-to-maturity)		XXX		Total liabilities			<u>\$xxx</u>
Investments in unused land		XXX					
Cash surrender value of officer's life				Capital stock:			
insurance policies		XXX		\$15 convertible preferred stock, \$100 stated			
Sinking fund for bond retirement		XXX		value, 50,000 shares authorized, 45,000			
Plant expansion fund		XXX		outstanding	XXX		
Total long term investments			\$xxx	12% cumulative preferred stock, \$100 stated			
				value, callable at \$115, 100,000 shares			
Property, Plant, & Equipment:				authorized and outstanding	XXX		
Land		XXX		Common stock, \$10 stated value, 500,000			
Buildings		XXX		shares authorized, 450,000 issued, 15,000			
Machinery and equipment		XXX		held in treasury	XXX		
Furniture and fixtures		XXX		Common stock subscribed 10,000 shares	XXX		
Leasehold improvements		XXX		Less: subscriptions receivable	<u>(xx)</u>		
Leased assets		XXX		Additional paid-in capital:		xxx	
Less accumulated depreciation		<u>(xx)</u>		From 12% cumulative preferred	XXX		
Total property, plant, and equipment			\$xxx	From common stock	XXX		
				From treasury stock transactions	xxx		
Intangible assets net of amortization:				From stock dividends	xxx		
Goodwill		xxx		From expiration of stock options	xxx		
Patents		xxx		Warrants outstanding	xxx		
Trademarks		xxx		Non-Controlling Interest		xxx	
Total intangible assets, net			\$xxx	Retained earnings:		xxx	
				Appropriated for bond indebtedness	xxx		
Other assets:				Free and unappropriated	xxx		
Unamortized bond issue costs		xxx		Accumulated other comprehensive income:		xxx	
Equipment to be disposed off		xxx		Total stockholders' equity		xxx	\$xxx
Total other noncurrent assets			<u>\$xxx</u>	Less: Treasury stock at cost			(xx)
Total assets			<u>\$xxx</u>	Total liabilities and stockholders' equity			<u>\$xxx</u>

IV) Statement of Cash Flows

- The statement of cash flows is a required financial statement whenever a company is presenting the results of operations for a year. Their primary purpose is to
 - Provide detailed information about the entity's cash inflows and outflows (sources and uses)
 - Disclose information about financing and investing activities
 - Help users make assessments
- The statement of cash flows helps determine whether an entity needs external financing or is generating cash flows, meeting obligations, and paying dividends. A company with high income can still have negative cash flow
- There are 3 categories of activities in the statement of cash flows:
 - Operating Activities Inflows and outflows of cash related to the production of income from continuing operations. {Operating C/F = I/S Items + Current assets and Current liabilities excluding N/P & short-term debt}
 - ✓ Collections on sales from customers
 - ✓ Cash payments for COGS and SG&A
 - ✓ Interest received and Interest paid
 - ✓ Dividends received
 - ✓ Acquisition and disposal of trading securities
 - ✓ Payments for income taxes
 - ✓ All other receipts/disbursements that do not stem from transactions defined as Investing or Financing activities
 - Investing Activities Investing in yourself/others. {Investing C/F = Generally non-current assets}
 - ✓ Principal collections or loans made by the entity (Interest and Dividends received are Operating)
 - ✓ Acquisition or disposal of available-for-sale or held-to-maturity Investments (Not Trading)
 - ✓ Acquisition or disposal of PP&E and intangibles Includes any gain/loss on disposal

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Acquisition

PP&E 100

CASH outflow 100

PP&E 100

PP&E 100

Accumulated Depreciation 70

PP&E 100

Gain on sale of PP&E 10
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- Financing Activities Issuing Debt or Equity {Financing C/F = Debt (non-current + current) & Equity}
 - ✓ Proceeds from issuing or payments for retiring **Bonds** (Interest paid is Operating)
 - ✓ Issuance or Reacquisition of stock or Treasury stock
 - ✓ Borrowing or repaying a loan
 - ✓ **Dividends paid** to shareholders
 - ✓ Bank overdrafts which are excluded from cash

	Raising Equity / Debt		Reacquire Treasury	Stock / Retire Debt
	CASH inflow XXX		Common stock	XXX
	Common stock	XXX	Preferred stock	XXX
J	Preferred stock	XXX	APIC	XXX
1	APIC	XXX	N/P	XXX
	N/P	XXX	Bonds Payable	XXX
	Bonds Payable	XXX	CASH outf	low xxx

Miles Company Statement of Cash Flows FYE December 31, 2011				
	<u>Dr.</u>	<u>Cr.</u>	<u>Change</u>	
Cash flows from Operating activities				
Net cash provided (used) by operating activities			\$470	
Cash flows from Investing activities				
Net cash provided (used) by investing activities			(750)	
Cash flows from Financing activities				
Net cash provided (used) by financing activities			390	
Net Increase or Decrease in cash			\$110	
+ Beginning cash balance			+ \$5 <u>0</u>	
Ending cash balance = Cash & Cash Equivalents (or	1 B/S)		\$160	

- > IFRS allows more flexibility in classifying cash flows related to interest, dividends, and income taxes
 - IFRS classifies taxes paid as Operating, but allows allocation to Investing or Financing for portions specifically identified with investing and financing activities
 - Interest or Dividends "received" may be Operating or Investing
 - Interest or Dividends "paid" may be Operating or Financing

Transaction	US GAAP Classification	IFRS Classification
Taxes Paid	Operating	Operating, Investing or Financing
Interest Received	Operating	Operating or Investing
Interest Paid	Operating	Operating or Financing
Dividends Received	Operating	Operating or Investing
Dividends Paid	Financing	Operating or Financing

Direct or Indirect Method for Operating Activities, Only Direct Method for Investing or Financing

- Only Direct Method for Investing or Financing

 Two acceptable approaches to prepare the Operating activities section of the Statement of Cash

 Flows:
 - **Direct method** (direct cash approach preferred method) Cash sources and uses related to each account in Income from continuing operations are listed individually
 - ✓ Sales are adjusted for changes in A/R
 - ✓ COGS are adjusted for changes in both Inventory and A/P
 - ✓ Selling expenses may be adjusted for changes in Allowance for uncollectible A/R and Accumulated depreciation if they are included in selling expense (since depreciation and bad debt expense do not involve the payment of cash)
 - ✓ Interest expense is adjusted for amortization of bond discount or premium
 - ✓ Income tax expense is adjusted for changes in current and deferred taxes
 - ✓ Expenses not requiring the use of cash (depreciation, amortization) and gains/losses from sale of Investments (other than trading) are NOT reported
 - Indirect method (reconciliation approach) Net Income is reconciled to net cash flow from operating activities by adjusting for differences related to changes in balance sheet operating accounts (such as A/R, inventory, A/P) and noncash income items (such as depreciation, amortization, deferred income taxes)

Reconcile Net Income with Cash Flow from operations

Both are acceptable methods, but if direct method is used, the indirect method MUST be
presented as a supplementary schedule to present a reconciliation of net income to net cash
flows from operating activities

> Example comparing the Direct & Indirect Methods:

Miles Company					
	Income Statement				
FYE December 31, 2011					
(1) Sales	\$1,500				
② cogs	(500)				
③ Selling expense (Includes bad debt expense of \$50)	(250)				
④ General & administrative expenses	(100)				
5 Depreciation expense	(125)				
6 Interest expense	(75)				
Equity in earnings of Investee	25				
8 Income tax expense	(150)				
Gain on sale of Available-for-sale security	<u> 25</u>				
Net Income	\$350				

Selected Balance Sheet account changes for the year	
Increase in A/R \bigcirc	\$200
Increase in inventory ②	75
Increase in A/P②	50
Increase in Allowance for uncollectible receivables ③	50
Increase in Accumulated Depreciation (5)	125
Decrease in Bond Discount 6	15
Increase in Investment under Equity method 🕜	25
Decrease in deferred tax liability 8	25
Increase in Taxes Payable 8	100

T-Account depicting changes in the selected Balance Sheet accounts during the year						
A/R	Investmen	t - Equity	Inventory	A/P	Allowance A/R	
200	25		75	50	50	
Accum. De	preciation	Bond Discount	<u>Deferred T</u>	ax liability	Taxes Payable	
	125	15	25		100	

Direct Method = Pass J/E and look at the "Cash" plug

- > **Direct method** (direct cash approach) Take every I/S item and convert from the Accrual method of accounting back to Cash
 - Receipts from Sales A/R increased by \$200

ſ	CASH (plug)	1,300
1) {	A/R (change)	200
	Sales	1,500

Payments for Purchases - Inventory increased by \$75 and A/P increased by \$50

2	COGS	500
	Inventory (change)	75
	A/P (change)	50
l	CASH (plug)	525

• Payments for Selling expenses - Allowance for bad debts increased by \$50, bad debts is considered a selling expense

_	Selling expense	250	
3	Allowance for uncollectible		50
	CASH (plug)		200

• Payments for G & A expense

	G & A expense	100
4) {	CASH	100

• **Depreciation expense** - Ignore under the direct method, since there was no effect on cash

⑤{	Depreciation expense	125	
W 1	Accumulated depreciation		125

• Interest expense - Amortization of Discounts changed by \$15

ſ	Interest expense	75	
6	Amortization of discount		15
	CASH (plug)		60

• **Equity in earnings** - When an investment is accounted for under the Equity method, as the investee earns income, the investor recognizes their share of the income on their I/S, even though they have not yet received cash

• Income tax expense (Deferred tax liability decreased by \$25, taxes payable increased by \$100)

8	Income tax expense	150	
	Deferred tax liability	25	
W	Income taxes payable		100
	CASH (plug)		75

• Gain on sale of investment -The cash proceeds from the sale of investment would be considered an Investing activity, so the gain is a non-operating gain and should not be part of Operating activities

_ [CASH		XXX	
9 {		Investment		XXX
		Gain on sale of Investment		25

Operating activities (Direct method)					
Cash collected from customers ①	Dr. \$1,300	Cr.	Change		
Payments for purchases 2		\$525			
Payments for selling expenses 3		200			
Payments for G & A expenses 4		100			
Payments for Interest 6		60			
Payments for Taxes 8		75			
Net cash provided by Operating activities	\$1,300	\$960	<mark>\$340</mark>		

Note: Under the direct method, non-operating Gains and losses are ignored. Non-cash items such as depreciation, bad debt expense, amortization expense and Equity in Earnings are also ignored

However, in the example, adjustment for bad debt was required as it was already included in Selling expense

Indirect Method = Close T-accounts & plug to Cash flow statement [3 types of Adjustments]

- ➤ Indirect Method (reconciliation approach) When applying the indirect method, begin with Net Income and make 3 types of adjustments.
- Adj. I 1. Non-cash items are adjusted (Depreciation and Amortization expense is added back, equity in earnings is deducted)
- Adj. II 2. Non-operating items are adjusted (deduct the gain from sale of an Available-for-sale security, since this is an Investing activity)
- Adj. III 3. Changes in the balances of accrual related accounts are adjusted (A/R, Inventory, A/P, Allowance for uncollectible accounts receivable, Amortization of Discount, and taxes)

T-Account depicting changes in the selected Balance Sheet accounts during the year					
#200 200	I b 	Equity 	III b Inventory \$75 75	III c A/P \$50 50	III d Allowance A/R \$50 50
Accum. Deprec	25	III e Sond Discount \$15	Deferred T \$25 25	I f ax liability	Taxes Payable \$100 100

	Operating activities (indirect method)				
		Dr.	Cr.	Change	
	Net income	` <mark>\$350</mark>			
Adj.I=	Depreciation expense $\mathbf{I} \mathbf{\alpha}$	125			
-	Equity in earnings I b		25		
Adj.II= • Non-oper	-Gain on sale of AVS investment II a		25		
·	Increase in A/R III a		200		
4 1: TTT	Increase in inventory III b		75		
Adj.III=	Increase in A/P III c	50			
Change in balances	Increase in Allowance for uncollectible III d	50			
balances	Amortization of Discount III e	15			
	Decrease in Deferred tax liability III f		25		
	Increase in tax payable III g	100			
	Net cash provided (used) by operating activities	\$690	\$350	\$340	

Begin with Net Income of \$350. The following adjustments are then made:

Adj. I = Non Cash

- ✓ Non-cash items are adjusted
 - ⇒ Since Depreciation & Amortization expense did not result in the use of any cash but was deducted from Net Income, depreciation expense of \$125 is added back to Net Income
 - ⇒ Income from the investment held under the Equity method was also received, but it did not result in the inflow of any cash. Since the income of \$25 recorded as "equity in earnings" was included as income, but did not result in the inflow of any cash, the income is deducted from Net income
 - ⇒ Note: Under the direct method, these were simply ignored!

Non-operating items are adjusted Adj. II =

- Non-operating \Rightarrow Sale of the AVS investment resulted in a \$25 gain. The cash proceeds from the sale of an investment is an Investing activity, however, the gain would have been included in I/S. Since the gain was NOT from Operating activities, it must be deducted from Net Income
 - ⇒ Note: Under the direct method, these were simply ignored!

Adj. III = Change in balances

- ✓ Changes in the balances of accrual related accounts are adjusted. Similar to the direct method, all the changes in the balances must be accounted for. For example, A/R increased by \$200. Therefore, the amount included for sales was \$1,500, but the actual cash inflow was only \$1,300, so we must take out the \$200
 - ⇒ Basically, if an asset increased, it is a deduction on the indirect method
 - ⇒ To the contrary, if a Liability increased, such as A/P of \$50, it is an addition to the indirect method
- Result: Net cash provided/used by operating activities
 - ✓ Same result under either the Direct or the Indirect method
 - ✓ Indirect method is for operating activities only. For investing & financing activities, same presentation as in direct method

Supplementary disclosures

- If direct method is used: Need to do indirect method even if direct method is used!
 - ✓ Schedule to reconcile net income to cash flow from operations is required to be presented
 - ⇒ The schedule is identical to indirect method of preparing operating activities section
 - ✓ Schedule of non-cash investing and financing activities

Transactions having no effect on cash; E.g.,

Non-Cash = Disclose PP&E purchased financed entirely by loan

(as it does not appear PP&E XXX

on C/F statement)

N/P XXX

- Conversion of bonds to stock

Bonds Payable XXX

Common Stock XXX

- ⇒ Capital lease In the period an entity enters into a capital lease, a non-cash financing and investing activity is reported to the extent of the PV of minimum lease payments
 - As payments are made by the lessee, the principal reduction component is reported as a cash outflow under financing activities
 - The interest component is reported under operating activities if direct method is followed. If indirect method is followed, interest paid must be disclosed (as mentioned below)
- If **indirect method** is used:
 - ✓ Cash payments for Interest and Income Taxes must be disclosed.
 - ✓ Schedule of **non-cash investing and financing** activities (Same as above)
- Cash flows per share are **NOT** Disclosed

V) Statement of Changes in Stockholders' Equity

- The statement of changes in stockholders' equity provides specific information about changes in an entity's primary equity components, including capital transactions and distributions to shareholders, reconciliation of retained earnings, and reconciliation of the carrying amount of each class of equity capital, paid-in capital, and accumulated other comprehensive income
- Under US GAAP, Statement of Changes in Stockholders' Equity may be presented as a primary F/S
 OR in the notes to the F/S. However, SEC requires its presentation as primary F/S
 - Under IFRS (as with the SEC), Statement of Changes in Stockholders' Equity is presented as primary F/S

VI) Notes to F/S

Provide disclosures as per GAAP to facilitate users to understand F/S

VI A) Significant Accounting Policies = Initial Note

- Included as an integral part of the F/S to identify and describe accounting principles & methods, recognition criteria, measurement bases
 - Must include
 - ✓ Accounting principles especially when alternatives exist
 - ✓ Principles peculiar to a particular industry
 - ✓ Unusual or innovative applications of accounting principles
 - **IFRS (not US GAAP)** "**requires**" **that judgments** made by management (e.g., are the investment securities held-to-maturity?) be included under this footnote
 - ✓ Note: Both US GAAP and IFRS require disclosure of significant estimates in the F/S
- > Examples of disclosures commonly required with respect to accounting policies include
 - Basis of consolidation
 - Depreciation methods
 - Amortization of intangibles
 - Inventory pricing
 - Accounting for recognition of profit on long-term construction-type contracts
 - Recognition of revenue from franchising and leasing operations
- ➤ Generally do **not** include **duplicate details** presented elsewhere in the F/S like
 - Dollar (\$) balances of accounts, calculations/computations & results
 - Details of changes in accounting principles
 - Details of maturity and amounts of long-term debt

Initial Note = Significant Accounting Policies

VI B) Remaining Notes to the F/S Remaining Notes = All other relevant info

- Contain all other information relevant to users & disclose facts not presented in either the body of the F/S or in the "Summary of Significant Accounting Policies"
 - Include disclosures required by various US GAAP pronouncements (discussed along with the relevant topics throughout Part 2, Section A)
 - Note: Various disclosures are "required", whereas others may be "optional"
- Examples of relevant note information include
 - Changes in stockholders' equity (including capital stock, paid-in capital, retained earnings, treasury stock, stock dividends, etc.)
 - Required marketable securities disclosure including carrying value and unrealized gains & losses
 - Contingency losses
 - Contractual obligations, including restrictions on specific assets or liabilities
 - Pension plan description

VI C) Related Party Disclosure

- > Related parties include
 - Affiliates
 - Equity method investees
 - Parent or subsidiary entities or subsidiaries of a common parent
 - Employee benefit trusts
 - Owners of over 10% of voting interest (principal owners) and their immediate family members
 - Management and their immediate family members
- Disclosure for all material transactions between related parties:
 - Nature of relationship
 - Description of transaction
 - Amounts of transactions
 - Amounts due to/from related parties

Do not disclose

- Items in ordinary course of business like compensation agreements, expense allowances, etc.
 - ✓ However, SEC regulations do require disclosure of key management compensation arrangements
- Transactions eliminated in consolidation of F/S

VI D) Subsequent Events

- Recognition of subsequent events
 - Recognized subsequent events Condition existed as on B/S date and recognized in F/S
 - ✓ E.g., estimate for warranty liability, estimate of allowance for uncollectible accounts, estimate of a contingent liability due to a lawsuit
 - ✓ If settled after B/S date but before F/S issue, settlement items should be recognized as liability on the B/S
 - Unrecognized subsequent events Conditions did not exist as on B/S date (arose later) and NOT recognized in F/S. However, footnote disclosure should be made if F/S would become misleading otherwise

Subsequent Event Evaluation Period

- **Public companies** and other entities that intend to widely distribute F/S evaluate subsequent events through the date that the F/S are **issued**
- Other entities evaluate subsequent events through the date that the F/S are available to be
 issued (also need to disclose the date through which subsequent events have been evaluated)

VI E) Risks & Uncertainties

- Nature of operations Indirectly alerts the F/S user about the risks common to the business
 - Disclosure of locations of principal markets Provides information useful in assessing risks & uncertainties related to environments in which the entity operates and sells products & services
 - Info about the nature of operations is helpful because the various kinds of businesses in which reporting entities operate have diverse degrees and kinds of risks
- Estimates used in preparing F/S Explicitly communicates to F/S users that estimates & assumptions about future periods have been used in preparing the F/S. This is an inherent limitation relating to the precision in F/S as actual results may differ from estimates
- Significant estimates If it is reasonably possible that a significant estimate will <u>materially change</u> in the near term, disclose the potential impact on values of assets, liabilities, gains or losses
- Current vulnerability associated with concentrations Arises because an entity is exposed to risk of loss greater than it would have had it mitigated its risk through diversification
 - Particular customers, suppliers, lenders, guarantors or contributors
 - Revenue from particular products, services or fund-raising events
 - Available sources of supply of materials, labor or services
 - Licenses or other rights used in the entity's operations
 - Market or geographical areas in which the entity conducts its operations

More extensive disclosures regarding risks & uncertainties on SEC filings of public companies

VIF) Going Concern Doubt

- ➤ **Going concern doubt** "Substantial doubt" about an entity's ability to continue as a "going concern" exists when conditions and events, considered in aggregate, indicate that it is probable that the entity will be unable to meet obligations as they become due **within 1 year** after the date the F/S are issued (or available to be issued)
 - If conditions & events in aggregate identified do NOT indicate any "substantial doubt" as to "going concern" No disclosures are required
 - If conditions & events in aggregate identified indicate "substantial doubt" as to "going concern" Consider management plan to alleviate this "substantial doubt"
 - ✓ Need to disclose:
 - ⇒ Principal conditions or events that raised substantial doubt
 - ⇒ Management's evaluation of those significant events
 - ⇒ Management's plans that alleviate significant doubt
 - And ✓ However, if "substantial doubt" is not alleviated after consideration of management's plans entity should also include a statement in the footnotes indicating that there is "substantial doubt" about the entity's ability to continue as a going concern within 1 year after the date that F/S are issued (or available to be issued)

(This page is left blank for any reference notes)

A.2) Recognition, Measurement, Valuation, and Disclosure

This topic covers the recognition, measurement, valuation, and disclosure requirements for specific accounts of the financial statements presented in Topic 1 of this section.

This topic discusses:

- I) Fair Value Measurements & Disclosures
- II) Accounts Receivable
- III) Inventory
- IV) Investments in Equity & Debt Securities
- V) Tangible Fixed Assets
- VI) Intangible Assets
- VII) Stockholders' Equity
- VIII) Revenue Recognition
- IX) Deferred Taxes
- X) Business Combinations & Consolidations
- XI) Leases
- XII) US GAAP vs. IFRS

I) Fair Value Measurements & Disclosures

- What is FV? Fair Value (FV) is defined as "the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's length transaction between market participants at the measurement date (at exit price)". An orderly transaction is a transaction that allows for normal marketing activities that are usual and customary, so they are NOT a forced transaction or sale
 - FV is price that would be received to sell the asset or paid to transfer the liability (exit price), not price that would be paid to acquire the asset or received to assume the liability (entry price)
 - FV accounting (called "mark-to-market") is used to measure certain F/S assets and liabilities
- ➤ How to measure FV? Steps to apply the **FV measurement approach** for an asset/liability:
 - 1. Determine **principal market** with the greatest volume and maximum level of activity (highest and best use) where the asset/liability would be sold
 - ✓ If the principal market is not known, use the **most advantageous market** which maximizes price received for the asset or minimizes amount paid to transfer the liability FV Cost to sell =
 - ✓ FV adjusted for costs to transport to the market (<u>do not adjust for transaction/selling costs</u>) NRV E.g., On Dec 31, Co. A's investment in stock is priced on NYSE @\$50 (where brokerage is @\$4) and on NASDAQ @\$48 (where brokerage is @\$1).
 - (i) If NYSE is the **principal market**, FV = \$50 (i.e., NYSE price)
 - (ii) If there is no principal market and stock is exchanged equally on both markets, FV would be the price in the **most advantageous market**. NRV (Net Realizable Value) is \$46 (\$50 \$4) on NYSE and \$47 (\$48 \$1) on NASDAQ. Since NASDAQ price maximizes the price received for the asset, NASDAQ is considered to be the most advantageous market and FV = \$48 (i.e., NASDAQ price)
 - 2. Determine valuation premise ("in-use" OR "in-exchange") Assume highest and best use
 - ✓ "in-use" if maximizes value by using it with other assets as a group
 - √ "in-exchange" if asset provides maximum value on a stand-alone basis
 - 3. Determine appropriate **valuation (echnique)** (market, income, OR cost approach) to measure FV (note that a change in technique is considered a change in accounting estimate)
 - ✓ **Market approach (FMV)** uses prices and relevant information from market transactions for identical or comparable assets/liabilities.
 - ✓ Income approach (PV) uses present value techniques to discount cash flows or earnings
 - ✓ Cost approach uses current replacement cost
 - 4. Obtain **inputs** for FV valuation Hierarchy of Level 1, Level 2 and Level 3 must be used to prioritize the inputs to valuation techniques
 - ✓ Level 1 Quoted prices from active markets for identical assets/liabilities (e.g., stock quotes)
 - ✓ Level 2 Directly or indirectly observable inputs, other than level 1; Includes
 - ⇒ Quoted prices from active markets for similar assets/liabilities
 - ⇒ Quoted prices from <u>limited-activity</u> markets for identical/similar markets
 - ⇒ Other observable inputs like yield curves, bank prime rates, interest rates, credit risks, default rates on loans
 - ✓ **Level 3** If level 1 or 2 not available, unobservable inputs (which may reflect the reporting entity's own assumptions about the market and based on the best information available) like financial forecasts or expected cash flow estimates
 - 5. Calculate FV of the asset or liability

II) Accounts Receivable

Trade Receivables

- A/R should be reported at Net Realizable Value (NRV); A/R at gross amount is to be adjusted for
 - Cash Discounts (discounts for prompt payments)
 - Trade discounts (recorded net of any trade discounts)
 - Bad Debts (uncollectible receivables)
 - Sales Returns and allowances (expected to be returned in future)
 - IFRS refers to allowance accounts as "provision"
- ➤ A/R Account Analysis (Use T format or the "BASE" calculation)
 - Beginning Balance
 - Add: Credit sales / Bad debt recoveries
 - Subtract: Cash collected / Bad debts
 - Ending balance

Discounts

• Effective cost of discount = Discount % x 365 or 360 (100% - Discount %) (Total pay period - Discount period)

E.g., 2/10, net 30 - means a 2% discount if the balance due is paid within 10 days, otherwise the entire balance is due within 30 days

Annual Financing Cost = $\frac{2\%}{98\%}$ x $\frac{360 \text{ days}}{(30 \text{ days} - 10 \text{ days})}$ = 36.7%

Sales may be recorded at gross OR net of cash discounts

For Trade discounts, always record net

		ulways record her	
	Sales at gross	Sales at net	
Cash discount	Cash discount is recognized as an expense if cash is received within the discount period	Sales are recorded at discounted prices under the assumption that payments will be received in the discount period	
Trade discount	Both the methods are recorded net of trac	de discounts	
Rationale	Use when it is uncertain whether the sales discount will be availed	Sales are recorded at the cash equivalent value, and receivables near realizable value	
Year-end allowance	Allowance may be created for discounts to be availed	Allowance may be created for discounts not availed	
	Journal Entries:		
J/E for Sale	A/R (gross) 100 Sales (gross) 100	A/R (net) 98 Sales (net) 98	
J/E for cash receipt within discount period	Sales Disc. (disc.) Cash (net) A/R (gross)	Cash (net) 98 A/R (net) 98	
J/E for cash receipt after discount period	Cash (gross) 100 A/R (gross) 100	Cash (gross) A/R (net) Disc. not taken (disc.)	

Assume discount will not be taken

Assume discount will be taken

Example of Trade Discount (always use Net method):

Manufacturer Co. sells merchandise with list price of \$100,000 to Trader Co. They are sold to Trader Co. for list price minus trade discounts of 30% and 10%. Calculate the Manufacturer Co. accounts receivable balance if the merchandise is sold on credit.

Solution:

List price	\$100,000
Less: 30% discount	(30,000)
List price after 30% discount	70,000
Less: 10% discount	7,000
Accounts receivable balance	\$63,000

Example of Sales or Cash Discount (Gross method vs. Net method):

Wholesale Co. sells \$100,000 worth of goods to Retail Co. The terms of the sale are 2/10, n/30. Show the journal entries for the accounts receivable Wholesale Co. would record using both the gross method and the net method if:

1. Payment is received within the discount period

Accounts receivable

Sales discounts not taken

2. Payment is **not** received within the discount period

Solution:

	Gross Method	Net Method
- Accounts receivable	\$100,000	\$98,000
Sales	\$100,000	\$98,000
payment is received within the d	iscount period:	
Cash	\$98,000	\$98,000
Sales discounts taken	2,000	
Accounts receivable	\$100,000	\$98,000
payment is not received within t	he discount period:	
Cash	\$100,000	\$100,000

\$100,000

\$98,000

2,000

Non-GAAP = Violates Matching & Conservatism GAAP method as estimate of uncollectible booked now = Matching & Conservatism

➤ Uncollectible A/R

	Direct write-off	Allowance methods		
	method	(GAAP methods to report A/R @NRV)		
	(Non-GAAP method for Tax purposes)	Sales Percentage Method I/S method	Aging of A/R method B/S method	
Assumption	Cannot estimate bad debts	Bad debt is function of credit sales	Bad debt is function of A/R collections	
Calculating bad debt expense	Recognized when a specific account is determined uncollectible	Credit sales * Estimate of uncollectible % of credit sales	Outstanding A/R * Estimate of uncollectible % of A/R (separate % is ok for different A/R categories based on age)	
Journal Entries	l A/R XXX	a contra valuation account to Increases bad debt expense S Bad Debt Expense XXX B/S Allowance Decreases when A/R writter	Allowance = Contra Asset XXX n off No net effect as XXX A/R \ Allowance \	
Net effect on write offs / recoveries	A/R decreases on write-off & increases on recovery	No net effect on actual write-off / recovery (A/R less allowance figure on B/S is unchanged)		
Computation note	No allowance account	Any balance in allowance account ignored to calculate bad debt expense	Any balance in the allowance account reduces the amount of bad debt expense	
US GAAP / Emphasis	Not allowed by GAAP unless immaterial; Required for tax purposes	Allowed; I/S focus - Emphasizes matching is better	Allowed; B/S focus - Emphasizes asset valuation is better	

A/R at "Gross" face value on B/S

A/R at "Net" Realizable Value on B/S = A/R less Allowance

• Note: For calculations, use following T-accounts to solve for the plug (may also use the BASE analysis format where BASE: Beginning + Additions - Subtractions = Ending)

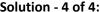
Accounts Receivable		Allowa		
Beg. Balance (+) Sales I/S (+) Recoveries	(-)Cash Collections (-)Write-offs	(–)Write-offs	Beg. Balance (+)Bad debt expense (+)Recoveries	I/S
= End. Balance			= End. Balance	
				A- 33

Example of Uncollectible (Allowance Method - Calculation of Bad Debt Expense):

Apple Co. recorded a credit sale of \$100,000 in 2010. Balance in Apple's accounts receivable on Dec 31, 2010, was \$30,000 (\$15,000 was 0-30 days old, \$8,000 was 31-60 days, \$5,000 was 61-90 days, \$2,000 was over 90 days). Balance in allowance for uncollectible account is \$500 before adjustment. Calculate allowance for uncollectible if

- 1. Apple estimates that 1% of its credit sales will not be collected
- 2. Apple estimates that 3% of year-end accounts receivable will not be collected
- 3. Apple estimates the following uncollectible % for year-end accounts receivable 1% for 0-30 days, 3% for 31-60 days, 5% for 61-90 days and 10% above 90 days

4. Pass J/E for all the 3 cases as above Solution - 1 of 4 (Percentage of Sales Method): Allowance Beginning balance in the allowance for uncollectible \$ 500 500 Add: Allowance for uncollectible (1% of \$100,000) 1,000 1000 [1% of \$100,000] Ending balance in the allowance for uncollectible \$1,500 Solution - 2 of 4 (Percentage of Accounts Receivable Method): \$ Beginning balance in the allowance for uncollectible 500 Allowance Add: Allowance for uncollectible (plug) 400 500 Ending balance in the allowance for uncollectible (3% of \$30,000) 900 400) Plug 900 [3% of \$30,000] Solution - 3 of 4 (Ageing of Receivables Method): Estimated Uncollectible Due Date Amount Estimate % Uncollectible 0-30 days \$15,000 1% \$150 31-60 days \$8,000 3% \$240 61-90 days \$5,000 5% \$250 Above 90 days \$2,000 10% \$200 \$30,000 \$840 Beginning balance in the allowance for uncollectible 500 Add: Allowance for uncollectible (plug) 340 Ending balance in the allowance for uncollectible (as per calculation) |\$ 840



	Solution - 4 of 4:			
		<mark>% of Sales</mark>	% of Receivables	Ageing of Receivables
	Bad Debts	\$1,000	\$400	\$340
I/	Allowance for uncollect	tible \$1,000	\$400	\$340
Ĩ	\[\{\begin{align*} \B/\s \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \			
	A/R	\$30,000	\$30,000	\$30,000
	 < Allowance> 	<u><1,500></u>	<u> </u>	<u> </u>
	Net A/R	\$28,500	\$29,100	\$29,160
	Sales	\$100,000	\$100,000	\$100,000
,	A- 34			
	<u> </u>	<1,000>	<400>	<340>
	Operating			

Example of Uncollectible (Allowance Method - Bad Debt Write-off):

On 4/30/2011, Apple's accounts receivable balance was \$33,000. Using facts from the previous example, one of the debtors who owed \$600 refused to pay and was written off.

- 1. Pass J/E for the write-off
- 2. Calculate Net Accounts Receivable before and after write-off for all the 3 cases as in the previous example

Solution - 1 of 2 (Write-off under Allowance method):

		% of Sales	% of Receivables	Ageing of Receivables
В	/S ∫ Allowance for uncollectible↓	\$600	\$600	\$600
	B/SAccounts Receivable ↓	\$600	\$600	\$600

Solution - 2 of 2 (Write-off under Allowance method):

	% of Sales	% of Receivables	Ageing of Rece	ivables		
Before Write-off						
Accounts Receivable	33,000	33,000	33,000			
Less: Allowance for uncollec	ctible <u>(1,500)</u>	<u>(900)</u>	(840)			
Net Accounts Receivable	<mark>31,500</mark>	<mark>32,100</mark>	<mark>32,160</mark>	◆		
After Write-off of \$600					No ch	1
Accounts Receivable	32,400	32,400	32,400		in Ne	A/R
Less: Allowance for uncolled	ctible <u>(900)</u>	_(300)	(240)			
Net Accounts Receivable	<mark>31,500</mark>	<mark>32,100</mark>	<mark>32,160</mark>	4		

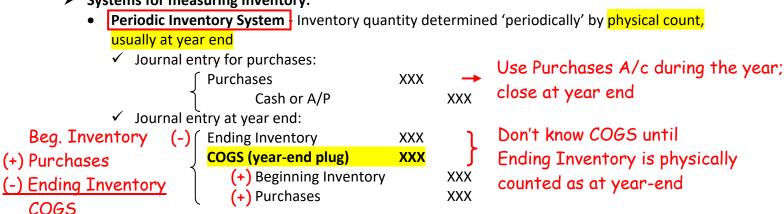
III) Inventory

III A) Determining Inventory & COGS

- Inventory = Raw materials (held for use in production) + Work in Process (in process for production) + Manufacturing Inventory Finished Goods (held for sale) + Retail Inventory (held for re-sale)
- Include ALL costs associated with inventories until the point of sale

	Include	Exclude
1.	Direct Materials, Direct Labor and Direct & Indirect Overheads (both fixed and variable overheads)	<u>Unallocated fixed overheads esp. if production is</u> <u>much below normal capacity (go to COGS)</u>
2.	Freight-in, insurance, warehousing (incurred upto the point of sale)	<u>Freight-out</u> , sales commissions (treat as Selling expenses)
3.	Handling costs, repacking, normal spoilage	Abnormal costs, excess spoilage
4.	Adjustment for Purchase discount	Purchase discount lost (if net method is used)
	e.g., if goods purchased with a \$1,000 invoice 3/10, net 30, then the buyer is entitled to a 3% discount if payment is made within 10 days (with normal payment terms without discount being 30 days), and records inventory at \$970 (net method)	e.g., In the previous example, if payment is made later than 10 days after invoice, the purchase discount lost of \$30 will be treated as financing costs and excluded from inventory
5.		Interest or Financing cost;
		However, IFRS allows interest cost to be capitalized to inventory only if there is a lengthy production period

Systems for measuring Inventory:

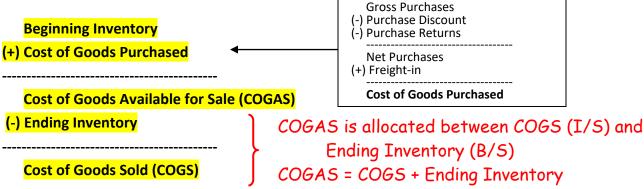


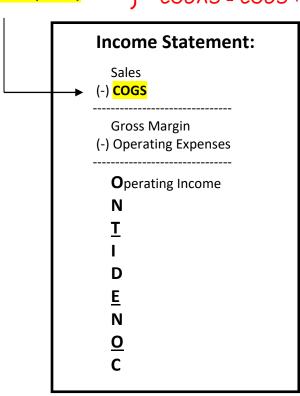
Perpetual Inventory System - Inventory quantity updated 'perpetually' on an ongoing basis, usually real-time counting No Purchases A/c
 ✓ Journal entry for purchases (real time inventory):

✓ Journal entry as sales occur:

$$\begin{cases} Cash \text{ or A/R} & 100 \\ I/S \text{ Sales} & 100 \end{cases}$$

➤ Calculating Cost of Goods Sold (COGS) at year end in the Periodic System only (NOT for perpetual system as COGS is updated for each inventory sale)





> Inventory turnover ratio = <u>COGS</u>

Average Inventory

{Mnemonic: In turnover ratios, turn-it-over to the denominator}

- Average Inventory = (Beginning Inventory + Ending Inventory) / 2
- # of days in Average inventory = 365 / Inventory Turnover
- Higher inventory turnover signifies faster movement of goods and is generally better; however, too high inventory turnover may imply stock-out cases

Cases with legal title without possession of the goods

	When does the title (or ownership) of the goods pass?	If goods in transit on 12/31, inventory in whose books?
Goods in Transit (possession	on by common carrier)	
FOB shipping point	When goods are delivered by seller to the common carrier (shipped), title passes from Seller → Buyer	Title with buyer while goods are in transit
FOB destination	When goods are received by the buyer (reach destination), title passes from Seller → Buyer	Title with seller while goods are in transit
Sales Returns (possession	by buyer or in transit)	
Shipment of non- conforming goods (Sale Returns)	When goods are rejected by the buyer, title reverts from Buyer → Seller (even if buyer possesses the goods prior to their return)	Title of rejected goods with seller while in possession of buyer or in transit
Sales with a right to return (i.e., goods are sold but buyer has right to return the goods)	When amount of goods likely to be returned can be estimated, record as sale with an allowance for estimated returns	Title of goods with seller (unless amount of returns can be reasonably estimated)
Consignment Inventory (p	ossession by consignee or in transit)	
Consignment Sales (Seller or consignor delivers goods to the agent or consignee to hold and sell goods on behalf of the consignor)	Title remains with consignor until goods are sold by the consignee; thus, title passes directly to the third-party buyer at point of sale Further, costs incurred by consignor in transferring goods to consignee considered inventory costs. Include: - freight on shipments to consignee (not freight-out since no sale has occurred yet), - in-transit insurance, - warehousing costs, - advertising	Consignor's books Note that inventory is never owned by consignee who: - has possession of goods but no ownership - acts as an agent with a commission on sales and reimbursable expenses, - treats consignment inventory as purchase only when they are sold to a third-party buyer



III B) Inventory Costing Methods

1) Specific Identification Method if Non-interchangeable/ Heterogeneous

- Must be able to separately identify each unit purchased, in stock or sold
- On sale, actual cost of the sold item is assigned to the transaction and the ending inventory consists of actual costs of specific items on hand
- Usually used for high cost items, which are individually identifiable (automobiles, jewelry, etc.)

2) Average Cost Method

- Both COGS and Inventory valued at average unit cost
- Under periodic system, use Weighted Average Method
 - Cost of units calculated at the end of the period based upon the weighted average price paid (including freight, etc.)
 - Weighted Average price = Cost of goods available for sale

of units available for sale

- Under perpetual system, use Moving Average Method
 - Cost of units calculated in the same manner as for weighted average except that a new weighted average cost is calculated after each purchase (that is why we call it 'moving' average)

Example for Avg. Cost (Weighted/Moving), FIFO and LIFO (Periodic/Perpetual):

During Jan 2011, Inventory Co. records the following information pertaining to its inventory.

Date	Particulars	Units	Unit cost	Total Cost	Units in hand
1/1	Beginning Inventory	400	\$10.00	\$4,000	400
1/3	Purchase	600	\$15.00	\$9,000	1,000
1/14	Sold	800			200
1/26	Purchase	500	\$20.00	\$10,000	700

Calculate the value of COGS and Inventory as of 1/31/2010

Solution - Part 1 of 5 (Weighted Average Cost Method) Periodic

Total # of Units available for sale (Beg. Inventory + Purchases) = 1,500 units

Cost of Units available for sale (Beg. Inventory + Purchases) = \$23,000

Therefore, Weighted Average Unit Cost = \$23,000 / 1,500 units = \$15.33 per unit

COGS = 800 units * \$15.33 = \$12,267

Ending Inventory = 700 units * \$15.33 = \$10,733

Solution - Part 2 of 5 (Moving Average Cost Method) Perpetual

Date	Particulars	Units & Unit cost	Inventory	Inventory	Moving
			Cost (A)	Units (B)	Avg. Cost (A / B)
1/1	Beg. Inventory	400 @\$10.00 = \$4,000	\$4,000	400	\$10.00
1/3	Purchase	600 @\$15.00 = \$9,000	\$13,000	1,000	\$13.00
1/14	Sold	800 @\$13.00 = \$10,400	\$2,600	200	\$13.00
1/26	Purchase	500 @\$20.00 = \$10.000	\$12,600	700	\$18.00

 $\frac{\text{COGS}}{\text{COGS}} = 800 \text{ units * } \frac{\$13.00}{\text{COGS}} = \$10,400$

Ending Inventory = 700 units * \$18.00 = \$12,600

	3) First-in, First-out (FIFO)	4) Last-in, First-out (LIFO)
Assumption for cost-flow to calculate COGS and Inventory	Goods from beginning inventory and earliest purchases are sold first. Therefore, inventory in hand consists of the most recent purchases	Most recent purchases are assumed to be the first goods sold. Therefore, inventory in hand consists of the earliest purchases
Matching	Closely relates to the actual physical flow of goods	Matches current costs with sales (as COGS contains relatively current costs) Based on capital maintenance concept which presumes that a going concern must maintain a basic level of investments in the assets of the business including inventory. Therefore, true cost of item sold is the cost of replacing it in inventory
Effects on I/S and B/S in case of rising prices	COGS ↓ (Net Income ↑) Ending Inventory ok I/S not ok, B/S ok	COGS ok (Net Income ok) Ending Inventory ↓ I/S ok, B/S not ok
Effect on tax liability, LIFO Conformity Rule, LIFO Reserve (US GAAP)	Since Net Income ↑, Tax liability ↑	Since Net Income is lower than FIFO, Tax liability LIFO Conformity Rule - If LIFO is used for tax purposes, it must also be used for financial reporting LIFO Reserve - When a company uses LIFO for external reporting but another method for internal purposes, LIFO Reserve account is used as a contra account to inventory to
		reduce inventory from internal valuation to LIFO valuation
LIFO Liquidation	No effects in COGS for fall in inventory levels	LIFO Liquidation - If inventory decreases below a particular level, lower valued inventory procured earlier may be included in COGS resulting Net Income ↑
Periodic vs. Perpetual system	Results are same in both inventory systems	Results are different in both inventory systems
IFRS	Acceptable method	Not allowed under IFRS
		Rationale: Under IFRS, the accounting method used to account for inventory should be based on the order in which the products are sold relative to when they were put in inventory. Specific identification is used whenever possible. The LIFO method is prohibited under IFRS because it rarely reflects actual physical inventory flow

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COGS = FIFO
Ending Inventory = LISH
(Last In Still Here)

COGS = LIFO Ending Inventory = FISH (First In Still Here)

Solution - Part 3 of 5 (FIFO)

FIFO Periodic:

COGS is 800 units from earliest purchases Ending Inventory is 700 units from latest purchases

1/1 - 400 units @\$10.00 = \$4,000 1/3 - 400 units @\$15.00 = \$6,000 1/3 - 200 units @15.00 = \$3,000

∴ COGS = \$10,000 ∴ Ending Inventory = \$13,000

COGS = FIFO Ending Inventory = LISH

FIFO Perpetual (Results will be same as FIFO Periodic):

 COGS for goods sold on 1/14
 Ending Inventory is the balance left

 1/1 - 400 units @10.00 = \$4,000
 1/3 - 200 units @15.00 = \$3,000

 1/3 - 400 units @15.00 = \$6,000
 1/26 - 500 units @20.00 = \$10,000

 \therefore COGS = \$10,000
 \therefore Ending Inventory = \$13,000

Same
Result for
Periodic &
Perpetual
under FIFO

Solution - Part 4 of 5 (LIFO Periodic)

 COGS is 800 units from latest purchases
 Ending Inventory is 700 units from earliest purchases

 1/26 - 500 units @20.00 = \$10,000
 1/1 - 400 units @\$10.00 = \$4,000

 1/3 - 300 units @15.00 = \$4,500
 1/3 - 300 units @\$15.00 = \$4,500

∴ COGS = \$14,500 ∴ Ending Inventory = \$8,500

COGS = LIFO Ending Inventory = FISH

Solution - Part 5 of 5 (LIFO Perpetual)

 COGS for goods sold on 1/14
 Ending Inventory is the balance left

 1/3 - 600 units @15.00 = \$9,000
 1/1 - 200 units @\$10.00 = \$2,000

 1/1 - 200 units @10.00 = \$2,000
 1/26 - 500 units @\$20.00 = \$10,000

∴ COGS = \$11,000 ∴ Ending Inventory = \$12,000

COGS = LIFO Ending Inventory = FISH

Summary of results:

	COGS	Ending Inventory
PERIODIC SYSTEMS		
FIFO	\$10,000	\$13,000
Weighted Average Cost	\$12,267	\$10,733
LIFO Periodic	\$14,500	\$8,500
PERPETUAL SYSTEMS		
FIFO	\$10,000	\$13,000
Moving Average Cost	\$10,400	\$12,600
LIFO Perpetual	\$11.000	\$12.000

Interpretation: In the period of rising prices,

COGS from FIFO < LIFO FIFO: $COGS \downarrow Net Income \uparrow (I/S issue)$ Ending Inventory from FIFO > LIFO LIFO: Ending Inventory $\downarrow (B/S issue)$ Notes: 1. Combine inventory into pools

2. Use \$-value + LIFO

5) Dollar-value LIFO 3. Adjust for inflation

- Variation of the LIFO method in which inventory is measured in \$ (NOT units) and is adjusted for changing price levels
- Inventory is combined into pools of items which are valued separately
 - For each pool, an overall price index used to calculate \$ value LIFO
- ➤ Dollar-value LIFO Conformity Rule applies (if used for tax, also use for financial reporting) so companies generally define LIFO pools so as to conform with IRS regulations
- Advantages over LIFO
 - Reduces costs of maintaining inventory as it is only needed to keep track of the annual layers
 of inventory cost and price indices for each inventory pool (no need to retain detailed records
 of each unit cost of each item purchased over the life of the entity)
 - Reduces possibilities of liquidation as related items grouped together into inventory pools (so decrease in certain items may be offset by an increase in other items)
- > Steps to calculate ending inventory by the \$ value LIFO method:
 - Calculate Ending Inventory @base year-end price =

Ending Inventory @current year-end price

Cumulative price index

- Calculate Change in Inventory Layers @base year price
- Calculate Change in Inventory Layers @current year price =
 - ✓ Change in layer @base year price * Cumulative price index
- In case of increase in layers, simply add the layers; however, in case of a liquidation, as per LIFO rules, latest layer is liquidated first

Example for Dollar Value LIFO:

Dollar Co. commenced business in Jan 2001. The company decided to follow Dollar Value LIFO method for measuring inventory cost. The nominal cost of inventory as Dec 2001, Dec 2002, Dec 2003 and Dec 2004 were \$10,000, \$12,100, \$15,000 and \$13,500 respectively.

With 2001 as the base year, the cumulative conversion price index for the years 2002, 2003 and 2004 were calculated to be 1.10, 1.20 and 1.25. Calculate the cost of ending inventory for 2004

Solution	^{on:} Step 0		Step 1	Step 2
Year	Ending Inventory	Cumulative	Ending Inventory	Layer Change
	@current year-end \$	price index	@base-yr \$	@base-yr\$
	(A)	(X)	(C = A / X)	
2001	\$10,000	1.00 (base)	\$10,000	\$10,000 (base)
2002	\$12,100	1.10	\$11,000	\$1,000
2003	\$15,000	1.20	\$12,500	\$1,500
2004	\$13,500	1.25	\$10,800	(\$1,700)
Year	Layer change	Step 3 Layer change	Step 4 Ending Inver	ntory
	@base-yr \$	@current \$	@\$-value-LI	FO
2001	\$10,000	\$10,000 * 1.00 = \$10,0	00 \$10,000	
2002	\$1,000	\$1,000 * 1.10 = \$1,100	\$10,000 + \$1	,100 = \$11,100
2003	\$1,500	\$1,500 * 1.20 = \$1,800	\$10,000 + \$1	,100 + \$1,800 = \$12,900
2004	(\$1,700)	\$800 * 1.10 = \$880	\$10,000 + \$8	380 = \$10,880

- Manufacturers usually compute their conversion price index while retailers & wholesalers determine index from appropriate published source; Index can be calculated by following methods:
 - Simplified use generally available cumulative price index (like the CPI index)
 - **Double extension method** called 'double' as inventory cost is calculated twice both at current price and base-year price {extend back to base year}
 - ✓ Inventory @current-yr cost = current gty * current yr-end cost
 - ✓ Inventory @base-yr cost = current qty * base yr-end cost
 - ✓ Cumulative price index = Ending Inventory @current-yr cost

 Ending Inventory @base-yr cost
 - **Link chain technique** 'link' the year-to-year annual conversion price index to develop the required single cumulative price index {cumulative index, compare with previous year}
 - ✓ Inventory @current-yr cost = current qty * current yr-end cost
 - ✓ Inventory @begin-of-yr cost = current qty * current begin-of-year cost
 - ✓ Annual price index = Ending Inventory @current-yr cost
 Ending Inventory @beginning-of-yr cost
 - ✓ Cumulative price index = Prior period's cumulative price index * Current year annual price index

Example for Dollar Value LIFO - cumulative price index calculation:

Link Co. commenced business in Jan 2001. The company decided to follow Dollar Value LIFO method for measuring inventory cost. The costs of inventory for 2001 to 2004 were as follows:

Year	Ending Inventory	Ending Inventory
	@end of year \$	@beginning of year
2001	\$10,000	n/a
2002	\$12,100	\$11,000
2003	\$15,000	\$13,750
2004	\$13,500	\$12,960

Calculate the annual conversion price index, cumulative conversion price index and inventory @2001 prices for the years 2001 to 2004

Solution:

Y	ear	Ending Inv @end of year \$ (A)	Ending Inv @beg. of year \$ (B)	Annual price index (Y = B / A)	Cumulative price index (Calculate X)	Ending Inv @base year \$ (C = A / X)
2	001	\$10,000	n/a	n/a	1.00 (base)	\$10,000
2	002	\$12,100	\$11,000	1.10	1.00*1.10= <mark>1.10</mark>	\$11,000
2	003	\$15,000	\$13,750	1.09	1.10*1.09= <mark>1.20</mark>	\$12,500
2	004	\$13,500	\$12,960	1.04	1.20*1.04= <mark>1.25</mark>	\$10,800

III C) Inventory Valuation - LCM or LCNRV

- Under US GAAP, Inventory is valued at:
 - ✓ Lower of Cost or Market (LCM) if LIFO or retail inventory method,
 - ✓ Lower of Cost or NRV (LCNRV) if methods other than LIFO or retail inventory method (e.g., <u>FIFO</u>, average cost)

where

- Cost = Original cost measured by one of the inventory costing methods like FIFO, Average Cost, LIFO, Retail Inventory method
- NRV (Net Realizable Value) = Net selling price Cost to complete & dispose
- Market = Middle of the following 3 numbers:
 - ✓ Ceiling = NRV
 - ✓ Floor = NRV normal profit margin
 - ✓ Replacement cost = Cost to purchase or reproduce (which could be more than the ceiling, between the floor and the ceiling or less than the floor)

Note:

- FASB issued Accounting Standards Update 2015-11 simplifying the measurement of inventories by replacing "Lower of Cost or Market" test with a "Lower of Cost or NRV" test. However, the new guidance applies only to inventories for which cost is determined by methods other than LIFO and retail inventory method i.e., entities using LIFO or retail inventory methods continue with "Lower of Cost or Market" [IFRS always required "Lower of Cost or NRV"]
 - The Board released the new guidance as part of its simplification initiative, which, as explained in the ASU, is intended to "identify, evaluate, and improve areas of US GAAP for which cost and complexity can be reduced while maintaining or improving the usefulness of the information provided to the users of financial statements"
 - Effective Dec 15, 2016, for public companies, and Dec 15, 2017, for non-public companies
- Earlier: US GAAP required "Lower of Cost or Market" for all methods
- LCNRV / LCM is based on the principles of Conservatism & Matching

 - On inventory write-off, new cost basis of the inventory is created; even if NRV (or Market price) increases subsequently, reversal of write-down is not allowed (recovery only on sale of goods)
- In case of rising costs, inventory would generally be valued at **C**ost while in case of falling costs, inventory would tend to be valued at **NRV** (or **M**arket)
- > Exceptions to the LCNRV / LCM rule:
 - Sale price of goods not affected by market value (value at cost)
 - Company has a firm sales price contract (value at cost)
 - Precious metals & farm products (value at NRV even if higher than cost, but fully disclose in F/S)

US GAAP also requires LCNRV for Inventory @FIFO / Average Cost

- Under IFRS, inventories are always valued at LCNRV Lower of Cost or Net Realizable Value
 - Note: Same calculation for US GAAP if other than LIFO & retail inventory method
 - Exception for biological assets (living plants & animals) which are carried at NRV; agricultural produce is carried at fair value less costs to sell at point of harvest
 - Further, IFRS allows reversal of previously recognized write-downs of inventory (similarly, IFRS also allows reversal of fixed asset impairment to be covered in Fixed Assets section)

Example for Inventory Valuation:

Part 1:

LCM Co. determines that as of 12/31/2010 the replacement cost of its inventory is \$100,000. Estimated selling price is \$140,000 which includes selling expenses of \$20,000 and a normal profit margin of \$30,000. Cost of inventory is calculated to be \$110,000 (assume same cost under both LIFO and FIFO). Calculate the value of inventory as of 12/31/2010 under LIFO and FIFO methods (both under US GAAP).

Part 2:

If replacement cost is re-calculated to be \$80,000, what would be the new value of inventory

Solution - Part 1 of 2:

INVENTORY @COST INVENTORY @MARKET

\$110,000 Ceiling (NRV) = \$140,000 - \$20,000 = \$120,000

Floor (NRV - profit) = \$120,000 - \$30,000 = \$90,000

Replacement = \$100,000

Ceiling = \$120

R/C = \$100

| Floor = \$90

US GAAP - LIFO:

Market (Middle of the 3) = Replacement cost of \$100,000

∴ Lower of Cost (\$110,000) or Market (\$100,000) = \$100,000

US GAAP - FIFO (same calculation for IFRS):

NRV = \$120,000

∴ Lower of Cost (\$110,000) or NRV (\$120,000) = \$110,000

Solution - Part 2 of 2:

INVENTORY @COST INVENTORY @MARKET

\$110,000 Ceiling (NRV) = \$140,000 - \$20,000 = \$120,000

Floor (NRV - profit) = \$120,000 - \$30,000 = \$90,000

Replacement = \$80,000

Ceiling = \$120

Floor = (\$90)

- - - - - -

US GAAP - LIFO:

Market (Middle of the 3) = Floor of \$90,000

∴ Lower of Cost (\$110,000) or Market (\$90,000) = \$90,000

US GAAP - FIFO (same calculation for IFRS):

NRV = \$120,000

∴ Lower of Cost (\$110,000) or NRV (\$120,000) = \$110,000

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III D) Inventory Estimation Methods

1) Gross Profit (Margin) Method

- Not allowed for tax or financial reporting purposes; may be used to
 - Prepare interim F/S
 - Estimate loss of inventory due to fire, flood, theft etc.
- > Steps for estimating inventory:
 - Step 1: Use Historical Gross Profit % to estimate COGS
 - Step 2: Plug Ending Inventory on the COGS formula:

Beginning Inventory

(+) Cost of Goods Purchased

Cost of Goods Available for Sale

(-) Ending Inventory (plug)

Cost of Goods Sold (COGS)

- 2 types (Gross Profit on Sales method used unless otherwise specified):
 - Gross Profit on Sales (Assume Sales = 100%); E.g., 25% Gross Profit on Sales imply:

Sales = 100%

Less: COGS = 75%

Gross Profit = 25%

Gross Profit on Cost (Assume COGS = 100%); E.g., 25% Gross Profit on COGS imply:

Sales = 125%

Less: COGS = 100%

Gross Profit = 25%

Example for Gross Profit Method:

Tragedy Co.'s total inventory has been destroyed by fire and following info is available from records with the management - beginning inventory \$50,000, purchases \$100,000, sales \$200,000 and historical G.P. 40%. Calculate the loss of inventory by fire.

Solution:

Step 1: G.P. = 40% of \$200,000 = \$80,000

COGS = 60% of \$200,000 = \$120,000

Step 2:

Beginning Inventory	\$50,000
(+) Cost of Goods Purchased	\$100,000
Cost of Goods Available for Sale	\$150,000
(-) Ending Inventory (plug)	- \$30,000
Cost of Goods Sold (COGS)	\$120,000

∴ Ending Inventory (totally destroyed by fire) = \$30,000

2) Retail Inventory Method

- Complicated techniques which may be used by businesses or retailers that sell a large volume of items with relatively low cost per unit
- > Perpetual system that records inventory at retail price; steps to calculate cost of ending inventory:
 - Calculate the cost-to-retail ratio (need beginning inventory and purchase figures at both cost price and retail price; remaining figures like sales and markdowns at the retail price)
 - Apply the above ratio to ending inventory retail price to get ending inventory at cost
- > Key method that may be tested on the CMA exams:

	Conventional Retail Inventory method
Approximation of ending inventory value	Approximates ending inventory at LCM
Beginning Inventory	Included in cost-to-retail ratio
Net markups (Increase in selling price above original retail price, less markup cancellations)	Included in cost-to-retail ratio
Net markdowns (Decrease in selling price below original retail price, less markdown cancellations)	Not included in cost-to-retail ratio

Example for Retail Inventory Method:

Retail Co.'s provides the following information:

At cost price - Beginning Inventory \$80,000; Purchases \$500,000; Freight-in \$50,000 At retail price -

Beginning Inventory \$100,000; Purchases \$770,000; Sales \$700,000

Markup \$40,000; Markup cancellations \$10,000

Markdowns \$30,000; Markdown cancellations \$5,000

Calculate the ending inventory under the conventional retail inventory method.

Solution:

	Cost Price	Retail Price
Beg. Inventory	\$80,000	\$100,000
+ Purchases	\$500,000	\$770,000
+ Freight-in	\$50,000	n/a
+ Net Markups		\$30,000
Totals	\$630,000	\$900,000

Cost-to-retail ratio = \$630,000 / \$900,000 = **70.00**%

- Net Markdowns	- <u>\$25,000</u>
Total goods @retail	\$875,000
- Sales	- \$700,000
End. Inventory @retail	\$175,000

Ending Inventory @cost = \$175,000 * 70.0% = \$122,500

COGS = 80,000 + 500,000 + 50,000 - 122,500 = 507,500

3) Firm Purchase Commitments

Legal non-cancelable agreement for future purchase of inventory

If contracted price > market price and it is expected that loss will occur on purchase, recognize loss (@market price - contracted price) at the time of decline in prices: Estimated future liability

Estimated loss on purchase commitment XXX booked today

Accrued loss on purchase commitment XXX

At the time of actual purchase, accrued loss is reversed:

Purchases XXX
Accrued loss on purchase commitment XXX

A/P or Cash XXX

Example for Firm Purchase Commitments:

Commitment Co. signed mining contracts in 2010 to be executed at \$7,000,000 in 2011. The market price of the rights at 12/31/2011 is \$6,000,000 and it is expected that the loss will occur when the contract is effected in 2011. Calculate the loss on purchase commitments at 12/31/2011.

Solution:

Contract Price of Purchase commitment \$7,000,000

Market Price as of 12/31/2011 \$6,000,000

Loss on Purchase commitment recognized on 12/31/2011 \$1,000,000

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IV) Investments in Equity & Debt Securities

		US GAAP	IFRS	Key difference					
	I) Investment	I) Investment in Equity Securities							
Based on ownership %	No Influence (less than 20%)	FVTNI [May elect FVTOCI] only IFRS Exception if FV not readily determinable: Cost less impairment adjusted for observable price changes		Unlike US GAAP, IFRS allows FVTOCI option for equity securities					
	Significant Influence (20% - 50%)	Equity Method [May elect <u>FV option</u>]	Similar rules						
	Control (more than 50%)	Consolidation	Similar rules						
	II) Investmen	t in Debt Securitie	S						
	Intent of selling in the near-term	Held for Trading (HFT)	FVTPL	Similar rules (mainly terminology difference)					
Based on "intent" to hold	Neither intent of selling in near-term nor intent/ability of holding till maturity	Available for Sale (AFS); May elect <u>FV option</u>	FVTOCI; May elect FVTPL	,j e. e. ee					
	Intent & ability of holding till maturity	Held to Maturity (HTM); May elect <u>FV option</u>	Amortized cost; May elect FVTPL						

IV A) Investments in Equity Securities

- When the investor acquires common stock, the appropriate method of accounting for the investment mainly depends on the % stock owned by the investor
 - No influence (say, less than 20%) FVTNI {This section}
 - ✓ Exception if FV not readily determinable @Cost less impairment adjusted for observable price changes
 - Significant influence (say, 20-50%) Equity Method {This section}
 - Control (say, over 50%) Consolidation

1) Accounting for Equity Securities: FVTNI

No influence, and FV readily determinable

- Classified as Fair Value Through Net Income (FVTNI) Measure at FV on B/S, and record any gain/loss (whether or not realized) in I/S
 - Applies if no influence over investee (e.g., less than 20% ownership) and securities with readily determinable fair value
 - ✓ E.g., Below 20% equity investment in an investee whose equity securities are publicly traded
 - Disclose the portion of unrealized gains & losses for the period that relates to equity securities still held at B/S date
- Dividend income included in earnings (I/S)
- For equity securities, IFRS allows the below options:
 - Fair Value Through Profit or Loss (FVTPL) similar to FVTNI
 - Fair Value Through OCI (FVTOCI) allowed as an irrevocable option
 - ⇒ Unrealized gains/losses recognized as OCI (on Comprehensive I/S) and A.OCI (on B/S)
 - \Rightarrow Note that this is no longer allowed for equity securities per US GAAP (but still allowed for debt securities per US GAAP)

No influence, and FV not readily determinable

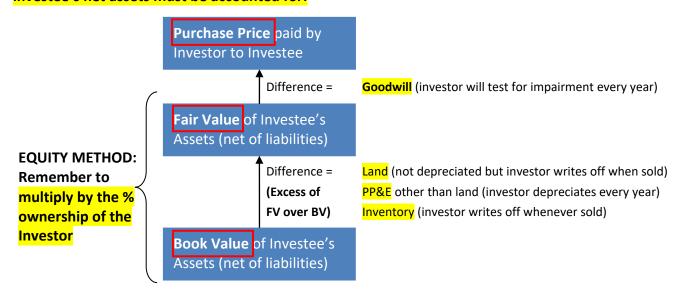
2) Accounting for Equity Securities: Exception if FV not readily determinable (Cost less impairment, and adjusted for observable price changes)

- Exception if no influence over investee (e.g., less than 20% ownership) and securities do NOT have readily determinable FV: Record investment at cost minus impairment, if any, folus/minus observable price changes in orderly transactions for identical/similar investment of the same issuer
 - E.g., Below 20% equity investment in an investee whose equity securities are not publicly traded. In such a case, an "observable price change" may be the new valuation if the investee goes for a subsequent round of funding
 - Implies that equity investments that do not have readily determinable FV need to be remeasured at FV either upon identification of an impairment or upon the occurrence of an observable price change
 - Impairment assessment is now simplified by requiring a qualitative assessment to identify impairment. If the qualitative assessment indicates that impairment exists, measure the investment at FV and recognize impairment loss on I/S (single-step model)
 - ✓ Few impairment indicators which may need to be considered while performing the qualitative assessment:
 - ⇒ Significant deterioration in the earnings performance, credit rating, asset quality, or business prospects of the investee
 - ⇒ Significant adverse change in the regulatory, economic, or technological environment of the investee
 - ⇒ Significant adverse change in the general market condition of either the geographical area or the industry in which the investee operates
 - ⇒ Bona fide offer to purchase, an offer by the investee to sell, or a completed auction process for the same or similar investment for an amount less than the carrying amount of that investment
 - ⇒ Factors that raise significant concerns about the investee's ability to continue as a going concern, such as negative cash flows from operations, working capital deficiencies, or noncompliance with statutory capital requirements or debt covenants
 - Election to measure an equity security per this method is made separately for each investment
 - Reassess at each reporting period if the FV for the equity investment continues to be nonreadily determinable (if the FV becomes readily determinable, this exception is no longer applicable, and need to start accounting using FVTNI)
- Dividend income included in earnings (I/S)
- Disclose
 - Carrying amount of investments without readily determinable fair values
 - Amount of impairments and downward adjustments, if any, both annual and cumulative
 - Amount of upward adjustments, if any, both annual and cumulative
 - As of B/S date, additional info and considerations relating to the above calculations

3) Accounting for Equity Securities: Equity method

Significant Influence

- Used when investor has "significant influence" over the operating & financial policies of the investee (generally 20%-50% stock ownership)
 - Exception 1: Use Equity method when influence exists even if ownership is less than 20%
 - ✓ Investor has definite intentions to increase the stake in the investee to at least 20% by acquiring more stocks in the near future
 - ✓ Investee has significant technological or transactional dependency on the investor
 - ✓ Investor has representation on the board of directors of investee company
 - ✓ Investor is a major customer or supplier of the investee
 - ✓ Investor owns at least 20% of the voting stock of the investee (does not apply if another shareholder group owns a majority and exercises total control)
 - Exception 2: Do not use Equity method if influence does NOT exist but ownership is 20%-50%
 - ✓ Investment in investee is only temporary
 - ✓ Bankruptcy of investee
 - ✓ Lawsuit/complaint filed against investor challenging ability to exercise significant influence
 - ✓ Investor surrenders significant rights as a shareholder under a 'Standstill agreement'
 - ✓ Investor fails to obtain representation on the Board of Directors
 - ✓ Another group of shareholders have majority ownership and exercise total control
 - ✓ Investor unable to obtain necessary financial info needed to apply the equity method
- Accounting treatment (equity method is more consistent with accrual accounting):
 - Original investment recorded at Cost
 - Any difference between the purchase price paid for the investee and the book value of the investee's net assets must be accounted for:



- As the investee earns profits, record % of investee's earnings as 'Equity in Earnings' on I/S of the investor (which is presented as a component of Income from continuing operations)
 Therefore, Investment follows the equity balance of the investee
- Dividends received is reduced from Investment account and is NOT treated as income on I/S

Example on Equity Method:

On Jan 1, 2010, Big Co. acquired 30% of a Small Co. for \$100,000. Small Co. FV is \$300,000 and BV is \$250,000. The higher FV (vs. BV) is attributed to land \$20,000, PP&E (other than land) \$20,000 and Inventory \$10,000. During the year 2010, Small Co. reports income of \$25,000 for 2010 and pays dividends of \$6,000 on Dec 31, 2010. Goodwill is impaired by 25% during 2010, PP&E is depreciated over 10 years and Inventory with higher FV is sold during 2010.

Pass Journal Entries, calculate carrying value of investment as of 12/31/2010 and calculate the amount that goes into the I/S.

>**\$10,000** Goodwill is impaired by 25% = \$2,500

Solution:

Purchase price

At 1/1/2010, Small's FV = \$300,000, BV = \$250,000 At 12/31/2010, Small's income = \$25,000, Dividend paid = \$6,000

\$100,000

FV of Big's share of Small **\$90,000** (\$300,000 x 30%) >\$15,000 Excess of FV over BV Land excess of \$6,000 (\$20,000 x 30%) unchanged during 2010 PP&E excess of \$6,000 (\$20,000 x 30%) depreciated by \$600 (\$6,000/10) Inventory excess of \$3,000 (\$10,000 x 30%) written off as sold in 2010 **BV** of Big's share of Small \$75,000 (\$250,000 x 30%) J/E under Equity method: Big records acquisition of investment at cost \$100,000 \$100,000 Cash Big records % of earnings ($$25,000 \times 30\% = $7,500$) (Investment \$7,500 -arn Equity in earnings (I/S) \$7,500 Big records % of cash dividend ($$6,000 \times 30\% = $1,800$) Receive Cash \$1,800 Dividend = No I/S impact Investment dividend Big records Goodwill impairment, PP&E depreciation and Inventory write-off for excess of purchase price from BV: Equity in earnings (I/S) \$6,100 (Goodwill \$2,500 + PP&E \$600 + Inventory \$3,000) Investment \$6,100 **Investment Account** I/S (Equity in Earnings) = \$7,500 **Earn** Invest 1/1 \$100,000 - \$6,100 Write-off + \$7,500 Earn -\$1,800 Dividend -\$6,100 Write-off 12/31 \$99,600 End.

> FVTNI vs. Equity Method:

	FVTNI Method	Exception to FVTNI if FV not readily determinable	Equity Method (assuming FV option not elected)
Implication & Ownership %	No influence over invest 20% stake)	ee (generally, 0% -	Significant influence over investee (generally 20% - 50% stake)
Investment Carrying Value	Investment @FV	Investment @Cost less impairment adj. for observable price changes	Investment follows equity balance of investee, better accrual
Investee Earnings	NOT recorded		Record % of investee's earnings as 'Equity in Earnings' on I/S
Investee Dividend	Record as Dividend Income on I/S		Reduce the Investment amount
Difference between purchase price and book value	NOT accounted for		Account for difference by reducing the 'Equity in Earnings' on I/S (test goodwill for impairment, write-off land's excess FV on sale, depreciate PP&E's excess FV, write-off inventory's excess FV on sale)

• Comparing Journal Entries:

		FVTNI	Exception to FVTNI if FV not readily determinable	Equity Method @	930%
Invest	Original { investment	Investment AXXX Cash X	xx	Investment 1	00,000 (Includes 75k BV; 15k FMV>BV; 10k Goodwill) 100,000
Earn	Investee { Earnings	No J/E		Equity in Earn	7,500 (25,000 x 30%) ings I/S 7,500 DN_TID-NO-C) section; Not cash, so atement
Dividend	Investee { Dividend	Cash XX Dividend Income I Dividend Income = I/S (ON-TID-NO		Cash Investment	1,800 (6,000 x 30%) 1,800
Write- off	Write-off excess purchase price paid over BV of investee	No J/E		Equity in Earnings I/S Investment	+ PP&E Depreciate \$600 + Inventory \$3,000)
FV - change	Increase in FV of Investment FV of Investment	Investment ↑ XXX Gain I/S XXX Loss I/S XXX Investment ↓XXX	No J/E unless Impairment or observable price change (note: if FV becomes readily determinable, account as FVTNI)	No J/E unless FV o	ption elected

• I/S & B/S Impacts:

	FVTNI	Exception to FVTNI if FV not readily determinable	Equity Method
B/S	Investment @FV	Investment @Cost less impairment adj. for observable price changes	Investment = Purchase price + % Earnings - Dividend - Write-off excess purchase price over BV
1/5	 Dividend Income Gain/loss from change in FV of Investment 	 Dividend Income Loss if impairment Gain/loss if observable price change 	Equity in Earnings = % Earnings - Write-off excess purchase price over BV

- ➤ Basically, equity method closely reflects accrual accounting. Appropriate if significant influence as investor has a degree of responsibility for the return on its investment (which is required to be included in investor's I/S based on ownership %)
 - Although investments are initially recorded at the purchase price paid, subsequent earnings of
 investee results in a continuous change in the investment account balance i.e., investor's
 share of investee's income is recorded as increase in investment account (with an offsetting
 recognition on I/S as "Equity in Earnings of Investee")
 - On the other hand, dividends received from investee is recorded reduction in the carrying value of investments (NOT reported as income)

For significant influence, instead of Equity method

- May elect Fair Value option (generally if investee's stocks are traded in an active market) = Measure at FV on B/S and include any unrealized gains/losses in I/S Account similar to FVTNI
 - May be elected on an instrument-by-instrument basis on certain election dates (e.g., date when the investment is first recognized per equity method), but is <u>irrevocable</u> once elected
 - Basically, selecting the FV option also eliminates the need for accounting for the difference between purchase price and book value
- Changes in ownership % Further to FASB's update as part of its simplification initiative (effective Dec 2016), need to apply the new method prospectively (i.e., going forward) Account for prospectively
 - Equity to FVTNI/Cost exception (e.g., 30% to 15% stake) Apply FVTNI/Cost exception prospectively
 - FVTNI/Cost exception to Equity Method (e.g., 15% to 30% stake) Apply equity method prospectively

IV B) Investments in Debt Securities

Debt Securities

- Includes corporate bonds, redeemable preferred stock, collateralized mortgage obligation, US
 Treasury & government agency securities, convertible debt, commercial paper
- Does NOT include: options/forwards/swaps, leases, A/R or N/R
- Accounted for depending on the classification based on management intent:
 - ✓ Trading or Held-for-trading (HFT) securities
 - ✓ Available-for-sale (AFS) securities
 - ✓ Held-to-maturity (HTM) securities

Classification is based on management's intentions

✓ Held	-to-maturity (HTM) securities	Indiagement's intentions		
		Trading (HFT)	Available-for-sale (AFS)	Held-to-maturity (HTM)	
Definition (categorized based on management's intentions)		Debt securities bought & held with the intent of selling them in the near term	Debt securities not classified as Trading or HTM	Debt securities that the entity has the positive intent AND ability to hold until maturity date	
		{Think of it as investment in inventory!}	{Think of it as investment likely to be sold some day!}	{Think of it as investment never to be sold in market!}	
B/S	Current or Non-current	Current (rarely, non- current)	Current OR Non-current	Non-current (current if due within next 1 year)	
	Valuation	Initially record @cost; carry at FV {As Trading securities are	Initially record @cost; carry at FV {As AFS are marketable; but	Initially record @cost; carry at amortized cost — {As HTM are not going to be	
		marketable and there is intent to sell in the short term}	since there is lack of intent to sell in near term, price fluctuation gain/loss "parked" in B/S on continuous basis until sold}	sold, fluctuations in market price are ignored; instead, difference between cost and maturity value amortized over the life of the security}	
	Unrealized Gain or Loss		* Cumulative unrealized gain/loss in B/S as A.OCI	Amortize using Ef Interest Rate I	
I/S = O <u>N</u> - TID-N-OC	Recurring Income	<u>N</u> of I/S – Interest income	N of I/S – Interest income	N of I/S - Interest income net of amortization	
	Realized Gain or Loss	<u>N</u> of I/S	<u>N</u> of I/S	N of I/S (Generally no realized gain/loss as expected gain/loss is amortized)	
	Unrealized Gain or Loss	<u>N</u> of <mark>I/S</mark>	* Goes to Statement of Comprehensive Income (OCI = PACE) and 'accumulates' in B/S	-	
Cash Flow Statement	Operating or Investing	Operating activity (investing if non-current on B/S)	Investing activity	Investing activity	
FV option		N/A	May elect FV option	May elect FV option	
IFRS termin	ology	FVPTL	FVTOCI (may elect FVPTL)	Amortized cost (may elect FVTPL)	

> Example to compare accounting for Trading (HFT) vs. Available for Sale (AFS) securities:

Purchase price, 1/1/20X1 \$100 > \$10 unrealized gain

FMV, 12/31/20X1 \$110
 FMV, 12/31/20X2 \$115
 \$5 unrealized gain

• Sold on 9/30/20X3 \$118 > \$3 gain (total = \$18 realized gain)

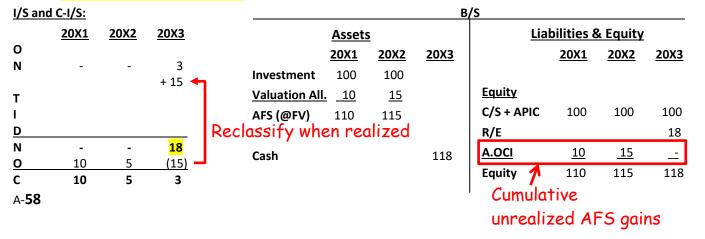
Journal Entries:

Date	Trading Securi	ties (HFT)	Available for Sale Securities (AFS)
1/1/20X1 { (Purchase)	HFT Investment Cash	100	AFS Investment 100 Cash 100	
12/31/20X1 (Unrealized gain)	HFT Valuation Allowance Gain (I/S)	10 10 I/S	AFS Valuation Allowance 10 Accumulated OCI (B/S) 10	Park@B/S
12/31/20X2 (Unrealized gain)	HFT Valuation Allowance Gain (I/S)	5 5 I/S	AFS Valuation Allowance 5 Accumulated OCI (B/S) 5	Park@B/S
9/30/20X3 (Realized gain)	Cash HFT Investment HFT Valuation Allowa Gain (I/S)	118 100 nce 15 3 I/S	Cash 118 AFS Investment 100 AFS Valuation Allowance 15 Gain (I/S) 3 Reclassify: Accumulated OCI (B/S) 15 Gain (I/S) 15	I /S

F/S for Trading Securities (HFT):

I/S an	d C-I/S:						В	/S			
	<u>20X1</u>	<u>20X2</u>	<u>20X3</u>		Assets	<u> </u>		<u>Lia</u>	bilities 8	& Equity	
0					20X1	20X2	20X3		20X1	20X2	20X3
N T	10	5	3	Investment	100	100					
 				Valuation All	<u>. 10</u>	<u>15</u>		<u>Equity</u>			
D				HFT (@FV)	110	115		C/S + APIC	100	100	100
N	<mark>10</mark>	<mark>5</mark>	3	,				R/E	10	15	18
0	-	-		Cash			118	A.OCI			
С	10	5	3	24511				Equity	110	115	118
								' '			

F/S for Available for Sale Securities (AFS):



FV option = All realized & unrealized gains/losses on I/S (even if AFS/HTM)

- May elect Fair Value option for AFS/HTM = Measure at FV on B/S and include any unrealized gains/losses in I/S
 - May be elected on an instrument-by-instrument basis on certain election dates (e.g., date when the investment is first recognized by the entity), but is <u>irrevocable</u> once elected
- > Disclosures For both AFS and HTM, disclose
 - Amortized cost basis
 - Aggregate fair value [FV not required for HTM for non-public entities]
 - Gross unrealized holding gains/losses
 - Information about the contractual maturities of the securities

V) Tangible Fixed Assets

V A) Acquisition of Fixed Assets

- > Tangible fixed assets = PP&E (all presented separately on B/S along with depreciation)
 - **Property** = Land
 - Plant = Building
 - Equipment = Machinery, Tools, Furniture & Fixtures (each of these sub-categories may be presented separately if significant)
 - Accumulated depreciation (contra-asset which may be combined for two or more asset categories)

Include all costs incurred to put the asset to intended use

- Land cost includes
 - ✓ Purchase price (including any existing building to be demolished)
 - ✓ Broker commissions, title & recording fees, legal fees, surveying charges
 - ✓ Existing obligations assumed by buyer (like mortgages &delinquent taxes)
 - ✓ Costs of clearing, grading, landscaping or site development] Getting Land ready for
 - ✓ Cost of razing or demolishing an old building
- J intended use
- ✓ **Less:** Proceeds from sale of any scrap (building materials, timber, etc.)
- Land improvements are recorded separately from land cost as they are <u>depreciable</u> (fences, sidewalks, pavements, landscaping, water system, lighting)
- Building cost includes
 - ✓ Purchase price
 - ✓ Alterations and improvements
 - ✓ Architect's fees
 - ✓ Repair charges neglected by the previous owner ('deferred maintenance')
 - ✓ Capitalized interest (during construction period before occupancy begins)
- Equipment cost includes
 - ✓ Purchase price (Invoice price, less discounts)
 - ✓ Transportation (freight in), Installation & Test Runs
 - ✓ Sales & excise taxes
 - ✓ Legal fees, Delinquent taxes, Title insurance & Surveying costs
 - ✓ Capitalized interest if self-developed

> Self-constructed fixed assets will include

- Direct Material + Direct Labor + Direct Overhead + Variable Overhead (include idle plant capacity expense)
- Capitalized interest (during construction period before occupancy begins)
- Repair & maintenance expense that add value to the fixed asset
- Do NOT include profit

- > Basket Purchases: Allocate purchase price based on appraised fair value of individual items
 - If land & building acquired for <u>lump sum price</u>, use <u>Relative Fair Value method</u> to allocate value between both the assets

E.g., If property is acquired for \$500,000, and the only info to allocate is the tax appraisal, which allocates \$100,000 to land and \$300,000 to the building for a total of \$400,000 tax value. Therefore, as per tax appraisal, 25% value is for land (\$100,000/400,000) and 75% is for the building (\$300,000/400,000). J/E to record the property would be

```
Land 125,000
Building 375,000
Cash 500,000
```

> Received as a donation: Treat as ordinary income for the FV of the asset

E.g., If an individual donates land worth \$700,000 to the company, J/E is:

Land 700,000

Other Income (Contribution Revenue) 700,000

PP&E - Both GAAP & IFRS allow Capitalization of Interest

Inventory - Only IFRS allows Capitalization of Interest

VB) Capitalization of Interest

- Interest cost incurred during the construction period needs to be capitalized to the asset (also called avoidable interest, i.e., interest that could be avoided if the asset had not been constructed)
- Capitalize for assets
 - Constructed for **own use** built by self or outside contractor (e.g., building, machinery)
 - Constructed for **resale** as a discrete project (e.g., real estate project, ships)
- Do(NOT)capitalize interest costs incurred
 - **Before commencement** of construction
 - After completion of construction (ready to use)
 - Amount borrowed in excess of amount actually spent
 - During intentional delays in construction (ordinary delays allowed)
 - On asset purchased (not constructed)
 - On inventory routinely manufactured
- Calculation of interest cost to be capitalized lower of
 - Weighted average accumulated expenditure * interest rate
 - ✓ Weighted avg. accumulated expenditure = (Prior years' expenditure + Weighted avg. of current year expenditure) * portion of the year deemed as construction period
 - ✓ Interest rate on new borrowing; however, if avg. accumulated expenditure > new borrowing, interest on the excess amount shall be the weighted average interest rate for other borrowings
 - Actual interest cost incurred (new borrowing + other borrowings)

Example on Capitalization of Interest:

Miles Company takes a 10% loan of \$500,000 on 1/1/2009 to finance construction of own use building of which \$300,000 is spent evenly during 2009. Balance \$200,000 is spent evenly during the first 9 months of 2010. Construction completes on 9/30/2010. Assume that the interest on the \$500,000 is payable for entire year in 2009 and 2010. Compute capitalized interest for 2009 and 2010.

	2009	2010		
Prior year expenditure (Balance carried forward)				
Amount	\$0	\$300,000		
Portion of the year	N/A	9 months (75%)		
Average prior year expenditure (A)	\$0	\$300,000 * 75% = \$225,000		
Current year expenditure				
Amount	\$300,000	\$200,000		
Prorated % (50% if spent evenly)	50%	50%		
Portion of the year under construction	12 months (100%)	9 months (75%)		
Average current year expenditure (B)	\$300,000 * 50% * 100% =	\$200,000 * 50% * 75% = \$75,000		
	\$150,000			
Weighted Average Accumulated	\$0 + \$150,000 = \$150,000	\$225,000+\$75,000 = \$300,000		
expenditure (A + B)				
Interest Rate	10%	10%		
Weights Avg. Accumulated Interest *	\$15,000	\$30,000		
Interest Rate (C)				
Interest cost incurred (D)	\$50,000	\$50,000		
Capitalized Interest (lower of C or D)	\$15,000	\$30,000		

A-62 PP&E 15,000 PP&E 30,000

Interest 35,000 Interest 20,000

Cash 50,000 Cash 50,000

VC) Costs Incurred After Acquisition

- Revenue Expenses Normal & recurring expenses; mainly repairs & maintenance expenses to keep asset in or restore an asset to normal operating condition
 - On factory machine add to COGS
 - On headquarters add to G&A
 - On delivery truck add to Selling expense
- > Capital Expenditure Not normal or recurring expenses which increase the CV of the asset
 - Have benefit of more than 1 year by making the asset 'bigger', 'better' or 'longer'

	Additions = "BIGGER"	Betterment = "BETTER"	Major or Extraordinary repairs / overhaul = "LONGER"
Result	Extension, enlargement or expansion of an existing asset	Improving efficiency & productivity (but not extend useful life)	Extends the useful life (may make the asset more efficient & productive also)
E.g.,	New capacity, new functions	- Reinstallations & rearrangements with material benefits - Refurbishments are considered betterments when - CV of old asset is known OR - Refurbishment enhances efficiency	- Overhaul - Refurbishment are considered major repairs if CV of the old asset is unknown and refurbishment enhance useful life
J/E {	Asset XXX Cash XXX	Asset XXX Cash XXX	Accum. Depreciation XXX Cash XXX

• Refurbishment (part replacement)

✓ If carrying value of the old asset is **known** (identifiable), pass following additional journal entry for the sale / disposal of the old asset, and then treat as 'better':

XXX

✓ If carrying value of the old asset is unknown (unidentifiable), treat as

⇒ <u>'better' if increases efficiency</u>

Asset XXX

Cash

⇒ <u>'longer' if increases useful life</u>

Accumulated Depreciation XXX

Cash XXX

VD) Depreciation

➤ Depreciation allocates cost of an asset to the period benefited in line with the Matching concept. To record depreciation, credit accumulated depreciation (contra-asset to PP&E on B/S)

➤ Methods for Depreciation*:

Method	Dep. Amount =	Additional info on calculations
	Dep. Base x Dep. Rate	
Straight Line Meth	nod:	
Straight Line Method (SLM)	(HC-SV) * SLM% SLM% =1 Useful Life	 Dep. Base = Constant Dep. Rate = Constant (though absolute value is constant, value relative to asset CV will be increasing) Dep. Amount = Constant
Accelerated Meth	ods:	
Double Declining Balance (DDB)	(HC-Acc Dep.) * DDB% DDB% = 1 * 2 Useful Life	 Dep. Base = Decreases as A/D increases with time (note that the CV is 'declining') Dep. Rate = Constant (in double declining method, rate is 'double' than SLM) Dep. Amount = Decreases SV is ignored; however, cannot depreciate below SV
Sum of the Years Digit (SYD)	(HC-SV) * SYD% SYD % = # of years left n(n+1) 2	 Dep. Base = Constant Dep. Rate = Decreases (Numerator = # of years left in useful life; Denominator = Sum of the years in useful life) Dep. Amount = Decreases Less aggressive than DDB
Activity Method (\	Variable Charge Approach	n / Physical use depreciation):
Units of Production (UOP)	(HC-SV) * UOP% UOP% = <u>Hours this yr</u> Total estimated hrs	 Dep. Base = Constant Dep. Rate = Varies depending on usage Dep. Amount = Varies depending on usage Depreciation is a function of usage or productivity (NOT a function of time as for all other methods)

^{*} Dep. - Depreciation; HC - Historical Cost, SV - Salvage Value, Acc Dep. - Accumulated Depreciation

> Selecting a depreciation method:

- Straight line method use if assets give equal benefit each year
- Accelerated method better matching as asset is more productive in initial years
 - ✓ Minimize any obsolescence loss as CV of asset is lower
 - ✓ Evens out expenses since Repairs & Maintenance is lower in initial years, sum of Depreciation and Repairs & Maintenance remains constant over time
 - ✓ More tax benefits in initial years (generally use DDB for tax)
- Activity method depreciate based on usage (not time)

Example on Depreciation methods:

Machinery bought on 1/2/2001 for \$10,000 with estimated useful life of 4 years and Salvage Value of \$2,000. Machine expected to have an estimated total output of 1,000 units over its life. Actual output was 150 units per year for 2001 and 2002 and 200 units per year for 2003 to 2004.

Calculate the depreciation for the years 2001 to 2004 under SLM, DDB, SYD and UOP methods.

Solution:

	<u>Year 1</u> 2001	<u>Year 2</u> 2002	<u>Year 3</u> 2003	<u>Year 4</u> 2004
SLM				
HC - SV = \$10,000 - \$2,000 = \$8,000				
SLM% = 1/Useful Life = ¼ = 25%	•	•	•	•
Depreciation =	\$2,000	\$2,000	\$2,000	\$2,000
DDB				
DDB% = 1/Useful Life * 2 = ¼ * 2 = 50%				
Carrying Value (HC - A/D) =	\$10,000	\$5,000	\$2,500	\$2,000
Depreciation =	\$5,000	\$2,500	\$500	\$0
			Canno	t depreciate
SYD				SV of \$2,000
HC - SV = \$10,000 - \$2,000 = \$8,000				
SYD% =	4/10=40%	3/10=30%	2/10=20%	1/10=10%
Depreciation =	\$3,200	\$2,400	\$1,600	\$800
UOP				
HC - SV = \$10,000 - \$2,000 = \$8,000				
UOP% =	150/1000=15%	150/1000=15%	200/1000=20%	200/1000=20%
Depreciation =	\$1,200	\$1,200	\$1,600	\$1,600

➤ Partial period depreciation - If asset purchased during the year, in Year 1 determine dep. rate for full year & prorate based on fractional time under use; Exception is UOP method (based on output)

Example on Depreciation methods (partial period depreciation): Assume same facts as above example except that machinery was bought on 7/1/2001. Calculate the depreciation for

the years 2001 to 2004 under SLM, DDB and SYD methods.

-	
50	ution
30	ution

Solution:	2001 (½ year)	2002	2003	2004
SLM Depreciation =	\$1,000	\$2,000	\$2,000	\$2,000
DDB Carrying Value (HC - A/D) = Depreciation =	\$10,000	\$7,500	\$3,750	\$2,000
	\$2,500	\$3,750	\$1,750	\$0
SYD SYD% = Depreciation =	4/10*0.5=20%	3.5/10=35%	2.5/10=25%	1.5/10=15%
	\$1,600	\$2,800	\$2,000	\$1,200

> Component vs. Group / Composite Depreciation

- Component Depreciation (Required under IFRS)
 - ✓ Separate significant components of a fixed asset with different lives should be recorded and depreciated separately

Example on Component Depreciation (IFRS):

On 1/1/2010, British Co. that uses IFRS acquired a machine with a cost of \$500,000 and an estimated life of 20 years. The cost of the machine included the cost of a cylinder that must be replaced every 5 years for \$40,000 and an inspection cost of \$10,000. The machine must be re-inspected every 10 years at an additional cost of \$10,000 per inspection. Under the component approach, the machine, the cylinder and the inspection cost are recognized and depreciated separately:

Asset Component	<u>Cost</u>	<u>Useful Life</u>	<u>Depreciation</u>	
Machine	\$450,000	20 years	\$22,500	
Cylinder	40,000	5 years	8,000	
Inspection cost	<u> 10,000</u>	10 years	<u>1,000</u>	
Total	\$500,000		\$31,500	

Group / Composite Depreciation

- ✓ Depreciate as a group
 - ⇒ **Group (Similar assets)** Collection of assets that are similar with same useful lives (e.g., fleet of delivery vans)
 - ⇒ Composite (Dissimilar Assets) Collection of dissimilar assets with different useful lives (e.g., <u>building furnished with furniture & electrical installations</u>)
- ✓ Depreciation rate = Total Yr 1 SLM depreciation of individual assets

Total Asset Cost

- ⇒ Depreciate only to the extent of total SV of remaining assets (note that SV is reduced with disposal of assets)
- ✓ Gain or loss on disposal of individual items is not recognized (only accumulated depreciation for the individual item gets reduced to the extent HC exceeds sale value); J/E

1	Cash	XXX	Assume CV = Sale price
	Accumulated depreciation	XXX (plug)	Assume of - Sale price
₹	Loss on Sale		∴ No gain or loss on sale
	Asset	XXX	: Plug is Accum. Depreciation
- (Gain on Sale		Triag is recuit. Bepreciation

Example on Composite / Group Depreciation:

3 different types of Furniture & Fittings (Table, Chair, Lights) are depreciated under the composite method as follows. Calculate depreciation or composite rate and composite life

<u>Asset</u>	Asset Cost	<u>SV</u>	<u>Useful Life</u>	HC - SV	SLM Depreciation
Tables	\$8,000	\$1,000	7 years	\$7,000	\$1,000
Chairs	\$8,000	\$2,000	5 years	\$6,000	\$1,200
Lights	\$4,000	\$1,000	3 years	\$3,000	<u>\$1,000</u>
	\$20,000			\$16,000	\$3,200

Depreciation or composite rate = \$3,200 = 16% \$20,000

Composite Life = \$16,000 = 5 years \$3,200

Appraise or value Ending PP&E

Depreciation = Beginning PP&E + Cost of acquisitions - Ending PP&E

- Appraisal or Inventory method of depreciation Estimate of the asset value is made at the end of each year, and depreciation expense is recorded to reduce the CV of assets to the estimated valuation
 - Typically used for low-cost tangible assets; e.g., hand tools for a manufacturer or utensils for a restaurant Think of PP&E as Inventory and Depreciation as COGS
 - Advantage No need to maintain separate schedules for low-cost assets
 - Criticism Does not systematically or rationally match costs to revenues
- Accounting changes relating to Depreciation
 - Change in accounting estimates (e.g., depreciation rate, useful life, SV) treated currently & prospectively as of the beginning of the year of change
 - Change in depreciation method is a change in accounting principle inseparable from a change in accounting estimate and, thus, also treated prospectively
- > IFRS requirements relating to depreciation (not required by US GAAP)
 - Depreciation method used should reflect the expected pattern of fixed asset consumption (acceptable methods include SLM, declining balance, SYD, UOD)
 - Depreciation method as well as estimates (useful life, salvage value, etc.) should be reviewed for appropriateness at each B/S date
 - Requires component depreciation (NOT composite depreciation)

Depletion

- Depreciation of natural resources ('wasting assets') like timber, minerals, petroleum
- Depletion base (HC SV) includes
 - ✓ Purchase cost
 - ✓ **Development costs** like exploring, drilling, evacuating and other costs to prepare the land for Extraction
 - ✓ PV of anticipated restoration costs (if any)
 - ✓ Less: Residual value of Land after the resources are extracted
- Depletion computed on UOP method = Depletion Base * Units Extracted

 Total expected recoverable units

 Depletion Base
 Total expected recoverable units

 Total expected recoverable units

 Total expected recoverable units
 - ✓ Where, Unit Depletion Rate = Depletion Base / Total expected recoverable units
- Allocate Depletion between COGS (extracted units sold) and Inventory (extracted units in stock)
- Change in estimates (SV, depletion rate) treated prospectively
- Exploration costs in the oil & gas industry may be treated either
 - ✓ **Full cost concept** (all ventures whether successful or unsuccessful are capitalized and depleted)
 - ✓ Successful efforts concept (only successful ventures are capitalized and depleted)

Example on Depletion:

In 2010, Mine Co. purchased a mineral mine for \$2,200,000 with removable ores estimated at 5,000,000 tons. The property has an estimated PV of restoration cost of \$400,000 after the ore has been extracted with residual value of \$100,000. The company incurred \$500,000 of development costs preparing the mine for production. During the year 2010, 400,000 tons were removed and 300,000 tons were sold.

- 1. Calculate the depletion base and the unit depletion rate
- 2. Calculate the amount of depletion in 2010 and the amounts of depletion to be included in COGS and Inventory for the year.

Solution - 1 of 2:

Depletion base = Cost of land + Development costs + PV of Restoration - Residual value

= \$2,200,000 + \$500,000 + \$400,000 - \$100,000

= \$3,000,000

Unit Depletion Rate = Depletion Base / Total expected recoverable units

= \$3,000,000 / 5,000,000 tons

= \$0.60 per ton

Solution - 2 of 2:

Depletion for 2010 = <u>Units extracted</u> x Unit depletion rate

 $= 400,000 \text{ tons } \times \$0.60 \text{ per ton} = \$240,000$

Depletion included in COGS

 $= 300,000 \text{ tons } \frac{1}{5} = 300,000 \text{ tons } \frac{1}{5} = \frac{1}{5$

(+)

Depletion included in Inventory

 $= 100,000 \text{ tons } \underline{\text{unsold}} \times \$0.60 \text{ per ton} = \frac{\$60,000}{100}$

VE) Impairment

- Circumstances that indicate impairment:
 - Decline in demand
 - Inability to keep up with technology / competition
 - Decline in FV
 - Net operating loss
 - Negative cash flow
 - Change in regulatory or legal environment
 - For goodwill impairment only -
 - ✓ Loss of key personnel
 - ✓ Impairment loss by subsidiary
- > Testing, Measurement & Recognition of Impairment Losses:

	Depreciate / Amortize before and after test	TEST for Impairment	MEASURE Impairment Loss	Recognize Loss in IDE (ON-TID-NO- C)?	Future write-up allowed (US GAAP)?	Future write-up allowed (IFRS)?		
Tangible A	Tangible Assets (PP&E) - Held for Use Assets							
Held for Use	Yes	CV > Non discounted future cash flows	CV - FV	I	No	Yes		
Intangible	Assets - Held 1	for Use Assets						
Definite Life	Yes	CV > Non discounted future cash flows	CV - FV	(D for material discontinue d items)	No	Yes		
Indefinite Life (excl Goodwill)	No	CV > FV						
Goodwill	No	Test 1: CV of reporting unit (with GW) > FV of reporting unit (with GW) Test 2: CV of GW > Implied FV of						
	GW (Implied FV of Centire unit - FV	•						
Held for Sa	le Assets							
	No	CV > NRV Where NRV = FV - cost to sell	CV - NRV	D	Yes	Yes		

➤ Note:

- For testing impairment, use undiscounted net future cash flows; but for measuring impairment, use FV or discounted future net cash flows
- Since undiscounted net future cash flows cannot be estimated for indefinite life intangible assets (including goodwill), use FV also for testing impairment
- For held for sale assets, use NRV which is FV less costs to dispose
- For held for sale assets and indefinite intangible assets & goodwill, test for impairment at the same time every year
- Journal entries for Impairment losses:
 - Tangible assets & intangibles with definite life (depreciable / amortizable):

Impairment Loss XXX

Accumulated Depreciation / Amortization XXX

Intangibles with indefinite life & goodwill:

Impairment Loss XXX
Intangible Asset or Goodwill XXX

- Impairment loss under (IFRS)
 - Calculate using one-step model Is CV > Recoverable amount? If yes, impair the difference
 - ✓ Recoverable amount is the greater of
 - ⇒ Asset's fair value less costs to sell and
 - ⇒ **Asset's value in use** (PV of future cash flows expected from the fixed asset)
 - Reversal of impairment losses is allowed subsequently if value recovers (only to the extent of impairment loss recognized)

Example on Impairment (Tangible Assets):

Camera Co. acquires production machinery on 1/1/2001 for \$100,000 and is depreciating it over 10 years by SLM assuming no salvage value. On 12/31/2003, development of new products has caused the output of the machine to be less valued in the marketplace and the company believes that it will be able to generate future cash flows of \$3,600 over its remaining life. The asset has an estimated fair value of \$3,000.

- 1. If the machine is still in use, determine the amount of impairment
- 2. If the Co. had been classified as held for sale in the beginning of 2003, calculate the amount of impairment assuming \$800 disposal costs.

Solution - 1 of 2 (Held for use):

Depreciate the asset: At 12/31/2003, the machine will have CV of \$7,000 with accumulated depreciation of \$3,000 **Test for Impairment:** Since CV of \$7,000 > Non-discounted future cash flows of \$3,600, the machine is impaired

Measure Impairment: Impairment = CV - FV = \$7,000 - \$3,000 = \$4,000

Record Impairment:

Impairment Loss \$4,000
Accumulated Depreciation \$4,000

Solution - 2 of 2 (Held for sale):

Depreciate the asset: N/A as the asset was held for sale during 2003. At 1/1/2003, the machine had a CV of \$8,000 with accumulated depreciation of \$2,000

Test for Impairment: Since CV of \$8,000 > NRV of \$2,200, the machine is impaired

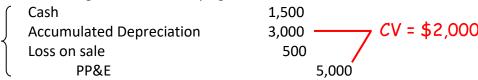
Measure Impairment: Impairment = CV - FV = \$8,000 - \$2,200 = \$5,800

Record Impairment:

Impairment Loss \$5,800
Accumulated Depreciation \$5,800

V F) Disposal & Involuntary Conversions

- Accounting treatment of disposal of fixed assets
 - Recognize depreciation upto the point of disposal
 - Remove the original cost and accumulated depreciation of asset disposed
 - Recognize gain or loss on sale for difference between CV and sale price (report the gain or loss in Non-operating gains or loss in I/S)
 - E.g., If a machine costing \$5,000 and carrying amount of \$2,000 is sold for \$1,500, the J/E is



Fixed assets held for sale

- Held for sale criteria for discontinued operations: Plan, Program, Probable, Available, Actively Marketed, Change unlikely {Mnemonic: PAC (asset to be 'pac'ked up reverse count 321)}
- Not subsequently depreciated and classified as other assets on B/S
- Must test for impairment, and impairment should be recognized to the extent CV > NRV
 ✓ NRV (Net Realizable Value) is FV less costs to dispose
- Write-offs for fully depreciated asset

> Total & permanent impairment

Example on Disposal of Fixed Assets:

Kingfisher Co. acquired equipment for \$100,000 on 1/1/2001. The equipment has an estimated useful life of 5 years with no salvage value and is depreciated under the straight-line method. The equipment was sold on 7/1/2004 for \$40,000 with sales commission outstanding of \$1,500.

Solution:

Accumulated Depreciation as of 12/31/2003 = \$60,000PP&E CV as of 12/31/2003 = \$40,000 6/30/2004Depreciation 10,000 Accumulated Depreciation 10,000

Cash (received on sale)
Accumulated Depreciation
PP&E
Sales Commission outstanding
Gain on sale (plug)

40,000
70,000
100,000
1,500

- ➤ Involuntary Conversions Destruction of property or seizure by government entities as a result of condemnation or eminent domain actions. Accounting is similar to voluntary sales, and deferral of gains or losses is not allowed
 - Rules for involuntary conversions are different for tax purposes (where deferral of gains on
 Involuntary conversions is allowed) resulting in temporary difference (covered in deferred
 taxes)
 Deferral of Gain on Involuntary Conversions allowed for tax purposes

Example on Involuntary Conversions:

On 9/11/2010, fire destroyed World Co.'s warehouse with an original cost of \$1,000,000 and accumulated depreciation as of date of \$275,000. Removal of debris cost \$15,000. On 1/2/2011, the Insurance Co. issued check to World Co. for \$700,000. On 6/30/2011, World Co. completed construction of a new warehouse for \$1,200,000. Record J/E in 2010 and 2011

Solution:

```
2010 J/E
        Insurance Co. dues
                                         700,000
                                         275,000
        Accumulated Depreciation
        Involuntary conversion loss (plug) 40,000
                Warehouse
                                                 1,000,000
                Cash to clear debris
                                                    15,000
2011 J/E
                                         700,000
        Cash
                Insurance Co. dues
                                                   700,000
        Warehouse
                                        1,200,000
                                                 1,200,000
                Cash
```

VI) Intangible Assets

- Intangible assets are long-lived legal rights and competitive advantages developed or acquired by a business; do not have any physical substance
- > Classification of Intangible Assets:
 - Forms:
 - ✓ **Knowledge** (e.g., R&D, software)
 - ✓ **Legal rights** (e.g., patent, copyright, trademark, franchise, license, leasehold improvements, etc.) identifiable
 - ✓ Goodwill unidentifiable
 - Identifiability
 - ✓ **Identifiable** (e.g., patent, copyright, trademark, franchise, license, leasehold improvements)
 - √ Non-Identifiable (e.g., goodwill)
 - Expected life Amortized over shorter of legal or useful life
 - ✓ **Definite life** (e.g., patent, copyright, franchise, license, leasehold improvements)
 - ✓ Indefinite life (e.g., trademark, goodwill)
 - → Don't amortize but test for impairment every year
 - Manner of acquisition
 - ✓ Externally acquired (purchased at fair value)
 - ⇒ Capitalize at cost (include legal & registration fees)
 - ✓ Internally Developed
 - ⇒ Expensed against income when incurred except for certain costs associated with 'identifiable' intangibles including legal fees, registration or consulting fees, design costs, other direct costs to secure the asset`

<u>Identifiable</u> <u>Unidentifiable</u>

<u>Definite Life:</u> Patent, Copyright

<u>Indefinite Life:</u> Trademark Goodwill

> Accounting for Intangibles:

• Capitalization of costs

- ✓ For externally acquired intangibles at fair value.
 - ⇒ For internally developed intangibles, only certain costs incurred may be capitalized
- ✓ Record at FV of consideration given OR FV of asset acquired, whichever is more clearly evident
- ✓ Cost of unidentifiable assets like goodwill = Consideration paid (Costs assigned to all identifiable assets acquired Liabilities assumed)

Amortization

- ✓ For identifiable intangibles with definite life straight line method over the lower of useful or legal life
 - ⇒ Useful life must consider the expected use of the asset by the entity and economic life (effects of obsolescence, competition, etc.)
 - ⇒ Legal life is based on legal, regulatory or contractual provisions
- ✓ Intangibles with indefinite life cannot be amortized and must be tested for impairment
 - ⇒ For Income tax purposes, unidentifiable intangibles like goodwill may be amortized over 15-year period resulting in a temporary difference

Impairment

- ✓ Write down the intangible and recognize impairment loss if it becomes impaired (i.e., full carrying amount is not recoverable due to a change in circumstances)
- ✓ Write-off intangibles that becomes worthless during the year (due to obsolescence or unsuccessful lawsuit)
- Change in Useful Life is treated as change in accounting estimate to be accounted prospectively
- Gain or loss on sale is Sale price less carrying value (for amortizable intangibles, remember to amortize till sale date)

> Knowledge-based intangibles

- Research and Development Costs (Not capitalized)
 - Research is discovery of new knowledge for new or significantly improved product/process, while Development is conversion of the knowledge into plan/design for application
 - ✓ Includes:
 - ⇒ New knowledge or New technology
 - ⇒ Model or Prototype
 - ⇒ Application of new research findings
 - ✓ Expensed when incurred including expenses on R&D equipment (due to high degree of uncertainty)
 - ⇒ Capitalize only tangible or intangible fixed assets with alternate future uses
 - ✓ NOT treated as R&D:
 - ⇒ R&D performed for others under contract (match the costs with revenue using % of completion or completed contract method)
 - ⇒ Commercial production/activity or seasonal, routine or troubleshooting activity in production stage (treat as manufacturing expense)
 - ⇒ Quality control testing
 - ⇒ Market research or testing
 - ⇒ Reformulation of a chemical compound
- → ✓ R&D performed for others under contract
 - ⇒ R&D revenue recognition may be done by using the <u>milestone method</u> when revenues (to the vendor doing the R&D) are contingent on achieving one or more substantial milestones related to the R&D contract. In this case, the vendor may recognize the entire contingent revenue in the period in which milestone is achieved
 - ⇒ R&D costs not required to be expensed these costs may be matched with revenue using %-of-completion or completed contracts method
 - ✓ (IFRS) Rules: Always expense research costs, but development costs may be capitalized if ALL the following criteria are met {Remember: Development for TRIBE}
- $\left(egin{array}{c} oldsymbol{ au}
 ight) \Rightarrow oldsymbol{ au}$ echnological feasibility has been established.
- ho \Rightarrow **R**esources available to complete the development and sell or use the asset
- $(\mathbf{I}) \Rightarrow$ Intention & Ability to complete and use or sell the intangible asset
- \bigcirc \Rightarrow **B**enefits (economic) expected to be generated in the future
- ightharpoonup \Rightarrow **E**xpenses attributable to development of the intangible can be reliably measured

> Legal Rights based Identifiable Intangibles

- Patents Costs incurred to legally protect product and process ideas resulting from R&D
 - ✓ Capitalize
 - ⇒ Costs of patent application
 - ⇒ Costs of purchase if the patent is purchased from another party
 - ⇒ Costs incurred in successful defense of a patent if infringed during its economic life
 - ✓ Do not capitalize R&D expense and costs on failure to defend a patent (as no legal benefit would exist)
 - ✓ Amortized over the shorter of useful life OR legal life
 - ⇒ Maximum 20 year life
- Copyrights Protection of artistic works including books, recordings and computer software.
 Copyright period is for the life of the creator plus 70 years (or total 95 years for works made for hire)
 - ✓ Amortized over the shorter of useful or legal life
- **Franchise Agreements** operation of a business unit under contractual arrangements with another party
 - ✓ Franchisee = Capitalize initial franchise fees and Expense continuing fees
 - ⇒ PV of initial franchise fees paid/payable by a franchisee is capitalized as an intangible and **Amortized** over the expected life of the franchise
 - ⇒ Continuing franchise fees / franchise royalties (paid to franchisor for ongoing services) are expensed by the franchisee
 - ✓ Franchisor = Recognize all fees as revenue when it has substantially performed all material services AND collectability is reasonably assured
 - ⇒ Defer the direct costs until the related revenue is recognized
- Leasehold Improvements costs to make improvements on leasehold real estate property
 - ✓ **Amortized over shorter of useful life** of improvements **OR legal life** of lease including any reasonably assured extensions
- Trademarks Exclusive use of an identifying name for a product or process
 - ✓ <u>Indefinite life</u> intangible which is generally not amortized, instead test for impairment

- ➤ Goodwill (Unidentifiable Intangible Asset) Represents capitalized excess earnings power (e.g., management expertise, technical skill or marketing network that cannot be identified separately)
 - Capitalize only if externally acquired
 - ✓ Acquisition Method Excess of an acquired entity's fair value over the fair value of the entity's net assets (include identifiable intangibles and adjust for liabilities)
 - ✓ Equity Method (purchase of a company's capital stock) Excess of stock purchase price over the fair value of the net assets acquired
 - Costs to maintain, develop or restore goodwill are expensed (like advertising expense) because goodwill is an unidentifiable intangible
 - Goodwill is calculated at the reporting unit level, which can be an operating segment or one level below
 - Never amortized, but tested for impairment annually at the same time every year; 2-step test for impairment
 - Test 1: CV of reporting unit (incl. Goodwill) > FV of reporting unit (incl. Goodwill)

FV of ⇒ Identifies potential impairment

unit \Rightarrow CV of the reporting unit is actually Stockholders' Equity from B/S

- If CV is 0 or -ve, perform test 2 if it is 'more likely than not' that goodwill is impaired \Rightarrow FV of the reporting unit can be estimated using the amount that would be received on selling the asset, or a valuation technique based on multiples of earnings or revenue

- To determine FV, use valuation premise consistent with asset's highest and best use (either in-use or in-exchange premise; in-use premise generally used if the asset is used in business in combination with other assets, such as a reporting unit)

Test 2: CV of Goodwill > Implied FV of Goodwill

assets

⇒ Measure impairment = Implied FV - CV of Goodwill

⇒ Where, Implied FV of Goodwill = FV of reporting unit (including Goodwill) - FV of all items except Goodwill

Example on Goodwill Impairment:

On 12/2/2010, David Co. purchased Goliath Co. for \$5,000,000 when the FMV of Goliath was \$4,500,000 resulting in Goodwill of \$500,000.

On 11/30/2011, carrying amount of Goliath is \$4,800,000 (including the \$500,000 goodwill recognized at the time of purchase). David calculates that Goliath is valued at \$4,400,000 using a multiple of earnings approach.

Fair Value of net assets (except goodwill) calculates to be as follows:

Current Assets \$2,100,000 PP&E 2,500,000 900,000 Patents Less: Current Liabilities (1,300,000) 4,200,000

Test and measure (if any) goodwill impairment.

Solution:

Test 1: CV of reporting unit (including goodwill) > FV of reporting unit (including goodwill)

Since \$4,800,000 > \$4,400,000, the reporting unit "may be" impaired

Test 2: CV of Goodwill > Implied FV of Goodwill

Implied FV of Goodwill = \$4,400,000 - \$4,200,000 = \$200,000Since \$500,000 > \$200,000, the reporting unit is impaired

Goodwill Impairment Loss = \$500,000 - \$200,000 = \$300,000

300,000

> Goodwill 300.000

VII) Stockholders' Equity

VII A) Common Stock

Common stock normally has a par value (certificate of incorporation) or stated value (board of directors) assigned to it; if issue price > par value, excess goes into additional paid-in capital (APIC)

> Issuance of stock:

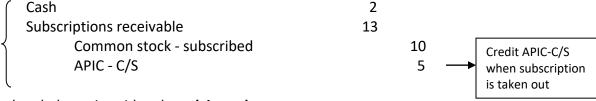
• J/E (\$10 par value issued for \$15):

```
      Cash
      15

      Common Stock (par)
      10

      APIC − C/S (excess of par)
      5
```

- If stock is exchanged for property other than cash, property recorded at FMV
- If multiple securities used (stocks & bonds), relative FMV method is used
- > Stock subscriptions from potential shareholders for new offers of the stock with a down payment at the time of the subscription, and the balance payable when the stock is issued
 - J/E when subscription is **taken out** (\$2 down payment received for \$10 par value share to be issued for \$15)



J/E when balance is paid and stock issued

	Cash	13		
	Common stock - subscribed	10		
\langle	Subscriptions receivable	1	3	Credit Common
	Common stock	1	0 -	Stock only when
(stock is issued

 J/E if the company cancels the subscription and refunds the down payment (reverse the first journal entry):

Common stock - subscribed	10
APIC - CS	5
Cash	2
Subscriptions receivable	13
	APIC - CS Cash

 J/E when buyer breaches the contract and the down payment is forfeited by the company as damages

```
Common stock - subscribed 10
APIC - CS 5

APIC - Forfeited subscriptions 2
Subscriptions receivable 13
```

> Repurchase & retirement of stock:

- If stock is repurchased & retired, accounts credited at the time of issuance are debited
 - ✓ If repurchase price < original price, difference is credited to APIC retired stock
 - ✓ If repurchase price > original price, difference is debited to retained earnings (after debiting any APIC from previous stock retirements)
- J/E (\$10 par value issued for \$15, now repurchased & retired for \$12):

```
Common stock (par) 10

APIC - CS (issuance in excess of par) 5

APIC - Retired stock [plug] 3

Cash 12
```

• J/E (\$10 par value issued for \$15, now repurchased & retired for \$16):

```
Common stock 10
APIC - CS 5
APIC-Retired Stock*/ Retained Earnings [plug] 1
Cash 16
```

^{*}To the extent of any previous existing balance; debit R/E after APIC-Retired Stock = 0

VII B) Preferred Stock

- > Stock similar to a debt with two preferential rights over common stock Preferred for
 - **Dividend preference** paid dividends before common stockholders
 - Liquidation preference paid before common stockholders
- ➤ J/E to record issuance of preferred stock:

Optional additional features:

- Cumulative dividends not paid in earlier years must also be paid before anything is paid out to common stockholders Pay dividend later if not paid now
 - ✓ Dividend in arrears not a liability until declared; disclosed in parenthesis or in the footnotes
- Participating after both preferred & common stockholders receive a specified level of dividends, balance dividend distributions are shared with common stockholders in ratio of the respective par values of participating preference stock & common stock
 Share excess dividends
- Convertible option to convert preferred stock into common stock at a specified ratio Stockholder's option
- Preferred with warrants warrants are convertible to common stock
- Callable corporation has a right to repurchase preferred stock at a specified price Issuer's option
- Note that mandatorily redeemable preference stock is classified as a liability on the B/S (treat as temporary equity as a 'mezzanine' between liabilities & equity); includes preferred stock redeemable at a fixed or determinable price on
 - Fixed determinable date,
 - Option of the holder, or
 - Occurrence of an event not within the issuer's control

Example on Preferred Stock (Dividend Preference):

Scarce Co. has following stock outstanding at 12/31/2011 at which time \$3,500 of dividends are declared and paid:

- 10% Preferred Stock with par value \$100 (issued on 1/1/2009)

\$5,000

- Common Stock with par value \$1

\$15,000

No dividend had been paid by Scarce in the last 2 years 2009-2010. Calculate allocation of dividend between preferred and common stockholders assuming that:

- 1. Preferred stock is non-cumulative and non-participating
- 2. Preferred stock is **cumulative** and non-participating
- 3. Preferred stock is non-cumulative and participating
- 4. Preferred stock is cumulative and participating

Solution - 1 of 4:

Dividend payable to **preferred stock** = \$5,000 x 10% = **\$500** Balance dividend paid to **common stock** = \$3,500 - \$500 = **\$3,000**

Solution - 2 of 4 (Cumulative):

Dividend in arrears for cumulative preferred stock at 12/31/2010 = \$5,000 x 10% x 2 years = \$1,000

Dividend payable to preferred stock for 2011 = \$5,000 x 10% = \$500

Total Dividend paid to **preferred stock** = \$1,000 + \$500 = \$1,500

Balance dividend paid to **common stock** = \$3,500 - \$1,500 = **\$2,000**

Solution - 3 of 4 (Participating):

Dividend payable to preferred stock @10% = \$5,000 x 10% = \$500

Dividend payable to common stock @10% = \$15,000 x 10% = $$\frac{1,500}{1,500}$

\$2,000

Balance dividend for proration between preferred stock and common stock =\$3,500 - \$2,000 = \$1,500

Proration of dividends:

Preferred Stock = \$5,000 / \$20,000 x \$1,500 = \$375

Common Stock = \$15,000 / \$20,000 x \$1,500 = \$1,125

Total Dividend paid to **preferred stock** = \$500 + \$375 = **\$875**

Total Dividend paid to **common stock** = \$1,500 + \$1,125 = \$2,625

Solution - 4 of 4 (Cumulative & Participating):

Dividend in arrears for cumulative preferred stock at $12/31/2010 = \$5,000 \times 10\% \times 2$ years = \$1,000 Dividend payable to preferred stock for $2011 = \$5,000 \times 10\% = \frac{500}{\$1,500}$ Total Dividend paid to preferred stock = \$1,500 Dividend payable to common stock @ $10\% = \$15,000 \times 10\% = \frac{\$1,500}{\$3,000}$

Balance dividend for proration between preferred stock and common stock =\$3,500 - \$3,000 = \$500

Proration of dividends:

Preferred Stock = \$5,000 / \$20,000 x \$500 = \$125

Common Stock = \$15,000 / \$20,000 x \$500 = \$375

Total Dividend paid to preferred stock = \$1,500 + \$125 = \$1,625

Total Dividend paid to **common stock** = \$1,500 + \$375 = \$1,875

Stock Options - Employees

Stock Rights - Existing Shareholders

VII C) Additional Paid-In Capital (APIC)

Stock Warrants Debt holders

> Forms of APIC

- APIC-Common stock: issue price of common stock in excess of par
- APIC-Preferred stock: issue price of preferred stock excess of par
- APIC-Retired stock: repurchase & retirement below original issue price
- APIC-Treasury stock:
 - ✓ Cost method: resale of shares above repurchase price
 - ✓ Par value method: repurchase of shares below original issue price
- APIC-Warrants: amount allotted to detachable warrants issued with bonds or preferred stock
- APIC-Stock options (less deferred compensation): stock options issued to employees
- APIC-expired stock options: stock options issued to employees expired

VII D) Retained Earnings & Dividends

Note: All dividends reduce S/Equity except Stock dividend & Stock splits

- Retained Earnings represents accumulated earnings since inception of the entity that have not been paid out to stockholders as dividends
 - Net income closed into retained earnings at each acc. year-end
 - Retained earnings is periodically reduced for dividends
- Relevant dates for Dividend
- *
 - Date of declaration Board of Directors commit to the dividend

Retained Earnings

Dividends Payable

XXX

XXX

- Date of <u>record</u> Shareholders at this date are identified as the ones entitled to the dividend No J/E
- Date of payment Dividend "declared" is distributed to the shareholders as of "record" date
 Dividends Payable
 Cash paid out
 XXX
- Property dividends account for as cash dividends recorded at FMV as of the declaration date (changes in FMV between declaration date and payment date is not considered); remember to recognize gain or loss on sale of the asset transferred which is the difference between book value and FMV
 - E.g., Dive Co. declares dividend-in-kind of land on 12/1/2011, payable on 12/15/2011. The land with historical cost of \$500 is worth \$700 on 12/1/2011 and \$750 on 12/15/2011.

 J/E on date of declaration (12/1/2011)

```
 \begin{cases} \text{Retained Earnings} \downarrow & 700 \\ \text{Dividends Payable} & 700 \end{cases}   \begin{cases} \text{Land} & 200 \\ \text{Gain on Land} & 200 \rightarrow \text{goes to R/E, so net effect on R/E is $500} \end{cases}
```

J/E on date of payment (12/15/2011) - ignore price appreciation after declaration date $\begin{cases} \text{Dividends Payable} & 700 \\ \text{Land } \text{paid out} & 700 \end{cases}$

- Liquidating dividends dividends not based on earnings but are a return of capital for which APIC is debited (do not debit common stock which can be eliminated only on corporate dissolution)
 - E.g., \$15,000 dividend paid out with retained earnings balance of \$10,000; note that the \$5,000 portion to be debited to APIC is the liquidating dividend:

```
Retained Earnings 10,000
APIC 5,000
Dividends Payable 15,000
```

- Scrip dividends issuances of promises to pay in the future (and may bear interest); therefore, treated as liability until paid
 - Issuance of promise (liability is scrip dividends):

```
Retained Earnings XXX
Scrip Dividends Payable XXX
```

• Payment of scrip dividends:

```
Scrip Dividends Payable XXX
Interest Expense (if any) XXX
Cash XXX
```

Stock dividends - not actual distributions of assets from the company and, therefore, not a liability when declared; represents only transfer of capital from retained earnings to contributed capital (total stockholders' equity remains unchanged). Also, note that recipients of stock dividends pass no J/E For stockholders: (i) No dividend income, (ii) Total stock basis remains same

Ordinary stock dividend - small stock dividends (usually less than 20-25%) recorded at the FMV of the stock when declared

```
Retained Earnings (@Stock FMV) 

Common Stock (distributable)

APIC - C/S

XXX

XXX

XXX

Stock @FMV
```

 Stock splits effected in the form of stock dividends - large stock dividends (usually more than 20-25%) recorded at the stock par value

```
Retained Earnings (@Stock Par) 

Common Stock (distributable) 

XXX 

Stock @Par
```

Stock Splits - old stock is exchanged for new stock; accounted for by adjusting par value of the new shares for the split by a memorandum entry - note that there is no J/E

- E.g., In a 2-1 (2-for-1) split, par value of 1,000 \$10 stocks will be replaced by 2,000 \$5 stocks
- Reverse stock split does the opposite by reducing the number of shares outstanding and proportionally increasing par value

Total S/E is

- Appropriation of retained earnings done when the a portion of retained earnings is appropriated (as a reserve) to meet certain contingent liabilities that may require large payments in the future; this makes the appropriated portion of retained earnings unavailable for dividends; however, total retained earnings remains unchanged
 - Considered a disclosure on the face of the F/S and is appropriate for reasonably possible costs
 or costs that are probable but not estimable; however, NOT used for probable and estimable
 losses which should be accrued on the I/S and reduce net assets
 - E.g., \$500,000 is appropriated from retained earnings for possible losses from pending lawsuits
 Retained earnings unappropriated
 Retained earnings reserve for lawsuits
 500,000
 - Whether the costs actually occur or not, the above entry is finally reversed (as if the costs occur) and the effects of the contingency will be reflected directly

VII E) Accumulated Other Comprehensive Income

- Accumulated Other Comprehensive Income reflects cumulative changes in net assets resulting from certain transactions not included in net income and not affecting retained earnings. Tax effects may be reported on each of the accounts or in the aggregate for the section. In certain cases, the items included in this section may be debit balances, resulting in contra-equity accounts being reported
- ➤ Includes {OCI = PACE*R*}:
 - Pension Adjustment
 - Available-for-sale securities (unrealized gains/losses)
 - Currency Translation gains/losses
 - Effective portion of Derivatives held as Cash Flow Hedges
 - **R**evaluation Surplus on intangible assets & fixed assets (IFRS only)

VII F) Treasury Stock

Authorized 15,000

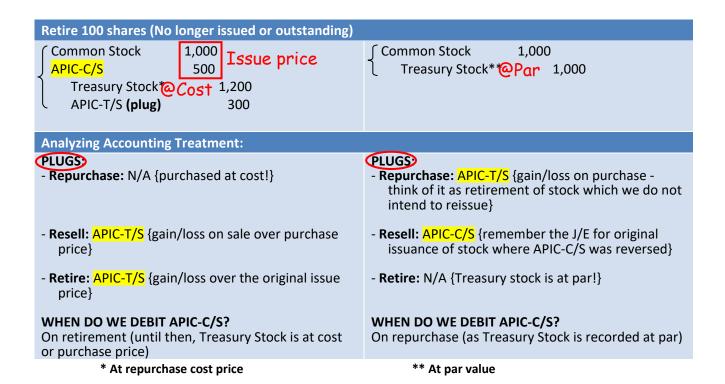
Issued 10,000

Outstanding 9,500

500 T/S

- Shares repurchased by the corporation but not retired (equals to the difference between issued & outstanding stock)
 - ✓ Not paid cash dividends, not voted
 - ✓ Reduces number of outstanding shares (authorized and issued, but not outstanding)
 - ✓ Do participate in stock dividends & stock splits
- 2 methods to account for Treasury Stock (total stockholders' equity remains same only the allocation within stockholders' equity is different):

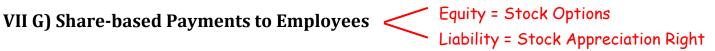
	ers equity is diffe	ii Circj.		
Cost Method {Cost In, Cost Out → Until Re	etirement}	Par Value Method (Le {Par In, Pa		
Account for treasury stock at repurc	chasecost	Account for treasury stock a retirement method as it trea retirement and resale as issued	ats repurchase as	
Treasury Stock reported separately deduction to stockholder's equity (c		Treasury Stock not reported amount of common stock (c		
Used if company intends to resell th	<mark>ie share</mark>	Used if company intends to hold shares indefinitely		
10,000 shares of \$10 par value issue	ed at \$15 per shar	e		
Cash 150,000 Common Stock 100,00 APIC-C/S 50,000				
Repurchased 500 shares @\$12				
Treasury Stock*@Cost 6,000 Cash 6,000 APIC-C/S APIC-T/S or R/E (plug) Cash 6,000 APIC-T/S (plug) 1,500				
{Like purchase of stock of any co.} Treat like Investment in co.	own stock!	{Like Retirement of stock when plug for excess/less than issue Treat like Retiren	price is APIC - T/S}	
Resell 100 shares @\$14				
Cash 1,400 Treasury Stock* 1,200 APIC - T/S (plug) 200	Sell the	Cash 1,400 Treasury Stock** APIC-C/S (plug)	1,000 400 Like new	
{Like sale of stock purchased; gains go to APIC-T/S}	Investment!	{Like Issuance of stock where Credit is Treasury Stock}	stock issued!	
Resell 300 shares @\$11		c. dair is Treasury Stocky		
Cash 3,300 APIC-T/S (plug) 200 R/E (plug) 100 Treasury Stock* 3,600		Cash 3,300 Treasury Stock** APIC-C/S (plug)	3,000 300	
{Like sale of stock purchased; losses go to APIC-T/S upto its existing of thereafter to R/E}	credit balance,	{Like Issuance of stock where Credit is Treasury Stock}	J	



• **B/S Presentation of Cost Method vs. Par Method** (assuming 500 stocks of \$10 par value repurchased at \$12; originally, 10,000 shares were issued at \$15)

Cost Method		Par Value Method (Legal/Stated Value)		
Common Stock at par	100,000	Common Stock at par	100,000	
Additional Paid-In Capital	50,000	Less: Treasury Stock at par Contra C/S	<u>(5,000)</u>	
Total Paid-In Capital	150,000	Common Stock outstanding at par	95,000	
Less: Treasury Stock at cost Contra S	/E (6,000)	Additional Paid-In Capital	<u>49,000</u>	
Total Stockholder's Equity	144,000	Total Stockholder's Equity	144,000	

- > Authorized, Issued & Outstanding Stock T/S = Issued (-) Outstanding
 - Authorized = Number of Stock that the corporation may legally issue per its charter
 - Issued = Part or all of the authorized stock which is issued
 - Outstanding = Part or all of the issued stock in the hand of the shareholders (Outstanding Stock is Issued Stock less Treasury Stock owned by the corporation)
- Book Value of Common Stock
 - Formula for Stockholder's Equity:
 - Total shareholders' equity
 - Preferred stock outstanding (at greater of call price or par value)
 - Cumulative preferred dividends in arrears
 - = Common stockholders' equity
 - Formula for Book Value per Common Stock = Common stockholders' equity on B/S # of Common Stock Outstanding



- > Rule SFAS 123R applies to share-based payment transaction wherein an entity acquires goods or services by issuing stock, stock options or other equity instruments
 - May be to employees or non-employees
 - ✓ Non-employees measured at FV of the equity instruments, or FV of goods & services, whichever is more reliable
 - ✓ Employees measured based on the FV of the equity instruments
 - May be considered **equity or liability**
 - ✓ Equity (e.g., stock options) Measured at FV of the securities. Measurement date = grant date
 - ✓ Liability (e.g., stock appreciation right) Measured at FV of the liability incurred. Measurement date = settlement/exercise date
- Stock options May be granted as inducements to employees to purchase company stock, but also as compensation in many cases
 - Entries are only recorded for the granting of compensatory stock options, so we need to first determine the character of the options
- ✓ Non-compensatory stock options Stock options granted widely with exercise prices that are in line with reasonable values for the stock. No entry is reported for the granting of non-No benefit compensatory options nor for their expiration; and the exercise of such options is recorded as a simple issuance of shares at the exercise price paid by the employee

E.g., If a company issues non-compensatory options granting all employees the right to buy shares in the company's \$10 par value stock for \$40 per share, the exercise of an option is reported as follows:

	Cash		40	
\exists		Common stock		10
l		APIC-CS		30

✓ Compensatory stock options - Stock options are targeted at specific employees and provide them with an exercise price that represents special benefits to them. Compensation expense reported by the company based on the estimated FV of the options when granted {Share-based payments classified as Equity → Measured at the FV of the securities → **Measurement date = Grant date**

Meant to compensate

today

- ⇒ The market price of the option is used, or it can be estimated using an option-pricing model. If it is not possible to estimate FV at grant-date, the compensation cost is measured using the intrinsic value at the end of each reporting period, and final compensation cost is measured at the settlement date
- ⇒ Under IFRS, all stock options are generally considered to be compensatory

- Option pricing models Measures the FV of the option as of the grant date; it is complicated by
 the fact that employee stock options are not traded on the open market and the need to make
 many assumptions (like exercise price of the option, expected life of the option, expected
 volatility of the underlying stock, expected dividends on the stock and risk-free interest rate
 during the expected option term)
 - ✓ Black-Scholes model (very complicated formula beyond the scope of the CMA exams)
 - ✓ **Binomial distribution model** Based on the expected cash flow method. Estimates are made as to the possibility of different price changes in the stock and decisions by employees to exercise, and a weighted average expectation is generated and discounted using interest rate assumptions

E.g., Assume that a company has stock selling at \$30 at the time they issue stock options to key employees giving them the right to purchase company stock at \$30 starting in 2 years and ending in 5 years. The risk-free interest rate is 5%, the present value of \$1 for 2 periods at 5% is 0.91, and the present value of \$1 for 5 periods at 5% is 0.78. The company estimates that 30% of the options will expire without being exercised, 50% will be exercised in 2 years, at their earliest possible date, with the stock selling at an average \$40 price, and that 20% of the options will be held as long as possible and exercised in 5 years, just before expiration, at an average \$50 price. The gain to the employees who exercise the options will be the amount by which the value of the stock received exceeds the exercise price on the date of exercise. Fair value of the option under the binomial distribution method is \$7.67:

<u>Result</u>	Stock Price	Exercise Price	<u>Gain</u>	<u>Factor</u>	PV	<u>%</u>	Weighted Value
Expire	-	-	-	-	-	30%	-
Exercise 2 Yrs	\$40	\$30	\$10	0.91	\$9.10	50%	\$4.55
Exercise 5 Yrs	\$50	\$30	\$20	0.78	\$15.60	20%	<u>\$3.12</u>
Fair Value							\$7.67

- Vesting period Period over which the employee is required to provide services. Compensation
 cost for share-based employee compensation classified as equity is amortized straight-line over
 the requisite service period; if exercisable immediately, expense the entire amount in first year
 - ✓ Cliff vesting schedule Options vest all at once (e.g., in the previous option pricing model example, 100% vests after 2 years of service)
 - ✓ Graded vesting schedule Options vest in piecemeal (e.g., 20% vested after 3 years of service and become 20% vested each year after that until 100% vested after 7 years)

Use FV on option grant date

Recording stock options - Once FV of stock options is computed, the company records APIC for
the option with an equal contra-APIC account to deferred compensation. Compensation
expense is recognized on a straight-line basis over the period of service required by the
employee before the option can be used. When the option is exercised, it is removed from the
books, and the common stock is treated as issued for the sum of the exercise price and carrying
amount of the option. If the option expires unused, it is transferred to another APIC account for
expired stock options.

E.g., Assume a company has granted an employee 1 option on 1/1/11, giving the employee the right to buy one share of the company's \$10 par value common stock for \$34, its current selling price. The option can be exercised after 1/1/13 if the employee remains in service to the company, and expires on 12/31/13. The company is using the fair value method, and the value at 1/1/11 using the binomial distribution model is estimated at \$6 per option.

On the date of grant, the entry is:

1/1/11

to employee

Option granted \[\text{APIC-Deferred compensation} \] APIC-Stock options outstanding 6@FV on option grant date

Since the employee must remain for 2 years before the option can be exercised, the compensation expense is allocated over that time:

12/31/11 & 12/31/12

Compensation expense I/S **APIC-Deferred compensation** 3 Recognize over required service period

If the employee exercises the option on 1/2/13, the entry is:

1/2/13

Employee exercises option

ſ	Cash	34	
	APIC-Stock options outstanding	6	
	Common stock		10
l	APIC-CS (plug)		30

If, on the other hand, the employee lets the option expire without ever using it, the entry is: 12/31/13

Option expires APIC-Stock options outstanding 6 **APIC-Expired stock options** 6

Disclosures

- ✓ Vesting requirements, maximum term of options granted and number of shares authorized for grants of options
- ✓ The number and weighted-average exercise of prices of each group of options
- ✓ Weighted average grant-date fair value of options granted
- ✓ Description of methods used and assumptions made in determining fair values of options
- ✓ Total compensation cost recognized for the year
- ✓ For O/S options, range of exercise prices
- ✓ For options that are being reported under the intrinsic method (only applicable to options granted before the effective date of SFAS 123R), Proforma disclosures of the impact on earnings if the FV method had been used

- ➤ Stock appreciation right (SAR) Allow employees to receive stock or cash equal in amount to the difference between the market value and some predetermined amount per share for a certain number of shares. Compensation expense is adjusted up or down as the market value of the stock changes before the measurement date (which is the exercise date). Therefore, compensation expense for each period is based on the change in FV of the instrument for each reporting period and could be credited if the stock's market value drops from one period to the next. {Share-based payments classified as Liability → Measured at FV of the liability incurred → Measurement date = settlement/exercise date }
 - **E.g.,** Assume the client has given its president 100 stock appreciation rights on 1/1/11, exercisable immediately and expiring on 12/31/15. The stock price on various dates was as follows:

1/1/11 \$20 12/31/11 \$23 12/31/12 \$28

In the first year, the stock increased \$3, entitling the president to \$300 on the 100 rights:

In the second year, the liability increases to \$800 based on the price increase to \$28, and an adjustment is required:

```
Compensation expense I/S 500Liability for appreciation rights 500
```

On the same day, the president decides to exercise the rights and receive payment:

```
Liability for appreciation rights 800

Cash 800
```

In some cases, the employee is not permitted to exercise the rights for a certain length of time, and this is treated as the service period for matching costs. In this case, the liability for the rights is based on the change in price multiplied by the fraction of the service period that has passed. If, in the above example, the rights were granted on 1/1/11 but could not be exercised before 1/1/13, the compensation expense and liability recorded at 12/31/11 would only be \$300 x 1/2 = \$150, since only 1/2 of the required service period had passed

VII H) Presentation of Stockholders' Equity

1) Presentation of Shareholders' Equity on B/S

> Stockholders' Equity portion of the Total Liabilities & Shareholders' Equity section of the B/S:

CAPITAL STOCK:			
Preferred stock, 10% cumulative, \$100 par value, authorized 5,000 shares, issued			
and outstanding 3,000 shares	300,000		
Common stock, \$10 par value, authorized 50,000 shares, issued 40,000 shares of			
which 3,000 are held in the treasury	400,000		
Common stock subscribed 5,000 shares	50,000		
Less: subscriptions receivable	(40,000)		
		710,000	
ADDITIONAL PAID-IN CAPITAL:			
From 10% cumulative preferred	XXX		
From common stock	XXX		
From retired stock	XXX		
From treasury stock transactions	XXX		
From warrants outstanding	XXX		
From stock options outstanding	XXX		
From expiration of stock options	XXX		
		XXX	
NON-CONTROLLING INTEREST in Subsidiaries		XXX	
RETAINED EARNINGS:			
Appropriated for bond indebtedness	XXX		
Free and unappropriated	XXX		
		XXX	
ACCUMULATED OTHER COMPREHENSIVE INCOME*:		XXX	
TOTAL STOCKHOLDERS' EQUITY:			\$XXX
LESS: TREASURY STOCK (only if under cost method) Contra S/E			<u>(XXX)</u>
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY			\$XXX

^{*} Components of Accumulated OCI (PACER) are disclosed either in a statement of changes in shareholders' equity or in the notes to F/S

- The presentation of stockholders' equity in a B/S may include as many as **7 categories**, presented in the following order:
 - Preferred stock
 - Common stock
 - Additional paid-in capital
 - Noncontrolling interest
 - Retained earnings
 - Accumulated other comprehensive income
 - Treasury stock, at cost
- Stock accounts are known as the legal capital of the corporation, and are listed from the most senior security (the one entitled to dividends first) to the most junior. If a company has one class of preferred stock and one class of common stock, the preferred stock is listed first.
- ➤ **Preferred stock** is shown at the total par (or stated) value of shares issued less shares held in treasury under the par value method. On the face of the B/S as part of the account name, the company must disclose:
 - Par value per share
 - Liquidation value per share (if different from par value)
 - Dividend preference rate or amount per share
 - Cumulative (if applicable)
 - Participating (if applicable)
 - Shares authorized
 - Shares issued
 - Shares outstanding
- ➤ **Common stock** is also shown at the total par value of shares issued less shares held in treasury under the par value method. On the face of the B/S as part of the account name, the company must disclose:
 - Par value per share
 - Shares authorized
 - Shares issued
 - Shares outstanding
- Additional paid-in capital is listed immediately after the stock accounts, and includes all contributed capital in excess of the legal capital of the company. Some of the types of APIC are from:
 - Preferred stock
 - Common stock
 - Retired stock
 - Treasury stock
 - Warrants
 - Employee stock options (less deferred compensation)
 - Expired stock options

- Noncontrolling interest arises when consolidated F/S are prepared, and represents the portion of net assets of an Acquiree (subsidiary) that are not owned by the consolidated entity. Arises as a result of an acquisition (purchase) of less than 100% of another business
 - Noncontrolling interest at acquisition = active market price of the acquiree's shares on the acquisition date x the number of shares held by the controlling parties
 - Noncontrolling interest must be reported in the equity section of the consolidated B/S
 - In the I/S, consolidated net income is adjusted to disclose the net income or loss attributed to the noncontrolling interest. Comprehensive income is also adjusted to include the comprehensive income attributed to the noncontrolling interest
- Retained earnings is reported next. The details of the changes in the account are reported in a separate Statement of Retained Earnings, which might appear as follows:

XYZ Corporation Statement of Retained Earnings	
For the Year Ended December 31, 2011	
Retained earnings, 12/31/10 - as previously reported	\$600
Prior period adjustment to correct inventory, net of \$80 taxes	120
Retained earnings, 1/1/11 - adjusted	720
Net income for the year ended 12/31/11	260
Less dividends	(100)
Retained earnings, 12/31/11	880

- Accumulated other comprehensive income (OCI = PACE), which reflects cumulative changes in net assets resulting from certain transactions not included in net income and not affecting retained earnings. Tax effects may be reported on each of the accounts or in the aggregate for the section. In certain cases, the items included in this section may be debit balances, resulting in contra-equity accounts being reported. Includes:
 - Pension Adjustment
 - Available-for-sale securities (unrealized gains/losses)
 - Currency Translation gains/losses
 - Effective portion of Derivatives held as Cash Flow Hedges
- Treasury stock is presented last on the B/S, but only for stock that is being held under the cost method (treasury shares held under the par value method are netted directly against the stock accounts presented earlier). It is always a contra-equity account. Included in the account name must be disclosures of:
 - Number of shares held
 - Indication that the shares are reported at cost

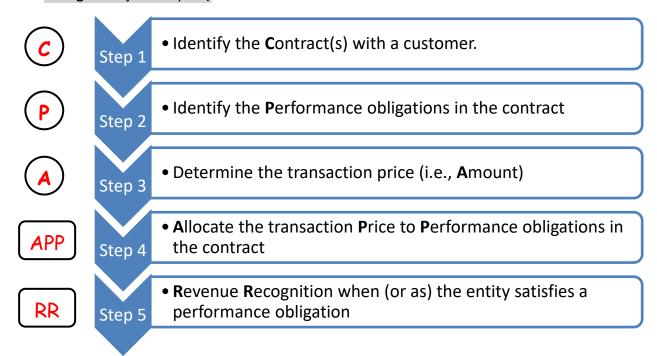
2) Statement of Changes in Stockholders' Equity

- The statement of changes in stockholders' equity provides specific information about changes in an entity's primary equity components, including capital transactions and distributions to shareholders, reconciliation of retained earnings, and reconciliation of the carrying amount of each class of equity capital, paid-in capital, and accumulated other comprehensive income
- Under US GAAP, Statement of Changes in Stockholders' Equity may be presented as a primary F/S
 OR in the notes to the F/S. However, SEC requires its presentation as primary F/S
 - Under IFRS (as with the SEC), Statement of Changes in Stockholders' Equity is presented as primary F/S

(This page is left blank for any reference notes)

VIII) Revenue Recognition

- ➤ Revenue from Contracts with Customers Entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services
 - 5-step approach: {Complicated? Don't you worry Miles has a **CPA APP** for **Revenue Recognition** just for you!}



Note:

- This section reflects FASB's new revenue recognition standards which are effective Dec 15, 2017, for public entities and Dec 15, 2018, for non-public entities. These new standards were worked upon jointly by the FASB and IASB; therefore, US GAAP and IFRS rules are very similar (with only some minor differences).
- Previous revenue recognition guidance in US GAAP comprised broad revenue recognition concepts together with numerous revenue requirements for particular industries or transactions, which sometimes resulted in different accounting for economically similar transactions. Therefore, the new standards are intended to:
 - Remove inconsistencies and weaknesses in revenue requirements
 - Provide a more robust framework for addressing revenue issues
 - Improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets
 - Provide more useful information to users of F/S through improved disclosure requirements
 - Simplify preparation of F/S by reducing the number of requirements to which an entity must refer

Step 1: Identify the Contract(s) with a customer



- Contract Agreement between two or more parties that creates enforceable rights & obligations
 - Need to meet ALL of the below criteria: {AICIC: All say "I Commit" & "I Commit"}
 - Approval & commitment of all the parties to the contract (in writing, orally, or in accordance with other customary business practices)
 - Identification of rights of each party regarding the goods/services to be transferred Commercial substance existent in the contract (i.e., risk, timing, or amount of the entity's future cash flows is expected to change as a result of the contract)
 - Identification of payment terms Collectibility is probable; need to consider only the customer's ability and intention to pay the amount of consideration when it is due
 - Criteria assessment needs to be performed at contract inception; and, if all criteria are met, reassessment not needed unless there is a significant change in facts & circumstances
 - E.g., If a customer's ability to pay the consideration deteriorates significantly, an entity would reassess whether collectibility is probable
- E.g., If the above criteria are not met but consideration is received from the customer:

\$ received but Recognize revenue if EITHER of the below is true: collectibility not probable [2nd C of A-IC] IC not metl

- ⇒ Entity has no remaining obligations to transfer goods/services AND all (or substantially all) of the consideration is received and is non-refundable, or
- ⇒ Contract has been terminated AND consideration received is non-refundable Else, recognize as liability until revenue can be recognized (either when the criteria is met or above events occur)

[Note: Earlier US GAAP rules allowed use of Installment Method or Cost Recovery Method of accounting in rare cases if receivables are collectible over an extended period of time, and there is no reasonable basis for estimating collectibility. But these are no longer allowed. Under new rules, need to follow the above revenue recognition rules if consideration is received from the customer while collectibility for remaining dues is not probable]

- Combination of contracts If two or more contracts are entered into with the same customer at/near the same time, combine them (i.e., account as one contract) if ANY of the below is met:
 - Contracts are negotiated as a package with a single commercial objective
 - Amount of consideration to be paid in one contract depends on the price or performance of the other contract
 - Goods/services promised in the contracts (or some goods/services promised in each of the contracts) are a single performance obligation
- > Contract modifications Change in scope or price (or both) of a contract that is approved by the parties. Accounted as a separate contract if BOTH of the following conditions are present:
 - Scope of contract increases due to promise of additional goods/services that are distinct
 - Price of contract increases by an amount of consideration that reflects the entity's standalone selling prices (less any adjustments/discounts) of the additional goods/services

Example on Identifying the Contract – Recording the transactions:

ABC Co. enters into a contract to transfer goods to XYZ Co. on Jan 1, 20X1 for \$25,000 (such that the contract meets all requisite criteria). On Mar 31, 20X1, per contract terms, XYZ pays an advance of \$20,000 to ABC. On Apr 30, 20X1, ABC delivers the goods to XYZ (whereby ABC's manufacturing costs are \$14,000). XYZ makes the full and final payment on May 30, 20X1. Pass journal entries in the books of ABC for the above transaction.

Solution:

Jan 1, 20X1: No entry recorded as neither party has performed as per the contract

Mar 31, 20X1: Deferred/Unearned Revenue is recognized by ABC on receipt of the cash advance:

Cash 20,000

Deferred/Unearned Revenue 20,000

Apr 30, 20X1: Revenue is recognized by ABC when goods are transferred to XYZ

 Deferred/Unearned Revenue
 20,000

 A/R (XYZ Co.)
 5,000

 Revenue
 25,000

 Cost of Goods Sold (COGS)
 14,000

 Inventory
 14,000

May 30, 20X1: Amount due from XYZ is received

Cash 5,000 A/R (XYZ Co.) 5,000

Example on Identifying the Contract – Collectibility of the consideration:

Kimco Developers enters into a contract with Hill-Mart for the sale of a building for \$500,000. Kimco's cost of the building is \$300,000.

Hill-Mart intends to open a retail store in the building. However, new retail stores in the area face high levels of competition, and Hill-Mart has little experience in the retail industry.

Hill-Mart pays a non-refundable deposit of \$50,000 at inception of the contract and enters into a long-term financing agreement for the balance amount. The financing arrangement is provided on a nonrecourse basis, which means that if Hill-Mart defaults, Kimco can repossess the building but cannot seek further compensation from Hill-Mart, even if the collateral does not cover the full value of the amount owed.

Though Hill-mart obtains control of the building at contract inception, Kimco concludes that collectibility is not probable because Hill-mart's ability and intention to pay appeared to be in doubt. How should Kimco account for the transaction?

Therefore, no contract!

Solution:

Regarding sale value of \$500,000, Kimco cannot recognize revenue as the agreement between Kimco and Hill-Mart does not meet all of the A-IC-IC criteria for a contract (since second C is not met).

Regarding non-refundable deposit of \$50,000, Kimco cannot recognize as revenue as neither the criteria for contract is met nor any of the below events have occurred (what has not yet occurred has been underlined below):

- Entity has no remaining obligations to transfer goods/services AND <u>all (or substantially all) of the</u> consideration is received and is non-refundable, or
- Contract has been terminated AND consideration received is non-refundable

Therefore, the non-refundable deposit is accounted for as a deposit liability as below:

Cash 50,000
Deposit Liability 50,000



Step 2: Identify the Performance obligations in the contract

- **Performance obligation** Promise in a contract to transfer a good/service to the customer
 - If an entity promises in a contract to transfer more than one good/service to the customer, the entity should account for each promised good/service as a performance obligation only if it is (either of the below):
 - ✓ Distinct good/service, or
 - ✓ Series of distinct goods/services that are substantially the same and have the same pattern of transfer
 - Good/service that is not distinct should be combined with other promised goods/services until the entity identifies a bundle of goods or services that is distinct
- > **Distinct good/service** If both of the following criteria are met:
 - Capable of being distinct <u>Customer can benefit</u> from the good/service either on its own or together with other resources that are readily available to the customer
 - Distinct within the context of the contract The promise to transfer the good/service is separately identifiable from other promises in the contract
 - ✓ Factors that indicate that an entity's promises to transfer two or more goods/services to a customer are <u>not</u> separately identifiable include: <u>not</u> if
 - ⇒ Goods/services are highly dependent or interrelated
 - ⇒ Entity provides a significant service of <u>integrating goods/services</u> with other goods/services promised in the contract into a bundle of goods/services that represent the <u>combined output(s)</u> for which the customer has contracted
 - Basically, entity is using the goods/services as inputs to produce or deliver the combined output(s) specified by the customer
 - ⇒ One or more of the goods/services <u>significantly modifies or customizes other</u> good(s)/service(s) promised in the contract

Example on Identifying the Performance Obligation – Single Performance Obligation:

BuildCo, a contractor, enters into a contract to build a shopping mall for a customer. BuildCo is responsible for the overall management of the project and identifies various goods/services, including engineering, site clearance, foundation, procurement, construction of the structure, piping and wiring, installation of equipment, and finishing. Identify the performance obligation(s) in the contract.

Solution:

For goods/services to be distinct, both of the following criteria must be met:

- Capable of being distinct Customer can benefit from the good/service either on its own or together with other resources that are readily available to the customer
- Distinct within the context of the contract The promise to transfer the good/service is separately identifiable from other promises in the contract

Although the goods/services provided by BuildCo are "capable of being distinct" [given the fact that BuildCo, or competitors of Buildco, regularly sells many of these goods and services separately to other customers], they are not "distinct within the context of the contract" – i.e., not separately identifiable [given the fact that BuildCo provides a significant service of integrating the goods/services (the inputs) into the shopping mall (the combined output) for which the customer has contracted]

Example on Identifying the Performance Obligation – "Distinct" Performance Obligations:

Infosoft, a software developer, enters into a contract with a customer to transfer a software license, perform installation, and provide unspecified software updates and technical support (online and telephone) for a 5-year period for \$500,000. Infosoft sells the license, installation, updates and support separately. The installation service includes changing the web screen for each type of user (e.g., marketing, inventory management, and information technology). The installation service is routinely performed by other entities and does not significantly modify the software. The software remains functional without the updates and the technical support. Identify the performance obligation(s) in the contract.

Solution: "Distinct"

Infosoft identifies four performance obligations in the contract for the following goods or services:

- 1. Software license
- 2. Installation service
- 3. Software updates
- 4. Technical support

Step 4 (App) = Allocate the \$500K Price to these Performance obligations

Basis for Infosoft's assessment: Goods/services are distinct as both of the following criteria must be met:

- "Capable of being distinct" Software license is delivered before the other goods and services and
 remains functional without the updates and the technical support. Thus, Infosoft concludes that the
 customer can benefit from each of the goods/services either on their own or together with the other
 goods and services that are readily available
- "Distinct within the context of the contract" (i.e., separately identifiable) Infosoft determines that the promise to transfer each good and service to the customer is separately identifiable because:
 - Software and services are not highly dependent or interrelated
 - Infosoft does <u>not</u> provide a significant service of integrating the software and services into a combined output (i.e., <u>not</u> a combined output)
 - Software and the services do <u>not</u> significantly modify or customize each other In particular, Infosoft observes that:
 - Although it integrates the software into the customer's system, the installation services do not significantly affect the customer's ability to use and benefit from the software license because the installation services are routine and can be obtained from alternate providers
 - The software updates do not significantly affect the customer's ability to use and benefit from
 the software license because the software updates in this contract are not necessary to ensure
 that the software maintains a high level of utility to the customer during the license period

Step 3: Determine the transaction price (i.e., Amount)



- ➤ Transaction price Amount of consideration (e.g., payment) to which the entity expects to be entitled in exchange for transferring promised goods/services to a customer (exclude amounts collected on behalf of third parties). To determine transaction price, consider the effects of:
 - Variable consideration Determine the amount to include in the transaction price by estimating either the expected value (i.e., probability-weighted amount) or the most likely amount, whichever better predicts the amount of consideration
 - ✓ Constraining estimates of variable consideration Include estimate of variable consideration only if probable that a significant revenue reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved
 - Existence of a significant financing component

 Adjust the transaction price for the effects of time value of money if the agreed timing of the payments provides the customer/entity with a significant benefit of financing for the transfer of goods/services to the customer
 - ✓ Recognize revenue based on the amount that would have been paid in cash by the customer at the time of transfer of goods/services (after adjustment for time value of money)
 - ✓ Need <u>not assess if customer payment is expected within one year</u> of the transfer of goods/services
 - Non-cash consideration Measure at <u>fair value</u> at contract inception
 - Consideration payable to the customer Any consideration paid/payable to the customer (e.g., credit, a coupon, or a voucher) should be accounted for as a <u>reduction of the transaction price</u>; unless the customer is also selling distinct good/service to the entity

Example on Determining the transaction price (i.e., Amount) – Time Value of Money:

Times Co. delivered capital equipment to Lag Inc. on Jan 1, Year 1, for \$100,000. Per the contract, Lag needs to pay the amount by Dec 31, Year 3 (i.e., 3 years credit without any interest). Times' cost of capital is 10%. Determine the transaction price for the sale of capital equipment.

Solution:

Since customer payment is expected beyond 1 year, need to consider time value of money. Therefore, transaction price = $$100,000 \times 1/(1.10)^3 = $75,131$

Note that the balance will be recognized as interest income over 3 years as follows:

Year 1: \$75,131 x 10% = \$7,513

Year 2: (\$75,131 + \$7,513) x 10% = \$8,265

Year 3: (\$75,131 + \$7,513 + \$8,264) x 10% = \$9,091

Total interest income = \$24,869



Step 4: Allocate transaction Price to Performance obligations in contract

- For a contract with more than one performance obligation, allocate the transaction price to each performance obligation
 - To meet the allocation objective, an entity shall allocate the transaction price to each
 performance obligation identified in the contract on a relative standalone selling price basis of
 each distinct good/service promised in the contract
 - ✓ If a standalone selling price is not observable, need to estimate it
 - Sometimes, the transaction price includes a discount or variable consideration that relates entirely to one of the performance obligations in a contract; and entity may need to allocate the discount or variable consideration to one (or some) performance obligation(s) rather than to all performance obligations in the contract
 - Any subsequent changes in transaction price Allocate on the same basis as at contract inception. Also, amounts allocated to a satisfied performance obligation should be recognized as revenue (or reduction of revenue) in the period in which transaction price changes

Example on Identifying the Performance Obligation – "Distinct" Performance Obligations:

Infosoft, a software developer, enters into a contract with a customer to transfer a software license, perform installation, and provide unspecified software updates and technical support (online and telephone) for a 5-year period for \$500,000. Infosoft sells the license, installation, updates and support separately and has concluded that these are distinct performance obligations. Software license is usually sold for \$400,000, installation service for \$50,000, software updates for \$20,000 per year and technical support for \$50,000 per year. How should Infosoft recognize revenue given contract price was fully paid by the customer on installation of software on Jan 1, Year 1?

Solution:

Fair value of the contract = $$400,000 + $50,000 + ($20,000 \times 5) + ($50,000 \times 5) = $800,000$

Allocating transaction price to performance obligations in the contract on a relative standalone selling price basis:

```
1. Software license = $400,000/$800,000 x $500,000 = $250,000 | Revenue recognized now  
2. Installation service = $50,000/$800,000 x $500,000 = $31,250 | Revenue recognized now  
3. Software update = $100,000/$800,000 x $500,000 = $62,500 | Revenue recognized over 5 yrs  
4. Technical support = $250,000/$800,000 x $500,000 = $156,250 | Revenue recognized over 5 yrs
```

Jan 1, Year 1: Recording the \$500,000 payment received on installation of software [note that revenue for software license and installation service is recognized at the "point in time (i.e., when control is transferred to customer)" whereas revenue for software updates and technical support needs to be recognized "over time"]:

```
Cash 500,000
License Revenue 250,000
Service Revenue 31,250
Deferred/Unearned Service Revenue 218,750
Liability
```

Dec 31, Year 1: Recognizing revenue for software updates and technical support for Year 1 (note that the remaining amount for software updates and technical support revenue will be recognized over Years 2-5):

```
Deferred/Unearned Service Revenue 43,750 1/5 of Liability =
Service Revenue 43,750 Revenue every year
```

Step 5: Revenue Recognition when entity satisfies performance obligation

- **Revenue Recognition** An entity should recognize revenue when (or as) it satisfies a performance obligation by transferring a promised good/service to a customer
 - Good/service is transferred when (or as) the customer obtains control of that good/service
- For each performance obligation, determine if it is satisfied "over time" (typically, promises to transfer services); else, consider satisfied at a "point in time" (typically, promises to transfer goods)
 - Satisfied "over time"

one

✓ If one of the following criteria is met:

- ⇒ Entity's performance <u>creates or enhances an asset</u> (e.g., work in process) that the customer controls as the asset is created or enhanced
- ⇒ Entity's performance does not create an asset with an alternative use to the entity, and the entity has an enforceable right to payment for performance completed to date
- ✓ For each performance obligation satisfied "over time", an entity shall recognize revenue "over time" by consistently applying a method of measuring the progress toward complete satisfaction of that performance obligation. Appropriate methods include:
 - ⇒ Output methods Recognize revenue on the basis of value of the goods/services transferred-to-date to the customer <u>relative to</u> the remaining goods or services promised under the contract
 - ⇒ Input methods Recognize revenue on the basis of the entity's efforts/inputs (e.g., resources consumed, labor hours expended, costs incurred, time elapsed, machine hours used) relative to the total expected inputs to satisfy the performance obligation
- If not satisfied "over time", considered satisfied at a "point in time" E.g., Software license, installation
 - ✓ To determine the "point in time" at which to recognize revenue, need to consider indicators of the transfer of control, which include the following:
 - ⇒ Entity has a present right to payment for the asset
 - ⇒ Customer has legal title to the asset
 - ⇒ Entity has transferred physical possession of the asset
 - ⇒ Customer has the significant risks and rewards of ownership of the asset
 - ⇒ Customer has accepted the asset

Example on Revenue Recognition – Performance Obligations satisfied "over time":

O2 Co. owns golf clubs and allows its customers unlimited use and access of its golf clubs for \$18,000 per year. O2's promise to the customer is to provide a service of making the golf clubs available for the customer to use as and when the customer wishes, and the extent to which the customer uses the golf clubs does not affect the amount of the remaining goods & services to which the customer is entitled. How should O2 recognize revenue?

Solution:

O2's customers simultaneously receive and consume the benefits of O2's performance as O2 performs by making the golf clubs available (regardless of whether the customers use it or not). Therefore, O2's performance obligation is satisfied "over time".

Since the customers benefit from O2's service of making the golf clubs available evenly throughout the year, O2's best measure of progress toward complete satisfaction of the performance obligation "over time" is a time-based measure, and it should recognize revenue on a straight-line basis throughout the year at \$1,500 per month.

Example on Revenue Recognition – Performance Obligations satisfied "over time" vs. at a "point of time":

Samuel Co. is developing a multi-unit residential complex. Samuel enters into a binding sales contract with 2 customers (Xavier and Yulia) for 2 different specified units that are under construction. Each unit has a similar floor plan and is of a similar size, but other attributes of the units are different (e.g., the location of the unit within the complex). Determine, for each of the following 2 contracts, whether Samuel satisfies the performance obligation "over time" or at a "point of time".

Contract with Xavier - Samuel does not have enforceable right to payment for performance completed to date: Xavier pays a deposit upon entering into the contract, and the deposit is refundable only if Samuel fails to complete construction of the unit in accordance with the contract. The remainder of the contract price is payable on completion of the contract when Xavier obtains physical possession of the unit. If Xavier defaults on the contract before completion of the unit, Samuel only has the right to retain the deposit.

<u>Solution:</u> Samuel determines that it does not have an enforceable right to payment for performance completed to date (i.e., until construction of the unit is complete, Samuel only has a right to the deposit paid by Xavier). Therefore, Samuel accounts for the sale of the unit as a performance obligation satisfied at a "point in time" which is after the construction of the unit is complete.

Contract with Yulia - Samuel has an enforceable right to payment for performance completed to date:

Yulia pays a non-refundable deposit upon entering into the contract and will make progress payments during construction of the unit. The contract has substantive terms that preclude Samuel from being able to direct the unit to another customer. In addition, Yulia does not have the right to terminate the contract unless Samuel fails to perform as promised. If Yulia defaults on its obligations by failing to make the promised progress payments as and when they are due, Samuel would have a right to all of the consideration promised in the contract if it completes the construction of the unit. The courts have previously upheld similar rights that entitle developers to require the customer to perform, subject to the developer meeting its obligations under the contract.

<u>Solution:</u> The performance obligation is **satisfied "over time"** as the contract satisfies the condition – "Entity's performance does not create an asset with an alternative use to the entity, and the entity has an enforceable right to payment for performance completed to date". Note:

- Asset (unit) created by Samuel's performance does not have an alternative use to Samuel because the
 contract precludes it from transferring the specified unit to another customer, and
- Samuel has a right to payment for performance completed to date

- Costs to Obtain or Fulfill a Contract with a Customer
 - <u>Incremental costs</u> of obtaining a contract Costs that the entity would <u>not</u> have incurred if the contract had not been obtained

Asset if ✓ Recognize as an asset the incremental costs that are expected to be recovered

- ⇒ As a practical expedient, an entity may expense these costs when incurred if the unless amortization period is one year or less
- <u>Costs</u> incurred infulfilling a contract To account for the costs of fulfilling a contract with a customer, apply specific GAAP requirements (e.g., GAAP rules for inventory, software costs, PP&E)
 - ✓ Otherwise, recognize as an asset the costs to fulfill a contract if those costs meet all of the following criteria:

Asset only if all 3 criteria

- ⇒ Relate directly to a contract (or a specific anticipated contract)
- ⇒ Generate or enhance resources of the entity that will be used in satisfying performance obligations in the future
 - ⇒ Are expected to be recovered

Example on Incremental costs of Obtaining a contract:

IBM Co., a consultant, wins a competitive bid to provide IT services to Clark Co. for a term of 4 years (which IBM anticipates to be renewed for two subsequent 1-year periods). IBM incurred the following costs to obtain the contract:

\$25,000

External legal fees for due diligence Travel costs to deliver proposal Commissions to sales employees Total costs incurred

\$20,000 \$15,000 Asset \$60.000

Determine the costs to be capitalized (i.e., recognized as an asset).

Solution:

Recognize as Asset: Commissions to sales employees (\$15,000) as IBM expects to recover those costs through future fees for consulting services. These would be amortized over the 6-year period (i.e., the 4-year contract term and two anticipated 1-year renewal periods) that IBM expects to provide related IT services. [However, note that had there been discretionary "bonuses" which are not incremental to the contract, those would have been expensed.]

Expense: External legal fees for due diligence (\$25,000) and travel costs (\$20,000) as these would have been incurred even if IBM did not get the contract.

Example on Costs incurred in Fulfilling a contract:

Further to obtaining the contract IBM Co. (per the previous example) but before providing the services, IBM designs and builds a technology platform for IBM's internal use that interfaces with Clark's systems. That platform is not transferred to Clark but will be used to deliver services to Clark.

Initial costs incurred by IBM to set up the technology platform are as follows:

Design services \$50,000 Enhances IBM's resources, and expected to be recovered Migration/testing data center \$60,000 Enhances IBM's resources, and expected to be recovered

Hardware \$70,000 PP&E

Software \$80,000 Costs incurred in development stage

Total costs incurred \$260,000 Asset

Additionally, IBM assigns one employee who receives annual salary of \$75,900 and who is primarily responsible for providing the services to Clark (but does not generate/enhance resources of IBM). The employee spends 80% of her time on the Clark engagement and 20% of her time supporting other customers.

Determine the costs to be capitalized (i.e., recognized as an asset).

Solution:

Recognize as Asset:

- Costs of design (\$50,000) and migration/testing of the data center (\$60,000) capitalized as an asset as they meet all required criteria (i.e., relate directly to a contract, generate/enhance resources of the entity, AND are expected to be recovered). These would be amortized over the 6-year period (i.e., the 4-year contract term and two anticipated 1-year renewal periods) that IBM expects to provide related IT services.
- Hardware costs (\$70,000) capitalized as PP&E, and would be depreciated over the useful life.
- Software costs (\$80,000) capitalized as Internal-use Software costs since these have been incurred in the development stage, and would be amortized.

Expense: Though the employee salary is incurred as part of providing the service to Clark, IBM concludes that these costs do not generate/enhance resources of the entity; therefore, recognized as payroll expense when incurred.

Contract Asset vs. Contract Liability

- Contract Asset Right to consideration in exchange for goods/services transferred to a customer when that right is conditioned on something other than the passage of time (e.g., the entity's future performance)
 - ✓ **Note**: If the right is unconditional (i.e., conditioned only on passage of time), present as A/R

Example on Contract Asset and A/R:

On Jan 1, 20X1, Adam Co. enters into a contract with XYZ Co. to transfer Equipment A and Equipment B for a total price of \$8,000, and agreement that consideration will be due only after both equipment are transferred to XYZ. Equipment A is delivered on Mar 31, 20X1, and Equipment B on Jun 30. Stand-alone prices of Equipment A and B are \$3,500 and \$4,500 respectively. Pass the journal entries.

Solution:

Mar 31, 20X1 (Transfer of Equipment A): Since consideration is not yet due (as only Equipment A is transferred), Adam recognizes a contract asset (and not a receivable from XYZ):

```
Contract Asset $3,500
Revenue $3,500
```

Jun 30, 20X1 (Transfer of Equipment B): Adam now recognizes a receivable from XYZ:

Receivable (XYZ Co.) \$8,000

Contract Asset \$3,500

Revenue \$4,500

• **Contract Liability** - Obligation to transfer goods/services to a customer for which the entity has received consideration (or the amount is due) from the customer (i.e., either the customer has paid in advance or the payment from customer is due before transfer of goods/services)

Example on Revenue Recognition – Sale with Right of Return:

On Jan 1, 20X1, Luke Co. enters into a cancellable contract to transfer a product to Claire Co. for \$9,000. Claire pays advance consideration on Mar 1, 20X1 as per terms of contract. Luke transfers the product on May 1, 20X1. Pass journal entries.

Solution:

Mar 1, 20X1: Cash received in advance of performance

Cash \$9,000
Deferred/Unearned Revenue \$9,000 [Contract Liability recorded]

May 1, 20X1: Luke satisfies performance

Deferred/Unearned Revenue \$9,000 [Contract Liability reversed off]

Revenue \$9,000

- Disclosures Disclose sufficient information to enable users of F/S to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers
 - Qualitative and quantitative information is required about:
 - ✓ Contracts with customers including revenue and impairments recognized, disaggregation of revenue, and information about contract balances and performance obligations
 - ✓ Significant judgments and changes in judgments determining the timing of satisfaction of performance obligations (over time or at a point in time)
 - ✓ Assets recognized from the costs to obtain or fulfill a contract

Note on Expense Recognition:

Expenses are generally recognized when economic benefits are consumed or assets lose future benefits (generally follows the Matching Principle)

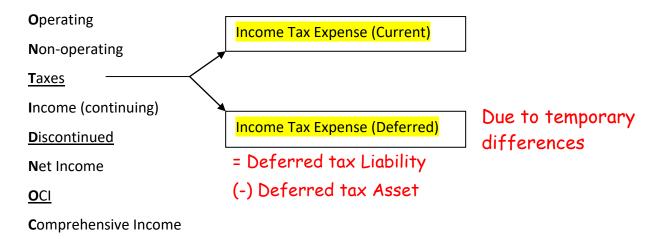
- Expenses may be "matched" to the associated revenues (e.g., product costs like COGS)
- Expense may be recognized when cash is spent or liability incurred (e.g., period costs like SG&A)
- Expenses may be allocated by systematic and rational procedures to periods benefitted (e.g., period costs like depreciation, insurance)

IX) Deferred Taxes

X A) Understanding Deferred Taxes

- In the US, 2 separate sets of accounts are maintained -
 - F/S governed by FASB GAAP rules
 - Income tax returns governed by IRS tax code
- > Differences between book and taxable income result from
 - Permanent differences which occur when a revenue or expense item is included in book income OR taxable income, not both
 - Temporary differences which occur due to items which will reverse themselves in a matter of time (timing difference)
 - ✓ Future taxable amounts included in book income (deferred tax liabilities which signify additional tax liability to IRS in the future)
 - ✓ Future deductible amounts included in book income (deferred tax assets which signify reduced tax liability to IRS in the future)
 - Income Tax Expense (deferred) is reported using the 'Liability method' where the I/S figure flows from B/S calculations of deferred tax asset & liability {think of it as the B/S is prepared first, then I/S}
 - Income Tax Expense = Income Tax Expense (current) + Income Tax Expense (deferred), where
 - ✓ Income Tax Expense (current) = Current Taxable Income x Current Tax rate
 - ✓ Income Tax Expense (deferred) = Deferred Tax Liability for the year Deferred Tax Asset for the year

Statement of Earnings & Comprehensive Income (ON-TID-NO-C):



No tax impact later = No deferred taxes

XB) Permanent Differences

Affects "current" taxes only

- > Permanent Differences are items of revenue and expense that are not taxable or deductible under present law; Appear either on F/S OR Tax return, not both
- No deferred taxes need to be recognized as there are no future tax consequences
- May be added or subtracted from book pre-tax income to arrive at book taxable income:
 - Subtract: Income for GAAP but **non-taxable** by IRS
 - Add: Deduction under GAAP but **non-deductible** under IRS rules

	GAAP F/S - Included?	IRS Tax return - Included?	+/- from GAAP pre-tax income
Revenues under GAAP non-taxable under IRS r	ules		
State & municipal bond interest income	Yes	No	(-)
Life insurance proceeds on officer's key man policy	Yes	No	(-)
Expenses under GAAP non-deductible under IR	S rules		
Fines, penalties, bribes, kickbacks	Yes	No	+
Nondeductible portion of meal (50%) and entertainment expense	Yes	No	+
Life insurance premiums when corporation is beneficiary	Yes	No	+
Excess percentage depletion over cost depletion	Yes	No	+
Investment interest expense (in excess of Investment Income)	Yes	No	+
Special Tax Allowances under IRS rules			
Dividend Received Deductions	No	Yes	(-)

XC) Temporary Differences Affects "current" & "deferred" taxes

> Temporary differences occur due to items which will reverse themselves in a matter of time (timing difference) and affect the deferred tax computation by creating deferred tax assets & liabilities

Book

- **Deferred tax liabilities** are **expected future tax liabilities** arising due to temporary differences
- Income 1 Future taxable income expected to be greater than future book income (in other words, more book income today); therefore, taxes not paid today will increase future tax liability {Mnemonic for deferred tax Liabilities = More Book income today \rightarrow Like Miles' Books?}
 - √ E.g., Tax incurred today, but to be paid later = Liability due
 - ⇒ Straight-line depreciation for books vs. Accelerated depreciation for tax
 - ⇒ Investment accounted for under equity method for books vs. cost method for tax
 - ⇒ Accrual sales for books vs. Installment sales for tax
 - ⇒ Prepaid expenses for books vs. Cash basis for tax
 - ⇒ Goodwill tested for impairment for books vs. 15-year amortization for tax

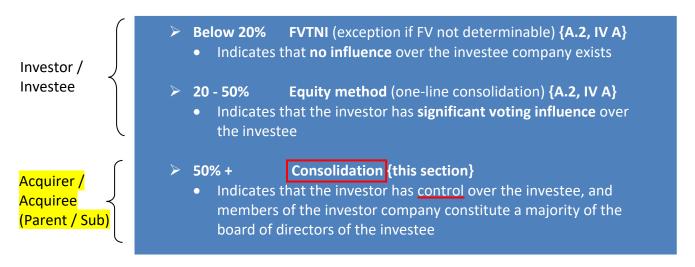
Tax

- Deferred tax assets are expected future tax benefits arising due to temporary differences
 - Future taxable income expected to be lesser than future book income (in other words, more tax income today); therefore, taxes paid today will reduce future tax liability {Mnemonic for deferred tax Assets = More Tax income today \rightarrow Allocate More Time}
 - ✓ E.g., Tax to be incurred later, but paid today = Prepaid Asset
 - ⇒ Bad debt expense allowance for books vs. Direct write-off for tax
 - ⇒ Warranty expense allowance for books vs. Warranty expense payouts for tax
 - ⇒ Rent, Royalty & Interest received in advance for books vs. taxable when received for tax
 - ⇒ Contingent liabilities (probable & reasonably estimable) accrued for books, not for tax
- Use future enacted rate for measuring deferred tax assets & liabilities; may use current rate if future enacted rate not specified or known (but NOT anticipated, proposed or unsigned rates)
 - Need to adjust for changes in enacted rate as a component of Income Tax Expense (deferred) whenever known
 - Under IFRS, may use enacted OR substantially enacted rate

X) Business Combinations & Consolidations

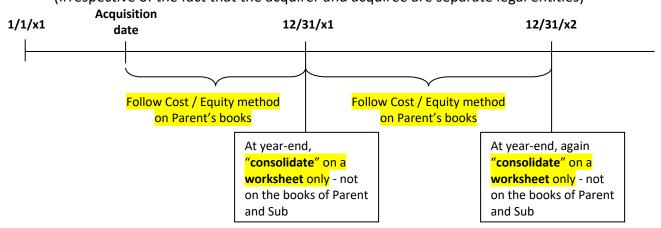
- "Combinations" => Refers to Mergers or Acquisitions of business entities
 - ✓ Merger = Only one legal entity survives
 - ✓ Acquisition = Acquirer and Acquiree survive as separate legal entities but their accounts are consolidated for accounting purposes

"Consolidations" => Refers to consolidation of F/S of Acquirer and Acquiree under the economic entity concept; per SFAS 141R (ASC 805/810), all consolidations performed using the Acquisition method (also called Purchase method)



Acquisition method follows Economic Entity Concept

(Irrespective of the fact that the acquirer and acquiree are separate legal entities)



XI) Leases

IX A) Overview of Leases

Lessor = Landlord Lessee = Tenant

- Lease is a contract between the **lessor** and **lessee**, which gives a lessee rights to possess and use the **lessor's property** for a specified **period of time** in return for **periodic payments** (rent) to the lessor
- For determining the type of lease, recognize 'substance over form' like
 - Periodic payments of rent for use of property (operating lease)
 - Periodic payments similar to installment purchase for the rights to acquire the property in the future (capital / non-operating lease)
- > Types of leases:

Lessee	Lessor	
1. Operating Lease	1. Operating Lease	
2. Capital Lease	2. Non-operating (Capital) Lease:	
	(i) Sales type lease	
	(ii) Direct financing lease	

- Under IFRS, both lessee & lessor classify leases as operating lease OR finance lease
 - ✓ Capital lease (under US GAAP) is termed as Finance lease under IFRS
 - ✓ No separate classification for sales-type or direct financing lease by Lessor in IFRS; both classified as Finance lease
- Points to note while solving problems on leases on the CMA exams:
 - Who is the Lessor & who is the Lessee?
 - What is the beginning date of the lease?
 - What is the time period of the lease?
 - What is the type of lease Operating or Non-operating/finance?
 - For capital leases, know the amortization schedule
 - Know the journal entries

IX B) Operating Leases = Rental Agreement

	Accounting by Lessee	Accounting by Lessor
Payments & Receipts of lease payments	Treat each payment made as rent expense Rent Expense XXX	Treat each payment received as rent income Cash XXX
Fixed assets	Cash XXX Leasehold improvements made by lessee amortized over the lower of remaining lease life or useful life	Rent Income XXX Carry fixed asset being leased in PP&E, and depreciate over its useful life
Uneven lease payments or free rent period	Total rent expense payable for the entire lease term is divided evenly over each period in line with matching principle (unless the scheduled rent increase is undeterminable like CPI-based)	Total rent income receivable for the entire lease term is divided evenly over each period in line with matching principle (unless the scheduled rent increase is undeterminable like CPI-based)
Lease bonus	Treat as <u>deferred (prepaid) rent expense</u> and amortized using the straight-line method over lease term	Treat as <u>deferred (unearned) revenue</u> and amortized using the straight-line method over lease term
Rents paid / received in advance	Treat as <u>deferred (prepaid) rent expense</u> until earned by the lessor	Treat as <u>deferred (unearned) revenue</u> until earned by the lessor
Non-refundable security deposits	Treat as <u>deferred (prepaid) rent expense</u> unless considered earned by lessor (usually at the end of the lease term)	Treat as <u>deferred (unearned) revenue</u> unless considered earned by lessor (usually at the end of the lease term)
Refundable security deposit	Treat as asset receivable at the end of the lease term	Treat as liability payable at the end of the lease term
Initial costs incurred	Expense as incurred	Initial direct lease costs (broker's commission, legal fees, etc.) amortized straight-line over the lease term vs. Executory costs (taxes, R&M) are recognized as incurred
Termination costs	Recognized immediately at FV	Measured & recognized at FV at the date of termination
Disclosure	 General description of leasing arrangements Minimum lease payments for each of the next 5 years and in the aggregate 	

IX C) Capital / Finance Lease

1) Capital Lease (treatment by LESSEE) Substance over form

- > Pretend that lessee owns the asset (but the lessee does not own the asset and might never own it)
 - Equipment is not put on the book; only right to use the asset is on the book (leasehold right)
- LESSEE must meet just one condition to capitalize {Lessee meets just one of the OWNS criteria}
- Ownership transfers at end of lease Title transfer
- Written option for bargain purchase Bargain purchase option
 - ✓ Lessee has the option to purchase the asset from the lessor at a price which is estimated to be 50% or less than the asset's then fair value
- Ninety (90%) percent of leased property FV < PV of future minimum lease payments
 ✓ Lessee is committing to pay a lot of money (heavily investing in the asset)
- Seventy-five (75%) percent of asset economic life is being committed in lease term

 Lessee is using the asset for most of its life
 - Lessee is using the asset for most of its me

➤ Note:

- If none of the OWNS criteria is met, the lease is an operating lease
- During the last 25% of the life of the leased asset (i.e., most of the economic life of the asset is already used up), just use the "O" or "W" criteria (not "N" or "S"). E.g., Asset with 10-year life leased out in Year 9

> Lessee Capitalization Rules

- CAPITALIZE as PP&E on the balance sheet with a corresponding lease liability
 - ✓ Leased asset at Lower of Cost (PV of future minimum lease payments) or FMV
 - ⇒ Include Minimum lease payments = Periodic lease payments + Required buyout or Guaranteed Residual Value (if any) + Bargain purchase option (if any)
 - ⇒ Ownership (TT) = PV of payments (annuity) + PV of Required buyout Written BPO = PV of payments (annuity) + PV of Bargain buyout

Ninety % = PV of payments (annuity) Do not add any

Seventy-five % = PV of payments (annuity) optional buyout which is not α BPO

⇒ Exclude any "executory cost" for R&M, insurance or tax paid by lessee Expense as incurred

- ✓ **Discount rate** is the incremental borrowing rate which is the lower (lesser) of:
 - ⇒ Rate implicit in the lease (if known) i.e., Lessor's Rate
 - ⇒ Rate available in the market to lessee, NOT the prime rate

```
J/E #1: Recognize both Asset & Liability @Lower of:
      ✓ J/E:
                                                         (i) PV of future minimum lease payments
                    PP&E (Leased Asset)

    Lease Liability

J/E #2:
     AMORTIZE the capitalized 'leased liability' by effective interest rate method @discount rate
      used to compute the PV above using an amortization schedule Amortize over lease life
          ⇒ Amortize over lease life
          ⇒ J/E:
                        Interest Expense I/S
                                                       XXX
                        Lease Liability
                                                       XXX
                                                              XXX
J/E #3:
      DEPRECIATE the capitalized 'leased asset' by straight line method:
                                  = Depreciate over asset life (legal form)
          ⇒ Ownership (TT)
                                                                          Depreciate over asset life
                                  = Depreciate over asset life (legal form)
             Written (BPO)
                                  = Depreciate over lease life (substance)
             Ninety %
                                  = Depreciate over lease life (substance) Depreciate over lease life
             Seventy-five %
          \Rightarrow J/E:
                                                       XXX
                        Depreciation I/S
                                  Accumulated Depreciation
                                                              XXX
```

- Footnote disclosures:
 - ✓ Amount of minimum lease payments for each of the next 5 years
 - ✓ Aggregate amount for the period thereafter
 - ✓ Amount in the aggregate

Lessee expense on I/S: Operating Lease = Rent

Capital Lease = Interest + Depreciation

Example on Capital Lease (Lessee):

Annuity Due

Lease payments =

\$125,000

On 1/1/11 Lessee Co. leases from Lessor Co. equipment for 5 years @\$25,000 payable at the beginning of each year. Title of the asset transfers at the end of the lease. The asset life is 10 years with incremental borrowing rate of 10%.

- 1. Record the journal entry to Capitalize the leased asset & liability
- 2. Amortize the leased liability
- 3. Depreciate the leased asset

(PV of annuity due for 5 years @10% is 4.16987)

J/E #1

Solution - Part 1 of 2 (Capitalize Asset + Liability):

PV of lease payments (note this is annuity due) = \$25,000 * 4.16987 = \$104,247

Journal entry to capitalize on 1/1/11:

Leased Equipment Lease Liability

104,247 Depreciate over asset life (10 years)
104,247 Amortize over lease life (5 years)

J/E #2

Solution - Part 2 of 3 (Amortize the liability):

Amortization schedule:

ATTIOT CIZACIOTI 30	Anior dzadon schedule.				
Period	Interest @10% of		Minimum lease	Plug for Lease liability	Lease Liability
	balance CV		payments	<mark>amortization</mark>	Carrying Value
1* (1/1/11)					<mark>\$104,247</mark>
1* (1/1/11)	Da	y 1 <mark>\$0</mark>	\$25,000	(\$25,000)	\$79,247
2 (1/1/12)		\$7,925	\$25,000	(\$17,075)	\$62,171
3 (1/1/13)	Total =	\$6,217	\$25,000	(\$18,783)	\$43,389
4 (1/1/14)	\$20,753`	\$4,339	\$25,000	(\$20,661)	\$22,727
5 (1/1/15)		\$2,273	\$25,000	(\$22,727)	<mark>\$0</mark>

^{*} Since lease payments are at the beginning of each period, there is no interest in period 1 (basically treat as \$104,247 less \$25,000 = \$79,247 amortized over 4 years)

Journal entries for accrual of interest on 12/31 (not required if interest would have been paid on 12/31, i.e., at the end of each year):

	<u>12/31/11</u>	<u>12/31/12</u>	<u>12/31/13</u>	<u>12/31/14</u>
Interest expense	7,925	6,217	4,339	2,273
า Interest payable	7,925	6,217	4,339	2,273

Journal entries for amortization:

		<u>1/1/11</u>	<u>1/1/12</u>	<u>1/1/13</u>	<u>1/1/14</u>	<u>1/1/15</u>
	Interest payable	0	7,925	6,217	4,339	2,273
1	Lease liability	25,000	17,075	18,783	20,661	22,727
l	Cash	25,000	25,000	25,000	25,000	25,000

J/E #3

Solution - Part 3 of 3 (Depreciate the asset):

Leased asset at cost = \$104,247

Life of the asset = 10 years (need to depreciate over asset life on account of 'O' condition) Depreciation per year = \$104,247 / 10 years = \$10,425

Journal entry for depreciation:

12/31/11 - 12/31/20

10,425 x 10 years = \$104,247 Depreciation

Accumulated Depreciation 10.425

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PV of Asset = Depreciation Expense \$104,247 (10 years)

2) Capital Lease (treatment by LESSOR)

- > LESSOR: Must meet all three 'C' criteria {For Capital lease, Lessor meets all the 3 Cs}
 - Criteria for the lessee is met (at least one of the 'OWNS' criteria) Lessee OWNS +
 - Certainty for any unreimburseable costs to be incurred by lessor } Additional criteria
 - Collectability of lease payments is reasonably predictable

> Classification for Lessor (2 types):

	Sales-type Capital Lease	Direct Financing Capital Lease
General Application	Generally arise when a manufacturer or 'dealer' leases an asset which otherwise might be sold outright for a profit. Therefore, leasing is used by the manufacturer/dealer as a way to market their own products (e.g., car dealership)	Serve purely as a financing arrangement
Concept	Lessor is a manufacturer or dealer Lessor leases the PP&E instead of selling to Lessee Manufacturer or Dealer = Lessor Right to use PP&E Lessee Lessee Lessee	Lessor is a financial institution Lessor buys the PP&E from a manufacturer/ dealer and leases it to Less Manufacturer or Dealer PP&E Title Right to use PP&E Lessee Lessee Lessee
Basis	CV of asset ≠ PV of asset (use FV is PV is n/a) Therefore, there is gain/loss on sale. Formula: CV or Cost + Gain (- Loss)	CV of asset = PV of asset (use FV is PV is n/a) Therefore, no gain/loss on sale. Formula: CV or Cost = PV or FV = Selling price
Income	Lessor has two profits derived from this transaction: - Gain or loss on sale (lease) of asset - Interest income from collection of lease payment	Since there is no gain or loss on sale (lease) of asset, lessor has only interest income from collection of lease payments
Initial direct costs	Added to COGS in the year of the lease	Added to the net investment (net Lease receivable)

> Lessor Capitalization Rules

- RECORD the Lease Receivable on the B/S net of any Unearned Interest
 - ✓ **Gross Investment (Lease receivable)** = Minimum lease payments + Unguaranteed residual value
 - ⇒ Minimum lease payments = Periodic lease payments + Bargain purchase option (if any) + Guaranteed Residual Value (if any)
 - ✓ **Net Investment** = PV of Minimum lease payments + PV of Unguaranteed residual value
 - ✓ Unearned Interest Revenue (contra-lease receivable) = Gross Investment Net Investment
 - ⇒ Included in the B/S as a deduction from Gross Investment so that the Net Investment is actually reported

J/E #1: Get the asset off the books and instead recognize a lease receivable

✓ J/E:

Lease Receivable (gross)	XXX	(-) Unearned Interest	
Loss on Sale (if sales-type)	XXX -	Net Lease Receivable	
Unearned Interest	XXX	THE LEASE RECEIVABLE	
PP&E or Sales	XXX		

XXX

RECOGNIZE any Gain or Loss on Sale (For Sales-type Lease only)

Gain on Sale (if sales-type)

✓ Cost of goods sold = Cost of asset + Initial direct costs - PV of unguaranteed residual value

J/E #2:

AMORTIZE the unearned interest over the life of the lease using the effective interest rate method on receipt of the periodic lease payments

Cash
Lease Receivable (gross)

Unearned Interest
Interest Income

XXX

XXX

XXX

XXX

XXX

Do NOT Depreciate as the asset is off lessor's books (depreciation is now done by lessee)

Lessor income on I/S: Operating Lease = Rent - PP&E Depreciation

Capital Lease = Interest

Example on Capital Lease (Lessor):

Based on the facts as in the previous example, record the journal entries in the books of the lessor if book value of the asset at the time of the lease

- 1. \$100,000
- 2. \$104,247

Solution - Part 1 of 2 (Sales-type Lease):

Refer to the PV calculation and Amortization schedule in the previous example (calculation & amortization might

Journal entry to record lease of asset 1/1/11:



Journal entries for **deferred interest receivable on 12/31**:

	↓	<u>12/31/11</u>	<u>12/31/12</u>	<u>12/31/13</u>	<u>12/31/14</u>
	Unearned Interest	7,925	6,217	4,339	2,273
Ì	Interest income	7,925	6,217	4,339	2,273

Journal entries for receipt of cash:

		<u>1/1/11</u>	<u>1/1/12</u>	<u>1/1/13</u>	<u>1/1/14</u>	<u>1/1/15</u>
ſ	Cash	25,000	25,000	25,000	25,000	25,000
4	Lease receivable	25,000	25,000	25,000	25,000	25,000

Solution - Part 2 of 2 (Direct Financing Lease):

No Gain on sale Only Interest income

Journal entry to record lease of asset 1/1/11: Lease Receivable (gross) 125,000

Unearned Interest 20,753 104,247 Equipment

Other Journal entries same as Sales-type Lease

F/S Elements in Accounting for Capital Leases:

		LESSEE	LESSOR	
		Capital Lease	Sales-type Capital Lease	Direct Financing Capital Lease
B/S	Asset	Leased Asset (net of accumulated depreciation) into Lessee's books	Leased Asset off Lesson's bo Lease Receivable (net of unearned interest revenue)	Leased Asset Ooks Lease Receivable (add initial direct costs, and net of unearned interest revenue)
	Liability	Lease Liability or Obligation		
I/S	Revenue		AND Dealer's profit on sale	Interest Revenue
	Expense	Interest Expense		
		Depreciation Expense		
		Executory Costs	Initial indirect costs (expensed immediately)	Amortization of initial direct costs

IX D) Finance Lease under IFRS

- Both lessee and lessor classify a lease as finance lease if the lease transfers substantially all the risks and rewards of ownership to the lessee
 - No specific criteria as in US GAAP with the lease classification depending on the substance of the contract rather than the form of the contract
- Under IFRS, the lessor and lessee generally classify a lease consistently as an operating lease or a finance lease (however, under US GAAP, since lessor has additional criteria, it is possible that a lessee classifies the lease as a capital lease while lessor classifies the same as an operating lease)

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Under GAAP:
Lessee criteria = "OWNS"
Lessor criteria = 3Cs = "OWNS" + C + C
```

XII) US GAAP vs. IFRS

FASB = US GAAP

IASB = IFRS

- Standard setting bodies for US GAAP & IFRS
 - FASB (Financial Accounting Standards Board) Independent full-time organization established in 1973 and has determined US GAAP since then
 - ✓ In 2009, FASB reorganized all GAAP pronouncements to create Accounting Standards Codification (ASC)
 - IASB (International Accounting Standards Board) issues IFRS (International Financial Reporting Standards) since 2001

Convergence of US GAAP & IFRS:

- The FASB and the IASB have been working together towards the international convergence of accounting standards since 2002
- Goal is to create a single set of high quality global accounting standards that companies can use for both domestic and cross-border financial reporting
- Convergence project is supported by the SEC which is considering the incorporation of IFRS into the US financial reporting system
- Basically, key difference in approach is:
 - ✓ **US GAAP = "Rules" based approach** (explicit & precise rules for recognition, measurement, presentation)
 - ✓ **IFRS = "Principles" based approach** (sets the general principles for recognition, measurement, presentation allowing professional judgment for application)

> Few key differences:

- Inventory Unlike US GAAP, IFRS does not permit the use of last-in, first-out (LIFO) method
- Fixed Assets (PP&E and Intangible Assets)
 - ✓ Unlike US GAAP, IFRS allows the Revaluation Model where fixed assets are reported at their fair value on the Balance Sheet and the revaluation surplus goes to accumulated other comprehensive income
 - ✓ Unlike US GAAP, IFRS allows reversal of impairment losses for held for use fixed assets
 - ✓ Under US GAAP, R&D is always expensed; but under IFRS, though research is an expense, development costs may be capitalized if certain criteria is met

	US GAAP	IFRS
General Approach	Rules-based approach (explicit & precise rules for recognition, measurement, presentation)	"Principles" based approach (sets the general principles for recognition, measurement, presentation allowing professional judgment for application)
	Inventory	
Costing Methods	LIFO is allowed	LIFO cost flow assumption is not allowed
Inventory Valuation	LCM - if LIFO or retail inventory method, LCNRV - if methods other than LIFO or retail inventory method (e.g., FIFO, average cost)	LCNRV - Inventories are valued at lower of cost or net realizable value
	Investments in Equity & Del	ot Securities
Investment in Equity Marketable Securities	- FVTNI method [cannot recognize unrealized gains/losses as OCI]	- FVTPL method [similar to FVTNI] - FVTOCI allowed as an irrevocable option, where unrealized gains/losses recognized as OCI (on Comprehensive I/S) and A.OCI (on B/S)
Investments in Debt Securities	Based on management intent, debt securities classified as: - Held-for-Trading (HFT) - Available-for-sale (AFS) - Held-to-maturity (HTM)	Use the IFRS 9 model (with 2 tests) to account for & classify debt securities as: - FVTPL [similar to HFT] - FVTOCI [similar to AFS] - Amortized Cost [similar to HTM]
	Stockholders' Equi	ity
Statement of Changes in Shareholders' Equity	US GAAP: May be presented as a primary F/S or in the notes to the F/S SEC: Requires presentation as primary F/S	Presented as primary F/S

Tangible Fixed Assets		
Fixed Asset Valuation	Fixed assets are reported using the Cost Model only : Carrying value =Historical cost - Accumulated depreciation - Impairment loss Revaluation model is not allowed	Fixed assets reported using either Cost Model OR Revaluation Model: • Cost Model: Carrying value = Historical cost - Accumulated depreciation - Impairment loss
		 Revaluation Model: Carrying value = Fair value on revaluation date - Subsequent accumulated depreciation - Subsequent impairment loss
Fixed Asset Depreciation	 Depreciation method may or may not match the expected pattern of fixed asset consumption Depreciation method as well as estimates (useful life, salvage value, etc.) NOT required to be reviewed for appropriateness at each B/S date May use composite OR component depreciation - No requirement to account for separate components of an asset 	 Depreciation method needs to reflect the expected pattern of fixed asset consumption Depreciation method and estimates (e.g., depreciation rate, useful life, salvage value) should be reviewed at year-end to ensure appropriateness Requires component depreciation - Separate components of a fixed asset with different estimated lives should be recorded and depreciated separately (provided the components are significant enough)
Fixed Asset Impairment Test	Determined by two step test: • Step 1: Test for Recoverability = CV > Undiscounted future CFs • Step 2: Calculate Impairment = CV - FV	Determined by one step test: Impairment loss = CV - Recoverable amount, Where Recoverable amount is the greater of 1. FV less costs to sell, AND 2. Value in use (PV of future cash flows)
Impairment Reversal	Reversal of impairment losses not allowed unless the fixed asset is 'held for sale'	Reversal of impairment losses allowed to the extent of impairment loss recognized earlier

Intangible Assets		
Intangible Assets	Intangible assets are reported using the cost model only. Revaluation model is not allowed.	Fixed assets are reported using Cost model OR Revaluation model
R&D Costs	R&D costs are expensed	Always expense research costs, but development costs may be capitalized if ALL the TRIBE criteria are met
Intangibles (other than Goodwill) Impairment Test	Finite Life Intangibles: Determined by two step test: • Step 1: Test for Recoverability = CV > Undiscounted future CFs • Step 2: Impairment loss = CV - FV Indefinite Life Intangibles: Determined by one step test: • Impairment loss = CV - FV	Determined by one step test : • Impairment loss = CV - Recoverable amount, Where Recoverable amount is the greater of 1. FV less costs to sell, AND 2. Value in use (PV of future cash flows)
Goodwill Impairment Test	 Determined by two step test: Test 1: CV of reporting unit (incl. Goodwill) > FV of reporting unit (incl. Goodwill) Test 2: CV of Goodwill > Implied FV of Goodwill, after which Impairment loss = Implied FV of Goodwill - CV of Goodwill - Where, Implied FV of Goodwill = FV of reporting unit (including Goodwill) - FV of all items except Goodwill 	Determined by one step test at the cash generating unit (CGU) level: • Impairment loss = CV - Recoverable amount, Where Recoverable amount is the greater of 1. FV less costs to sell, AND 2. Value in use (PV of future cash flows)
Impairment Reversal	Reversal of impairment losses not allowed unless the intangible is held for sale	Reversal of impairment losses allowed to the extent of impairment loss recognized earlier