Chapter 6: Reporting & Analyzing Inventory

- ➢ Describe steps in determining inventory quantities
- ➢ Apply methods of cost determination
- ➢ Explain financial statement effects of inventory cost determination methods
- ➢ Demonstrate presentation & analysis of inventory

2 Steps to determine Inventory Quantities

1. **Take a physical inventory of goods on hand**
    a. All companies need to determine quantity of inventory at the end of each accounting period
        i. For companies using the perpetual inventory system or periodic inventory system
    b. A good system of internal control minimises errors in counting inventory
2. **Determine ownership of goods**
    a. Goods in transit
        i. Should be included in the inventory of the company that has legal title of the goods on the date of count
    b. Consigned goods
        i. The consignee sells the goods on behalf of the consignor in exchange for a fee without ever transferring legal title or ownership
        ii. Consigned goods are counted in the inventory of the consignor (owner) rather than the consignee

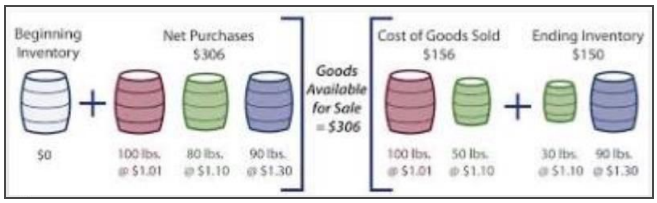
2 Methods of Cost Determination

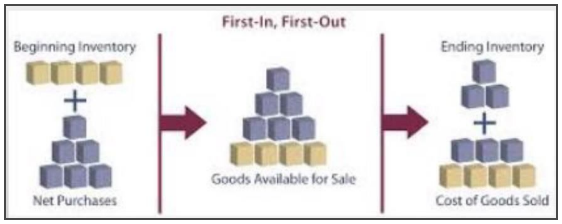
1. **Specific Identification Method**
    a. Used when goods are not ordinarily interchangeable
    b. Tracks the actual physical flow of goods
    c. It reports ending inventory at its actual cost
    d. Normally only used in a perpetual inventory system

2. **Cost formula methods**
    a. Assume a flow of costs that may not be the same as the actual flow of goods

2 Methods under IFRS:

- ➢ **FIFO (First-In First-Out)**
    - Assumes that the earliest goods purchased are the first to be sold and recognized as cost of goods sold
    - Can be used in perpetual and periodic systems (results for both = same)





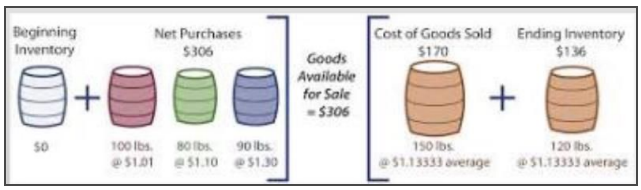
	Purchases			Cost of Goods Sold			Balance		
Date	Units	Cost	Total	Units	Cost	Total	Units	Cost	Total
Jan. 1							100	$10	$1,000
Apr. 15	200	$11	$ 2,200				100 200	10 11	3,200
May 1				100 50	$10 11	$1,550	150	11	1,650
Aug. 24	300	12	3,600				150 300	11 12	5,250
Sept. 10				150 250	11 12	4,650	50	12	600
Nov. 27	400	13	5,200				50 400	12 13	5,800
	900		$11,000	550		$6,200			

➢ **Average cost**

- Assumes that it is not possible to measure a specific physical flow of inventory
- Used under both inventory systems
- Allocation of the cost of goods available for sale between COGS and ending inventory is made based on the weighted average unit cost

Cost of Goods Available for Sale + Total Units Available for Sale = Weighted Average Unit Cost

- New average or "moving average = calculated after each purchase in <u>perpetual</u> inventory system
- Only 1 average = calculated under <u>periodic</u> inventory system and the allocation is made at the end of the period



Date	Purchases			Cost of Goods Sold			Balance		
	Units	Cost	Total	Units	Cost	Total	Units	Cost	Total
Jan. 1							100	$10.00	$1,000.00
Apr. 15	200	$11.00	$ 2,200.00				300	10.67	3,200.00
May 1				150	$10.67	$1,600.00	150	10.67	1,600.00
Aug. 24	300	12.00	3,600.00				450	11.56	5,200.00
Sept. 10				400	11.56	4,622.22	50	11.56	577.78
Nov. 27	400	13.00	5,200.00				450	12.84	5,777.78
	900		$11,000.00	550		$6,222.22			

Average 1 = $\frac{100\times10+200\times11}{(100+200)}$ = 10.67 □ *Avg.* 2 = $\frac{150\times10.67+300\times12}{(150+300)}$ =11.56 □ *Avg.* 3 = $\frac{50\times11.56+400\times13}{(450)}$ = 12.84

COGS = 400 x 11.56 COGS = 150 x 10.67

Ending Inventory = 500 x 11.56 Ending inventory = 150 x 10.67

Advantages of Cost Determination Methods

Specific Identification	FIFO	Average
• Exactly matches costs and revenues on the income statement.	• Ending inventory on the statement of financial position includes the most current costs (closest to replacement cost).	• Cost of goods sold on the income statement includes more current costs than FIFO.
• Tracks the actual physical flow.	• Approximates the physical flow of most retailers.	• Smooths the effects of price changes by assigning all units the same average cost.

Main Advantage = FIFO --- Value of ending inventory = very close to replacement cost

= AVG --- Moves variation in prices; more current

Effects of Cost Determination Methods (during a period of rising prices)

	Specific Identification	FIFO	Average
Income statement			
Cost of goods sold	Variable	Lowest	Highest
Gross profit	Variable	Highest	Lowest
Profit	Variable	Highest	Lowest
Statement of financial position			
Cash (pre-tax)	Same	Same	Same
Ending inventory	Variable	Highest	Lowest
Retained earnings	Variable	Highest	Lowest

Presentation & Analysis of Inventory

- Value inventory at the lower of cost & net realizable value
  - **Net realizable value** = selling price - any costs required to make the goods ready for sale
  - Lower of cost & net realisable value basis should be applied to individual inventory items as opposed to total inventory
  - In some cases, lower of cost and net realizable value can be applied to groups of similar items
  - *NOTE*: we are worried about overstatement rather than understatement
  - Ex. Cost = 1,200 □ NRV = 1,400 }--- no adjustment
  - Ex. Cost = 1,200 □ NRV = 1,000 }--- adjustment (overstatement of assets)

	Cost	NRV	LCNRV
Vehicle A	$16,000	$15,500	$15,500
Vehicle B	14,500	15,300	14,500
Vehicle C	14,800	14,500	14,500
Vehicle D	13,200	14,800	13,200
Vehicle E	11,500	11,400	11,400
Total inventory	$70,000	$71,500	$69,100

- If the value of inventory < cost: inventory is written down
  - Journal entry for write down: Dr. Cost of goods sold
    Cr. Merchandise inventory
- When conditions that caused the write down no longer exist then reverse inventory write down
  - Reversal can only be written back up to the original cost
  - Ex. $NRV_1 = 1{,}000 \rightarrow NRV_2 = 1{,}100$
    - Dr. Merchandise Inventory 100
      Cr. COGS 100

Reporting Inventory

➢ *In the statement of financial position:* at the lower of cost and NRV

➢ *In the notes to the statements:* total amount of inventory, COGS, cost determination method, amount of write-downs or reversals

Inventory Ratios

$$Inventory\ Turnover = \frac{Cost\ of\ Goods\ Sold}{Average\ Inventory}$$

$$Average\ Inventory = \frac{Beginning\ Inventory + Ending\ Inventory}{2}$$

$$Days\ in\ Inventory = \frac{365\ Days}{Inventory\ Turnover}$$

Inventory turnover = higher the better □ Days in Inventory = lower the better

Chapter 8: Reporting & Analyzing Receivables

- ➢ Identify types of receivables & record
- ➢ Accounts receivable transactions
- ➢ Account for bad debts
- ➢ Account for notes receivable
- ➢ Explain statement presentation of receivables
- ➢ Apply principles of sound accounts receivable management

3 Types of Receivables

Receivables: amounts that are due to a business from customers or other entities; classified as…

1) Accounts Receivable (A/R): amount owed by customer on account
    a) Expected to be collect w/in 30 days
    b) Usually most significant type of clam held by company
2) Notes Receivable
3) Other Receivables (interest receivable, loans to company officers, advances to employees, & recoverable sales taxes & income taxes)

Recognizing A/R

- ➢ Receivable is recorded when service is provided on account OR at point of sale of merchandise on account
- ➢ Receivables are reduced when…
    - ○ Cash is collected
    - ○ Customer takes advantage of a sales discount
    - ○ Customer returns product
- ➢ Receivables are increased if…
    - ○ A customer does NOT pay in full w/in a specified period of time (usually 30 days), then an interest (financing) charge may be added to balance due (an increase to interest revenue)
    - ○ Seller recognizes interest revenue & increases A/R balance owed by customer
        - ■ Dr. A/R
          Cr. Interest Revenue

NOTE: If payment is due 2 months late... then you write: 10,000 X 25% x 1/12 x 2 ← (2 months late)

Some A/R becomes uncollectible; losses from these uncollectible accounts are debited to **'Bad Debts Expense'**

- Ex. 2014 = Recognize Revenue
  = Revenue on account $10,000
  2015 = Recognize BDE
  = $10,000 is uncollectible

- Problem = Mismatch for revenue and expenses as they are recorded in different years
- Expenses are matched with revenues … you must recognize revenue and expense in the same accounting period but we don't know how much is uncollectible in the future so what we do is…
    - In 2014, we estimate for BDE than recognizing it in 2015

Recognizing A/R

1. **Direct Write Off Method**

Dr. Bad Debts Expense
Cr. A/R

2. **Allowance Method**

Dr. Bad Debts Expense (BDE)
Cr. Allowance for Doubtful Account (ADA)

Estimating Uncollectible Accounts

1. **Percentage of Total Receivables**
    a. Mgmt. estimates percentage of outstanding receivables that will result in losses from uncollectible accounts
    b. Ex. uncollectible accounts are expected to be 4% of A/R
2. Aging Accounts Receivables Method
    a. Classifies outstanding accounts by age & applies percentage to these categories based on past experience
    b. Once appropriate estimate for uncollectible accounts is determined, adjusting entry can be recorded
    c. Amount of adjusting entry = difference between required balance and existing balance in allowance account

		Number of Days Outstanding				
	Total	0–30	31–60	61–90	91–120	Over 120
Accounts receivable	$377,000	$222,000	$90,000	$38,000	$15,000	$12,000
% uncollectible		1%	4%	5%	8%	10%
Estimated bad debts						

Dec. 31	Bad Debts Expense	10,000	
	Allowance for Doubtful Accounts		10,000
	(To record estimate of uncollectible accounts)		

SFP (Statement of Financial Position) Presentation:

Accounts receivable	$200,000
Less: Allowance for doubtful accounts	11,000
Net realizable value	$189,000

Net Realizable Value: collectible portion of accounts receivables at statement date

Recording Write-Off of an Uncollectible

- ➢ Actual uncollectibles are Dr. ADA & Cr. A/R at the time specific amount is written off as uncollectible
- ➢ Write-off reduces both ADA & A/R equally
- ➢ NRV on SFP remains the same
  - ○ Dr. ADA

    Cr. A/R

Mar. 1	Allowance for Doubtful Accounts		2,500	
	Accounts Receivable			2,500
	(Write off of T. Ebbet account)			

Accounts Receivable					
Feb. 28	Bal.	227,500	Mar. 1		2,500
Mar. 1	Bal.	225,000			

Allowance for Doubtful Accounts					
Mar. 1		2,500	Dec. 31	Bal.	11,000
			Mar. 1	Bal.	8,500

	Before Write Off	After Write Off
Accounts receivable	$227,500	$225,000
Less: Allowance for doubtful accounts	11,000	8,500
Net realizable value	$216,500	$216,500

Recovery of an Uncollectible Account

- ➢ When a bad debt is recovered, 2 entries are required:
  - ○ Entry made in writing off account is reversed. If a partial payment is received, only that amount is reinstated Dr. A/R

    Cr. ADA
  - ○ Collection is recorded in the usual manner Dr. Cash

    Cr. A/R

Summary of Allowance Method

1. Recording estimated uncollectible accounts
    a. Any increase to allowance is recorded as BDE
2. Recording write-off of an uncollectible account
    a. Actual accounts are written off when they're determined to be uncollectible
    b. write-off reduces allowance
3. Recording recovery of an uncollectible account
    a. If written-off account is later collected, write-off is reversed & collection is recorded

Notes Receivable

- Formal instruments of credit issued as evidence of debt
- Normally require payment of interest & extend for 30 days or longer
- May be current or non-current assets depending on their due dates
- Trade receivables: Notes & A/R that result from sales
- Promissory note: written promise to pay a specified amount of money on demand or at a definite time
- Note Payable: party making promise to pay = maker
- Note Receivable: party to whom payment is to be made = payee
- At time a note is received, it is recorded at the principal value or face value with no interest added

As time passes, interest revenue accrues on the note

- *Interest = Face Value of Note x Annual Interest Rate x Time in Term of 1 Year*
- *Adjusting journal entry:*

    Dr. Interest receivable

        Cr. Interest Revenue

    (To accrue interest on note receivable)

Honoured note	Dishonoured note
	If eventual collection is expected
Cash	Accounts Receivable
Notes Receivable	Notes Receivable
Interest Receivable	Interest Receivable
Interest Revenue	Interest Revenue.
(To record collection of note and interest)	
	If no hope of collection
	ADA
	Notes Receivable
	Interest Receivable

Notes Receivable

- Reported at their net realizable value
- Each note must be analyzed to determine its probability of collection
- If eventual collection is in doubt, record BDE & ADA

Statement Presentation of Receivables

- Each of major types of receivables should be identified in SFP or in notes to financial statements
- Short-term receivables are reported in current assets section of SFP following cash & short-term investments
- Only NRV of receivables must be disclosed
- Helpful to report both gross amount of receivables & ADA either in statement or in notes to financial statements

Accounts Receivable

Less: Allowance for Doubtful Accounts

= Net Realizable Value

- Bad debts expense: recorded in operating expense section of income statement
- Interest revenue: recorded in non-operating value

<u>5 Steps to Managing Receivables</u>

1. Determine to whom to extend credit
2. Establish a payment period
3. Monitor collections
4. Evaluate liquidity of receivables
5. Accelerate cash receipts from receivables when necessary

Managing Receivables (Liquidity of Receivables)

1. Receivables Turnover $\frac{Net\ Credit\ Sales}{Avg.\ Gross\ Receivables}$
    a. Higher is better because you want to get paid more often so you can pay suppliers & bank
2. Average Collection Period $\frac{365\ Days}{Receivables\ Turnover}$
    a. Lower is better because you don't want to wait for 90 days but rather 30 days

Chapter 9: Reporting & Analyzing Long-Lived Assets

- ➢ Determine cost of PPE
- ➢ Explain & calculate depreciation
- ➢ Explain impairment issues
- ➢ Account for disposal of PPE
- ➢ Illustrate how long-lived assets are reported in the financial statements
- ➢ Describe methods for evaluating use of assets

Property, Plant & equipment (PPE) "fixed assets & capital assets

- ➔ Long-lived assets/resources; have physical substance (a definite size & shape)
- ➔ Used in operations of a business & are not intended for sale to customers
- ➔ PPE are originally recorded at cost
  - ◆ Purchase price (including taxes & duties) less debates or rebates
  - ◆ Expenditure necessary to bring assets to its intended location & make it ready for its intended use
  - ◆ Estimated cost of future obligations to dismantle, remove or restore asset at end of its useful life
- ➔ **Operating Expenditures:** benefit only a current period
  - ◆ Required to maintain an asset in its normal condition & often recur, although not always annually
  - ◆ Are EXPENSED: found in <u>income statement</u>
- ➔ **Capital Expenditures:** benefit future periods
  - ◆ Include costs that increases life of an asset or its productivity or efficiency
  - ◆ Normally larger than operating expenditures & occur less frequently
  - ◆ Are CAPITALIZED (included in asset account): found in <u>statement of financial position</u>

PPE is often subdivided in 4 classes: land, land improvement, buildings, and equipment

1. **Land**
   a. Cost of land can include:
      i. Cash purchase price
      ii. Closing costs (such as title, legal fees, and survey costs --- paid only once!)
      iii. Costs incurred to prepare land for its intended use (such as clearing, grading, and filling
   b. Cost of land is <u>NOT DEPRECIATED</u> because it has unlimited useful life
2. **Land Improvement**
   a. Cost of structural additions to land
   b. Decline in service potential, and require maintenance and replacement to keep their value

i. Ex. driveways, fences, sidewalks, and parking lots

c. Land improvements are DEPRECIATED and recorded separately from land

3. Buildings

a. All necessary expenditures relating to purchase or construction of a building are charged to Building account

b. When a building is purchased, costs include:

i. Purchase price

ii. Closing costs

iii. All costs to make building ready for its intended use (expenditures for remodelling rooms and offices, expenditures for replacing or repairing roof, floors, electrical wiring, and plumbing)

c. When a new building is constructed, it's cost consists of:

i. Contract price, architect's fees, building permits, excavation costs, interest costs,

4. Equipment

a. Cost of equipment consists of:

i. Purchase price

ii. Freight charges

iii. Insurance during transit

iv. Expenditure required in assembling, installing. and testing unit

b. Includes… delivery equipment, office equipment, machinery, vehicles, furniture & fixtures, and similar assets

c. Annual costs are operating expenditures (i.e. licenses and insurance)

Accounting for PPE

1. Cost Model

a. Records PPE @ cost at acquisition

b. Depreciation is recorded each period

c. Assets are carried @ carrying amount (cost - accumulated depreciation)

2. Revaluation Model

a. Carrying amount of PPE is adjusted to reflect its fair value

b. Can only be applied to assets whose fair value can be reliably measured

c. Revaluation gains are recorded in OCI & can be reversed later

d. OCI: Other Comprehensive Income (not related to activity of company, it's gain or loss)

Depreciation: allocating cost of a long-lived asset over its useful (service) life in a rational & systematic manner

- ➢ NOT a process of asset valuation
- ➢ Journal entry: Dr. Depreciation Expense
  Cr. Accumulated Depreciation

1. **Cost:** purchase price + all costs necessary to get asset ready for use
2. **Useful Life:** period of time over which an asset is expected to be available for use OR # of units of production or units of output that are expected to be obtained from an asset; it is an estimate
3. **Residual Value:** estimate of amount that a company would obtain from disposal of asset if asset were sold as it will be & in condition that its expected to be in at end of its useful life

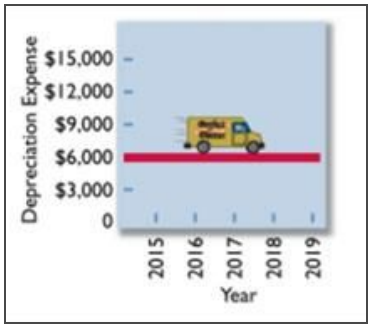
3 Depreciation Methods (each method results in same amount of total depreciation over asset's useful life)

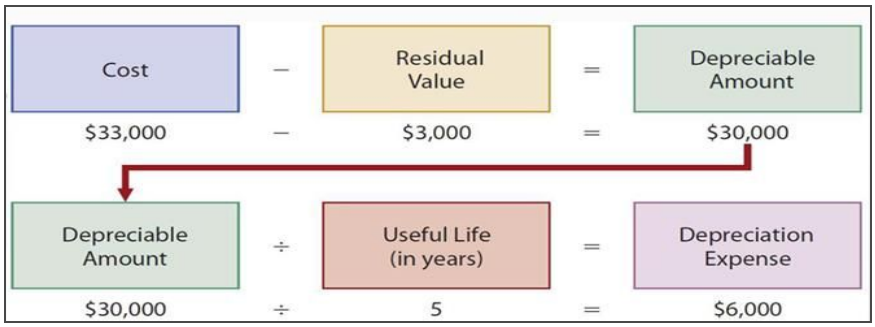
(1) Straight-Line

(a) Most widely used method of depreciation

(b) Equal amount of depreciation is expensed each year of assets useful life as long as cost of asset, useful life, & residual value did not change

(c) Annual Depreciation = $\frac{Cost - Residual\ Value}{Estimated\ Useful\ Life\ Measured\ in\ Years}$





(2) Diminishing Balance

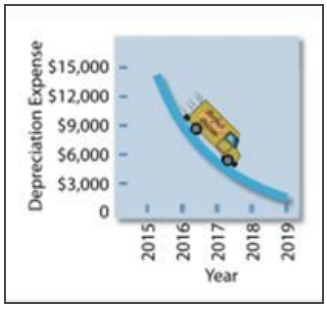
(a) Produces decreasing annual depreciation expense over an asset's useful life

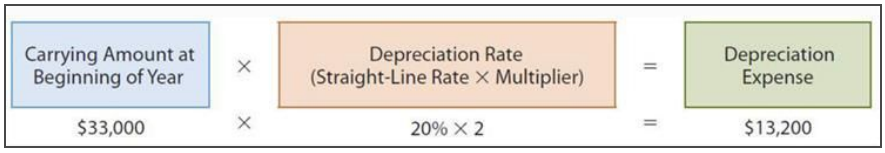
(i) Depreciation is calculated based on asset's carrying amount, which diminishes each year as accumulated depreciation increases

(b) Annual Depreciation Expense = Carrying Amount + Depreciation Rate

(i) Residual value = not included in calculation

(ii) Depreciation rate = straight line rate x multiplier





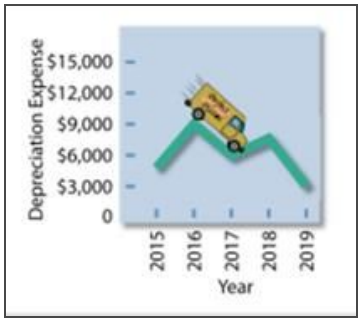
(3) Units-Of-Production

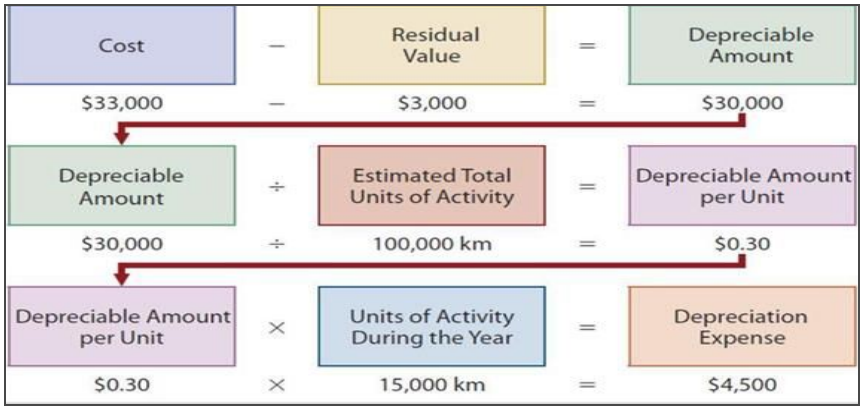
(a) Life of an asset is expressed in terms of total units of production OR total use expected from asset

(b) Production levels used to measure depreciation include units of output, machine hours, km driven, or hours used

2 Steps to Calculate Depreciation

1) Determine the depreciation amount per unit: (cost-residual value) / Total Est. Units of Production
2) Multiply the depreciation amount per unit by the units produced or used during the year to arrive at annual depreciation





Which Method to Use?

- ➢ Use method that best matches estimated pattern where benefits of asset are expected to be consumed
- ➢ Use Straight-line method if… economic benefit of an asset is fairly consistent over time
- ➢ Use Diminishing-balance method if… company receives more economic benefit in early years of asset's useful life than in later years
- ➢ Use Units-of-production method if… usage varies over time

Impairments

- ➢ Carrying Amount = Cost - Accumulated Depreciation to Date
- ➢ Recoverable Amount = Asset's Fair Value- Selling Costs of Similar Assets in an Active Market
- ➢ If carrying amount is greater than recoverable amount = asset is impaired
- ➢ Impairment Loss = Carrying Amount - Recoverable Amount
- ➢ Journal entry to record an impairment loss:
    - ○ Dr. Impairment Loss
      Cr. Accumulated Depreciation
- ➢ Companies must review their assets regularly for possible impairment, and do so whenever a change in circumstances affects fair value
- ➢ The impairment loss is reported on the income statement as part of profit from continuing operations
- ➢ IFRS allows reversal of a previously recorded impairment loss
- ➢ Reversal is limited to amount required to increase asset's carrying amount to what it would have been if impairment loss had not been recorded

Disposal of Property, Plant, and Equipment

4 Steps to record Sale of PPE

1. Update depreciation
2. Calculate carrying amount
3. Calculate gain or loss; gain or loss is difference between proceeds and carrying amount
4. Record disposal

Gain

Dr. Cash
Dr. Accumulated Depreciation
Cr. Asset account
Cr. Gain

Loss

Dr. Cash
Dr. Accumulated Depreciation
Dr. Loss
Cr. Asset account

Retirement of an asset

- ➢ Recorded as a special case of a sale, one where no cash is received
- ➢ If asset is retired before it's fully depreciated, there's a loss on disposal (=carrying amount at date of retirement)
- ➢ Even if carrying amount is zero, a journal entry is still required to remove accounts related to retired asset

- ➢ If company is still using a fully depreciated asset, asset and its accumulated depreciation will continue to be reported on SFP, without further depreciation, unit asset is retired

Financial Statement Presentations

- ➢ Statement of Financial Position
  - Reported as Property, Plant and Equipment; Intangible Assets; Goodwill
  - Disclose cost and accumulated depreciation (amortization) of each major class of assets
    - Either in statement or in notes
  - Disclose depreciation/amortization methods & useful lives or rates
  - IFRS also requires additional disclosures
- ➢ Income Statement
  - Depreciation expense, gains & losses on disposal & impairment losses are in operating section
- ➢ Statement of Cash Flows
  - Cash flows from the purchase and sale of long-lived assets are reported in the investing section

2 Methods for Evaluating Use of Assets

1. **Return on Assets**
   a. Overall measure of profitability
   b. Indicates amount of profit-generated by each dollar invested in assets

$$\text{Return on Assets} = \frac{Profit}{Avg.\ Total\ Assets}$$

2. **Asset Turnover**
   a. Indicates how efficiently a company is able to generate sales with given amount of assets
   b. Indicates how many dollars of sales are generated by each dollar invested in assets

$$\text{Asset Turnover} = \frac{Net\ Sales}{Avg.\ Total\ Assets}$$

Return on Assets = Profit Margin x Asset Turnover

$$\text{Profit Margin} = \frac{Profit}{Net\ Sales}$$

comparing
IFRS and ASPE

Key Differences	International Financial Reporting Standards (IFRS)	Accounting Standards for Private Enterprises (ASPE)
Models for valuing property, plant, and equipment	Choice of cost model or revaluation model	Only cost model allowed
Models for valuing investment properties	Choice of cost model or valuation model for investment properties	No separate recognition of investment properties–considered to be property, plant, and equipment–so only cost model allowed

Chapter 10: Reporting or Analyzing Liabilities

- ➢ Account for current liabilities
- ➢ Identify requirements for financial statement presentation
- ➢ Analyze liabilities

Liabilities: obligations that result from past transactions

1. **Current Liabilities**
    a. Debt that will be paid within 1 year from:
        i. Existing current assets (cash) or through creation of other current liabilities (notes payable)
2. **Non-Current Liabilities**
    a. Debts that don't meet both of the aforementioned criteria
        i. Ex. installment note payable and bonds payable

Types of current liabilities

- ➢ Bank indebtedness, A/P, accrued liabilities (taxes, salaries, interest,...), unearned revenue, notes or loans payable, current portion of non-current debt

Operating line of credit

- ➢ Pre-authorization by bank that allows companies to borrow money up to a pre-set limit, when it is needed
- ➢ Interest is usually charged at a floating (variable) interest rate on any amounts used from the line of credit
- ➢ Collateral "security": usually required by bank as protection in event of default on loan
    - Bank can get if company can't pay
- ➢ Bank indebtedness: negative or credit bank balance (debit to bank) which is reported as current liability on SFP
- ➢ No special journal entry is required to record an overdrawn amount

Sales Tax

1. Federal Goods and Services Tax (GST)
2. Provincial Sales Tax (PST or QST)
3. Combined into one harmonized sales tax (HST) in some provinces
    a. Retailer collects sales tax from customer when sale occurs & remits tax to federal & provincial collecting authorities (usually monthly)

b. In the case of GST or HST, collections may be offset against payments (i.e. sales tax payments made by company on its own eligible purchases). Only net amount owing or recoverable will be paid or refunded

Property Taxes

- ➢ Taxes are charged by municipal governments are are calculated as a specified rate for every $100 of assessed value of property (i.e. land & building)
- ➢ Paid annually
- ➢ Generally for calendar year, though bills are NOT usually issued until spring

Journal Entries

1. At reception of bill, record expense for period that has already passed

   Dr. Property tax expense

   Cr. Property tax payable

2. At payment of bill, record payment of expense & prepayments

   Dr. Property tax payable

   Dr. Property tax expense

   Dr. Prepaid property tax

   Cr. Cash

3. At year end, adjust prepaid tax

   Dr. Property tax expense

   Cr. Prepaid property tax

Payroll

3 types of liabilities related to employees' salaries or wages:

(1) Net pay (owed by employees)

(a) Management personnel are normally paid salaries, expressed as a specific amount per week, per month, or per. Year

(b) Part time employees or employees paid on an hourly basis or by work produced = paid wages

(c) Salaries + Wages = Gross Pay or Gross Earnings

(d) Gross pay - Payroll Deductions = Net Pay

(2) Employee payroll deductions

(a) Required by law to be withheld from employees' gross pay

(b) Mandatory payroll deductions include amounts withheld for federal & provincial income taxes, Canada Pension Plan (CPP) contributions, & Employment Insurance (EI) premium

(c) Voluntarily deduction for charitable, union, pension, & insurance contributions

Dr. Salaries Expense

Cr. Income Tax Payable

Cr. CPP Payable

Cr. EI Payable

Cr. Cash

Cr. Salaries Payable -> if we recognize the expense (ex. salaries) but paid at a later date

(3) Employer payroll obligations

(a) Employers pay payroll costs such as employer's share of CPP and EI. They fund worker's compensation plan. These costs are recorded as an employee benefits expense

Dr. Employee Benefits Expense

Cr. CPP Payable

Cr. EI Payable

(b) Until these payroll deductions & costs are remitted to 3rd parties that they're collected for, they are reported as current liabilities

Short-Term Notes Payable: Obligations in the form of written notes

- ➢ Often used instead of A/P because they give lender written documentation of obligation which helps if legal remedies are needed to collect the debt
- ➢ Notes and loans are sometimes used interchangeably
- ➢ Notes payable are often issued to meet short-term financing needs and usually require borrower to pay interest
- ➢ Notes that are due for payment within 1 year are classified as current liabilities
- ➢ Short-term notes can have a floating interest rate; however, it is common for them to have a fixed interest rate

Journal Entries

1. Record issue of note

Dr. Cash

Cr. Notes payable

2. Record accrued interest

Dr. Interest expense

Cr. Interest payable

3. Record payment of notes plus interest

    Dr. Notes payable

    Dr. Interest payable

    Dr. Interest expense

        Cr. Cash

Current maturities of non-current debt

- ➢ Current portion of a non-current debt be included in current liabilities
- ➢ Journal entry is not required to recognize this classification

Financial Statement Presentation & Analysis of Liabilities

- ➢ Current liabilities = 1st category under liabilities on SFP
    - ○ Each of main types of current liabilities is listed separately within this category
    - ○ Current liabilities are listed in order of liquidity (by their due dates), but not always possible because of varying maturity dates that may exist for specific obligations such as notes payable
    - ○ Other orders are also possible (i.e. reverse-liquidity)
- ➢ Non-current liabilities = reported in separate section of SFP immediately after current liabilities
- ➢ Summary data regarding debts may be on SFP, while detailed data (such as interest rates, maturity dates, conversion privileges, and assets pledged as collateral) are usually shown in notes to financial statements

Liquidity ratios: measure short-term ability of a company to pay current obligations & meet unexpected needs for cash

- ➢ Current ratio (current assets / current liabilities) = commonly used measure of liquidity *higher is better*
- ➢ Current ratio should be supplemented by other ratios such as receivables turnover and inventory turnover
- ➢ High turnover for receivables and high current ratio = good!

Solvency ratios: measure ability of a company to repay its long-term debt and survive over a long period of time

- ➢ Debt to total assets = total liabilities / total assets
- ➢ Indicates extent to which a company's assets are financed by debt

Times interest earned: gives an indication of a company's ability to meet interest payments as they come true

- Times interest earned = (profit + interest expense + income tax expense) / interest expense = profit before interest expense & income tax expense / interest expense
- Higher is better (company can meet & pay its interest)

Chapter 11: Reporting and Analyzing Shareholders' Equity

- ➢ Identify & discuss major characteristics of a corp,
- ➢ Record share transactions
- ➢ Prepare entries for cash dividends, stock dividends, & stock splits
- ➢ Indicate how shareholders' equity is presented in financial statements
- ➢ Evaluate dividend & earnings performance

Corporation: legal entity that is separate & distinct from its owners (shareholders)

Commonly classified by purpose & ownership

- ➢ **Purpose**
  - Profit (McDonald's, Sears Canada, Research in Motion, etc.)
  - Not for profit (United Way, Canadian Cancer Society, University of Ottawa, etc.)
- ➢ **Ownership**
  - Publicity held corporation - shares traded on organized stock exchange & may have thousands of shareholders
  - Privately held corporation - shares not traded on organized stock exchange & may have only a few shareholders

Characteristics of Corporations

- ➢ **Separate legal existence**
  - An entity separate & distinct from owners
    - Acts under its own name rather than in name of shareholders
    - May buy, own, & sell property; borrow money; may sure or be sued; & pays its own income tax
- ➢ **Limited liability of shareholders**
  - Creditors have recourse only to corporate assets to satisfy claims
    - Liability of shareholders limited to investment in corporation
- ➢ **Transferable ownership rights**
  - Ownership is evidenced by shares, which are transferable units
  - Transfer of ownership rights among shareholders has no effect on operating activities of corporation or an a corporations assets, liabilities, or shareholder's equity
- ➢ **Ability to acquire capital**
  - Easy for corporations to raise capital
    - Only small amounts of money need to be invested making shares attractive to many individuals
- ➢ **Continuous life**

- Corporations have an unlimited life
  - Continuance of a corporation is not affected by withdrawal, death, or incapacity of a shareholder, employee, or officer

➢ **Corporation management**

- Shareholders manager a corporation indirectly through a board of directors, which they elect
- Board of directors formulates operating policies & selects officers to execute policy & to perform daily management functions
- Corporation hires professional managers to run business, so owners are not required to have managerial expertise
- Separation of ownership & management can be viewed as an advantage or as a weakness

➢ **Government regulations**

- Federal & provincial laws usually prescribe requirements for issuing shares & distributions of profits permitted to shareholders
- Provincial securities regulations govern sale of share capital to general public, & corporations listed in foreign security market must also respect their requirements
- Complying with securities regulations increase cost & complexity of corporate form of organization

➢ **Income tax**

- Corporations, as separate legal entities, must pay federal & provincial income tax
- Shareholders must pay taxes on cash dividends

<u>Share Issue Considerations</u>

Shares of company are divided into different classes such as Class A & Class B

➢ Rights & privileges for each class of shares are stated in articles of incorporation

➢ The classes are usually identified by the generic terms common shares and preferred shares

3 Rights of Common Shareholders

1. Right to vote
2. Right to Dividends
3. Right to Residual Claim

Preferred Shares

1) **Dividend preference:** priority claim over common shares on any distribution of dividends
   a) Cumulate dividends: when dividends are declared to be payable, preferred shareholders must be paid both current-year dividends and any unpaid prior year dividends (dividends in arrears) before common shareholders receive dividends
   b) Noncumulative dividends: dividend that is not paid in any year is lost forever

2) **Liquidation preference:** priority claim over common shares on corporate assets if corporation fails
3) **Other preferences:** convertible preferred shares, redeemable preferred shares, retractable preferred shares

Authorized Share Capital: # of authorized shares a corporation is authorized to sell is indicated in its articles of incorporation

- ➢ May be specified as an unlimited amount of a certain #
    - Most Canadian public companies have an unlimited # of authorized shares
- ➢ Authorization of share capital does NOT result in a formal accounting entry
- ➢ # of shares authorized must be disclosed in shareholders' equity section of SFP

Issue of Shares: authorized shares that have been sold

- ➢ First time a corporation's shares are offered to the public, the offer is called an Initial Public Offering (IPO). The company receives the cash (less any financing or issue fees) from sale of IPO shares
- ➢ Once these shares have been initially issued, they continue trading on the secondary market
    - Investors buy & sell shares from each other, rather than from the company
    - The markets price per share is established by the interaction between buyers and sellers. Generally, the price follows the trend of a company's profits and dividends
    - A commonly reported measure of fair value of a company's total equity is its market capitalization calculated by multiplying the number of shares issued by the share price at any given date

Common Shares: commonly used for cash, but may also be issued for other considerations (e.g. services)

- ➢ When issue of common shares for cash is recorded, all of the proceeds received upon issue are considered to be legal capital and this amount is credited to Common Shares
- ➢ Ex. Hydro-Slide, Inc. issues 1000 shares common shares for cash at $6 per share

Dr. Cash	6,000	
Cr. Common Shares		6000

(To record issue of 1,000 common shares)

- ➢ When shares are issued for a non cash consideration, they should be recorded at their <u>cash equivalent price</u>

- ***Under IFRS:*** cash equivalent price is the fair value of the consideration received. If the fair value of the consideration received cannot be reliably determined, the fair value of the consideration given up is used
- ***Under ASPE:*** record most reliable of 2 values (fair value of consideration received or fair value of consideration given up)

Dividends & Stock Splits

Dividends: distribution of **retained earnings** by a corporation to its shareholders on a **pro rata** basis

- **Pro rata:** if you own 10% of common shares, you will receive 10% of the dividend
- **Retained earnings**: cumulative profits since incorporation that have not been distributed to the shareholders in the form of dividends
- Dividends are generally reported as an annual dollar amount per share, even though it is usual to pay dividends quarterly
- Cash dividends are the most common in practice, but stock dividends are also declared fairly often

Cash Dividends: distribution of each cash to shareholders

- For a corporation to pay a cash dividend, it must meet a 2-part solvency test & be declared by the board of directors
  - ***Solvency Test***
    - It must have sufficient cash or other resources to be able to pay its liabilities as they come due after the dividend is declared and paid
    - The net realizable value of its assets must exceed the total of its liabilities and share capital
  - ***Declaration of dividends***
    - The board of directors has full authority to determine the amount of retained earnings to be distributed in the form of dividends and the amount to be retained in the business
    - Dividends are not a liability until declared

Entries for cash dividends (3 important dates in connection with dividends)

1. **Declaration date**
   a. Date of board of directors formally authorize dividend & announces it to shareholders

      Dr. Cash Dividends

      Cr. Dividends Payable

      (To record declaration of cash dividend)

2. **Record date**
    a. Purpose of record date is to identify persons or entities that will receive dividend
    b. No entry is required on record date
3. **Payment date**
    a. Dividend cheques are mailed to shareholders & payments of dividend is recorded
    b. Entry on payment date is:

        Dr. Dividends Payable

            Cr. Cash

        (To record payment of cash dividend)

Example:

On December 1, 2012, the directors of IBR Inc. declare a $0.50 per share cash dividend on 100,000 common shares. On January 20, IBR Inc. pause the dividends. Prepare the journal entries.

1. Declaration date - dividend is $50,000 (100,000 x 0.50), & entry to record declaration is:

Cash Dividends	50,000	
Dividends Payable		50,000

2. Record date

   No journal entry

3. Payment date

Dividends Payable	50,000	
Cash		50,000

Stock dividend: distribution of corporations own shares to shareholders

- ➢ Results in a decrease in RE & an increase in share capital
- ➢ Does not decrease total shareholders' equity or total assets
- ➢ Valued using the fair value per share at the declaration date
- ➢ On declaration date:

    Dr. Stock dividends

        Cr. Common stock dividends distributable

- ➢ When dividend shares are issued:

    Dr. Common Stock Dividends Distributable

        Cr. Common Shares

	Cash Dividend	Stock Dividend
Declaration Date	Dr. Cash dividends Cr. Dividends payable	Dr. Stock dividends Cr. Common stock

		dividends distributable
Payment Date	Dr. Dividends payable Cr. Cash	Dr. Common stock dividends distributable Cr. Common shares

Stock splits: similar to stock divided, it involves issue of additional shares to shareholders according to their percentage ownership

- ➢ Stock split results in a reduction in legal capital per share and is usually much larger than stock dividend
- ➢ Purpose of a stock split is to increase marketability of shares by lowering share price, making it easier for corporations to issue additional shares and also to increase investor interest
- ➢ In a stock split, # of shares is increased in same proportion that legal capital per share is decreased
- ➢ Stock split does not have any effect on total share capital, retained earning, and shareholders equity; however # of shares increases
- ➢ Because a stock split does not affect balance in shareholders equity accounts… no journal entry for a stock split

Example:
Assume that instead of issuing a10% share dividend, IBR splits its 50,000 common shares on a 2-for-1 basis. What is the effect of IBR's stock split on shareholders equity?

Shareholders equity	**Before Share Split**	**After Share Split**
Common shares	$500,000	$500,000
Retained earnings	300,000	300,000
Total shareholders equity	$800,000	$800,000
# of shares	50,000	100,000

<u>Comparisons between Dividends and Stock Splits</u>

			Shareholders' Equity		
	Asset =	Liabilities +	Share Capital +	Retained Earnings	Number of Shares
Cash dividend	-	NE	NE	-	NE
Stock dividend	NE	NE	+	-	+
Stock split	NE	NE	NE	NE	+

Financial Statement Presentation

Statement of Financial Position

- ➢ In the shareholders equity section of the statement of financial position, we report: contributed capital, retained earnings, accumulated other comprehensive income

Statement of Changes in Equity

- ➢ Statement discloses changes in total shareholders equity for period, as well as changes in each shareholder's equity account, including: contributed capital, retained earnings, accumulated other comprehensive income

1. **Contributed Capital**
    a. **Share capital** - consists of preferred and common shares
        i. Preferred shares are shown before common shares because of their additional rights
        ii. Information about the legal capital, number of shares authorized, number of shares issued, any any particular share preferences is reported for each class of shares
    b. **Additional Contributed Capital** includes amount contributed from reacquiring and retiring shares, or from other shareholder transactions
2. **Retained Earnings**
    a. Are the cumulative profits (or losses) that have been retained in the company (not distributed to shareholders) since its incorporation
    b. The normal balance is a credit, but if a deficit (debit balance) exists it is reported as a deduction from shareholders equity
3. **Accumulated Other Comprehensive Income (AOCI)**
    a. Includes the gains and losses that bypass profits but affect shareholders equity
    b. Comprehensive income includes all changes in shareholders equity during a period except changes that result from the sale or repurchase of shares or the payment of dividends

c. Examples of comprehensive income include certain translation gains and losses on foreign currency, unrealized gains and losses from cash flow hedges, and unrealized pension cost from a minimum pension liability adjustment
d. Not all companies will have examples of other comprehensive income. However, if they do, they must report:
    i. Comprehensive income separately in a statement of comprehensive income,
    ii. Accumulated other comprehensive income as a separate component of shareholders equity

Evaluate Dividends & Earnings Performance

Dividend Record

- The payout ratio
    - Measures the percentage of profits distributed in the form of cash dividends to common shareholders
    - Higher is better if investor looking for income

$$\text{Payout ratio} = \frac{\textit{Cash dividends}}{\textit{Profit}}$$

- The dividend yield
    - Measures the profit generated by each shared, based on the market price of the shares
    - Higher is better if investor looking for income

$$\text{Dividend yield} = \frac{\textit{Dividend per share}}{\textit{Market price per share}}$$

Earnings Performance

- Earnings per share (EPS)
    - The weighted average number of common shares is calculated by multiplying the number of shares issued by the fraction of the year that they have been issued
    - When a corporation has securities that may be converted into common shares, it must report basic earnings per share and diluted earnings per share
    - The diluted earnings per share is a hypothetical figure that assume all securities that can be converted into, or exchanged for, common shares have actually been converted or exchanged

$$\text{Earnings per share} = \frac{\textit{Profit available to common shareholders}}{\textit{Weighted average number of common shares}}$$

- Return on common shareholders equity
    - Widely used ratio that measures profitability from the common shareholders viewpoint

- Profits available to the common shareholders is profits less any preferred dividends
- Higher is better

Return on common shareholders equity = $\frac{Profit\ available\ to\ common\ shareholders}{Average\ common\ shareholders\ equity}$

Chapter 13: Statement of Cash Flows

- ➢ Describe purpose & content of statement of cash flows
- ➢ Prepare statement of cash flows
- ➢ Use statement of cash flows to evaluate a company's liquidity & solvency

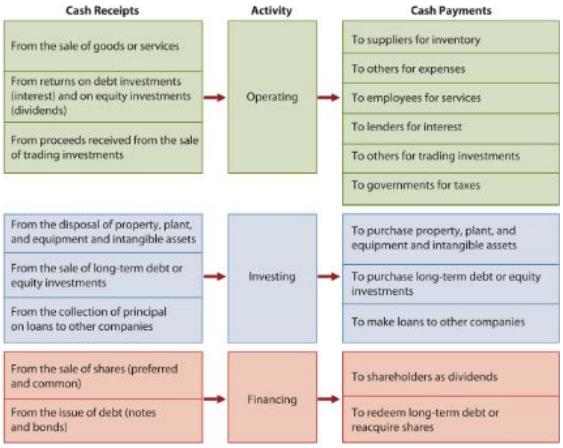
Purpose & Content of Statement of Cash Flows

Purpose = help investors, creditors, & other assess:

1. The reasons for the difference between profits and cash provided or used by operating activities
2. The investing and financing transactions during the period, or why assets and liabilities have increased or decreased
3. The company's ability to generate future cash flows

Content

- ➢ Information reported in statement of cash flows includes: cash receipts (sale), cash payments (buy), net change in cash
- ➢ Statement of cash flows classifies cash receipts & cash payments into 3 types of activities:
  - ○ Operating activities
  - ○ Investing activities
  - ○ Financing activities



COMPANY NAME Statement of Cash Flows Period Covered		
Operating activities		
(Prepared using indirect or direct method)	XX	
Net cash provided (used) by operating activities		XXX
Investing activities		
(List of individual inflows and outflows)	XX	
Net cash provided (used) by investing activities		XXX
Financing activities		
(List of individual inflows and outflows)	XX	
Net cash provided (used) by financing activities		XXX
Net increase (decrease) in cash		XXX
Cash, beginning of period		XXX
Cash, end of period		XXX

NOTE Under ASPE, dividends/interests are classified in 1 way (operating activities) while under IFRS, dividends/interests is flexible & can be classified in more than 1 way (dividends/interests received listed either operating or investing & for dividends/interest pid listed either operating or financing)

- ➢ If investment is short-term & trading, it'd be classified as operating & if investment is long-term & not trading, it'd be classified as investing

- ➢ Noncash activities include:
  - ○ Issue of debt to purchase assets
  - ○ Issue of shares to purchase assets
  - ○ Conversions of debt in equity
  - ○ Exchanges of property, plant, and equipment

- ➢ Significant investing and financing activities that do not affect cash are not reported in the body of the statement of cash flows. However these activities are reported in a note to the financial statements

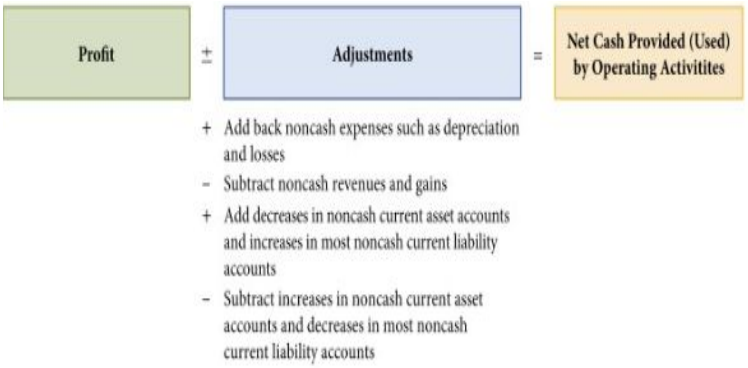
Operating Activities Section

- ➢ Profits must be converted from an accrual basis to a cash basis:
  - Earned revenues may include credit sales that have not been collected in cash
  - Expenses incurred may not have been paid in cash
- ➢ Conversion may be done by either of 2 methods
  - **Indirect method** - converts total profit from an accrual basis to a cash basis (shorter method)
  - **Direct method** - converts each individual revenue & expense account from an accrual basis to a cash basis, identifying specific cash receipts and payments

Indirect Method

I. Noncash Expenses & Revenues (don't use cash)

A. Income Statement includes noncash expenses:
   1. Ex: depreciation expense, amortization expense
   2. Noncash expenses reduce profits but does not reduce cash, noncash expenses are added back to profit



B. Income statement includes non cash revenues:
   1. Ex. amortization of a bond discount
   2. Noncash revenues are deducted from profit

II. Losses & Gains

A. All gains & losses from investing activities & financing activities must be eliminated from profits to arrive at cash from operating activities
B. If we do NOT eliminate these gains & losses, they would be counted twice, once in profits & again in investing or financing activities sections
C. + Losses and/or - Gains on income statement

III. Changes in Current Asset & Current Liability Accounts

1) Accounts Receivable

a) Decrease in A/R
   i) Revenues on an accrual basis would be lower than revenues on a cash basis
   ii) Amount of decrease in A/R is added to profit

b) Increase in A/R

i) Revenues on an accrual basis are higher than cash receipts
ii) Amount of increase in A/R is deducted from profit

2) Merchandise Inventory

a) When merchandise inventory increases during year, cost of goods purchased is greater than cost of goods sold recorded in income statement
b) Any increase (decrease) in merchandise inventory account must be deducted from (added to) profits to arrive at net cash provided (used) by operating activities
c) Analysis will be completed by converting cost of goods purchased from an accrual basis to a cash basis (need to analysis accounts payable)

3) Prepaid Expenses

a) An increase in prepaid expenses means that cash paid for expenses is higher than expenses reported on an accrual basis. Cash payments were made in the current period, but expenses have been deferred to future periods
b) The increase (decrease) in prepaid expenses is deducted from (added to) profit to arrive at net cash provided (used) by operating activities

4) Changes in Accounts Payable

a) Accounts payable is increased by the purchase of merchandise and decreased by payments to suppliers
b) An increase (decrease) in accounts payable means that less (more) cash was paid for purchases than was deducted in the accrual-based expenses
c) An increase in account payable must be added to profit

5) Changes in Income Tax Payable

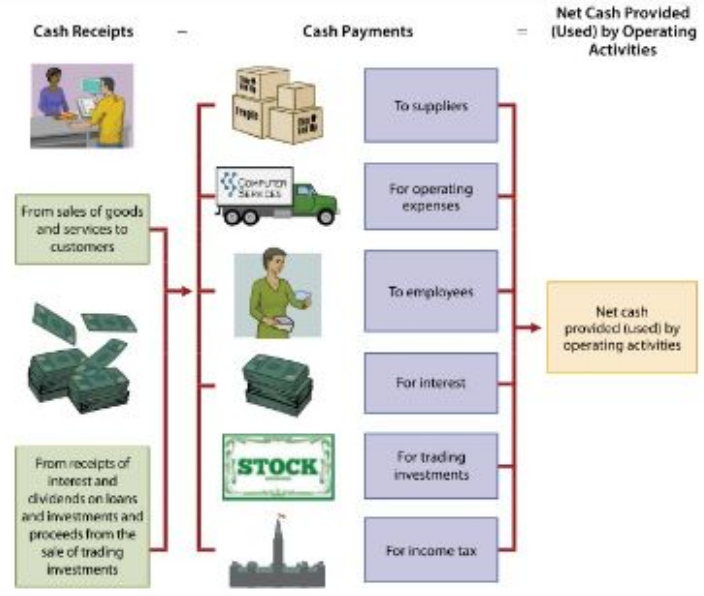
a) The change in the income tax payable account reflects the difference between income tax incurred and income tax actually paid
b) A decrease (increase) in income tax payable would result in a decrease (increase) to cash provided (used) by operating activities since the amount paid was greater than (less than) the tax incurred
c) A decrease to income tax payable will result in the amount being deducted from profit

Noncash expenses	Depreciation expense (property and equipment) Amortization expense (intangible assets)	Add Add
Losses and gains	Losses including impairment losses Gains and reversal of impairment losses	Add Deduct
Changes in certain noncash current asset and current liability accounts	Increase in current asset account Decrease in current asset account Increase in current liability account Decrease in current liability account	Deduct Add Add Deduct

COMPUTER SERVICES CORPORATION Statement of Cash Flows—Indirect Method (partial) Year Ended December 31, 2012		
Operating activities		
Profit		$145,000
Adjustments to reconcile profit to net cash provided (used) by operating activities		
Depreciation expense	$ 9,000	
Loss on sale of equipment	3,000	
Decrease in accounts receivable	10,000	
Increase in merchandise inventory	(5,000)	
Increase in prepaid expenses	(4,000)	
Increase in accounts payable	16,000	
Decrease in income tax payable	(2,000)	27,000
Net cash provided by operating activities		172,000

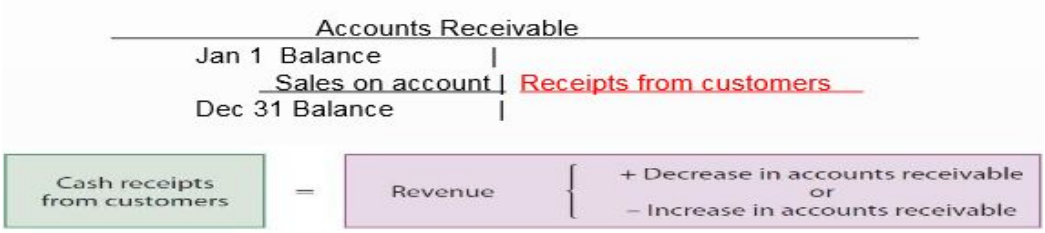
Direct Method

- Under the direct method, net cash provided (or used) by operating activities is calculated by adjusting each item in the income statement from the accrual basis to the cash basis
- Analyze the items reported in the income statement in the order in which they are listed
- The cash receipts and cash payments related to these revenues and expenses are determined by adjusting for changes (increases or decreases) in the related current asset and current liability accounts



I. Cash Receipts

1. Cash receipts from customers



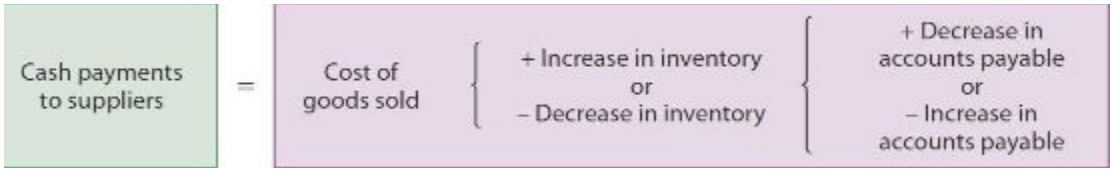
2. Other Cash Receipts

a. For example interest and dividends
b. Must be adjusted for any receivable amounts as was done above

II. Cash Payments

1. Cash Payments to Suppliers

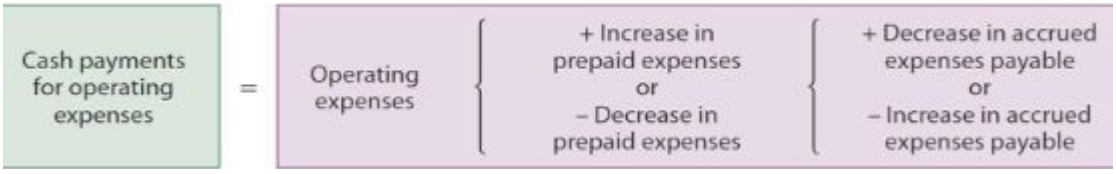
a. Find purchases during the year
   i. Adjust cost of goods sold for the change in inventory
   ii. The increase in inventory is added to the cost of goods sold
   iii. The decreases would be deducted from the cost of goods sold
b. Determine cash payments to suppliers
   i. Adjust purchases for the change in accounts payable
   ii. An increase in accounts payable is deducted from the cost of goods purchased to arrive at cash payments to suppliers
   iii. A decrease in accounts payable is added to the cost of goods purchased

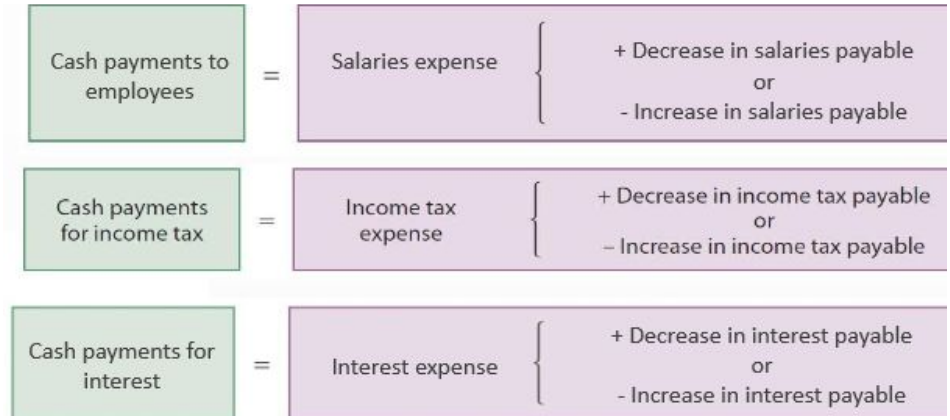


2. Operating expenses

Must be adjusted for:

a. Prepaid expenses
   i. Any increase must be added to operating expenses
   ii. Any decrease must be deducted from operating expenses
b. Accrued expenses payable
   i. An increase in the accrued liability account is deducted from operating expenses
   ii. A decrease is added to operating expenses





COMPUTER SERVICES CORPORATION
Statement of Cash Flows (partial)
Year Ended December 31, 2012

Operating activities		
Cash receipts from customers		$517,000
Cash payments		
To suppliers	$(139,000)	
For operating expenses	(145,000)	
For interest	(12,000)	
For income tax	(49,000)	(345,000)
Net cash provided by operating activities		172,000

Investing Activities Section

- Regardless of whether the indirect or direct method is used to calculate operating activities, investing activities are measured and reported in the same way
- The individual inflows and outflows from investing activities are reported separately
- Determine the net cash provided (used) by investing activities by analyzing changes in non-current asset accounts
    - Asset acquisitions are uses of cash
    - Disposals are sources of cash (for the proceeds of disposition)

Investing activities		
Purchase of building	$(120,000)	
Purchase of equipment	(25,000)	
Sale of equipment	4,000	
Net cash used by investing activities		(141,000)

Financing Activities Section

- Regardless of whether the indirect or direct method is used to calculate operating activities, financing activities are measured and reported in the same way
- The individual inflows and outflows from financing activities are reported separately

- Determine the net cash provided (used) by financing activities by analyzing changes in non-current liability and shareholders' equity accounts

Financing activities		
Issue of common shares	$ 20,000	
Payment of cash dividend	(29,000)	
Net cash used by financing activities		(9,000)

Using Cash Flows to Evaluate a Company

- Liquidity
  - Cash current debt coverage ratio
    - The higher the cash current debt coverage ratio is, the better the company's liquidity
    - Additional ratios such as the receivables turnover and inventory turnover must also be calculated in order to properly assess a company's liquidity

$$\frac{\textit{Cash provided (used) by operating activities}}{\textit{Average current liabilities}}$$

- Solvency
  - Cash total debt coverage ratio
    - Measures long-term debt paying ability (cash basis)
    - Higher is better

$$\frac{\textit{Cash provided (used) by operating activities}}{\textit{Average total liabilities}}$$

  - Free cash flow
    - Measures discretionary cash flow remaining from operating activities available to use to expand operations, reduce debt, go after new opportunities, or pay additional dividends, among other alternatives
    - Higher better

Net cash provided (used) by operating activities - net capital expenditures - dividends paid

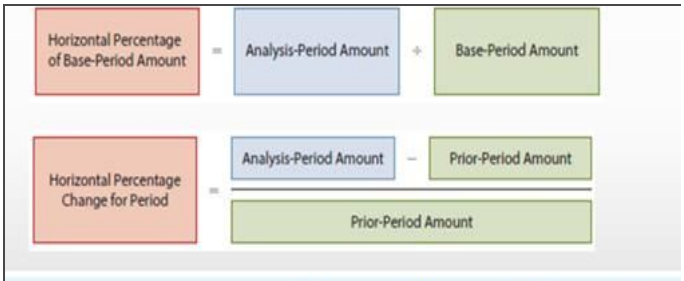
Chapter 14: Performance Measurement

- ➢ Explain & apply comparative analysis
- ➢ Identify and calculate ratios that are used to analyze liquidity, solvency and profitability
- ➢ Limitations of financial analysis

Comparative Analysis

Horizontal analysis (trend analysis)

- ➢ Technique to determine change over time
  - Percentage of base-period amount
  - Percentage change for period



	2012	2011	2010	2009
Net sales	$4,077.0	$3,849.6	$3,718.2	$3,619.7
% of base-year (2009) amount	112.6%	106.4%	102.7%	100.0%
% change for the year	5.9%	3.5%	2.7%	–

Vertical Analysis (common size analysis)

- ➢ Expresses each item in a financial statement as a percent of a base amount (total assets or net sales)
  - % of base year amount: $\frac{net\ sales\ year\ 2}{net\ sales\ base\ year} \times 100$
  - % change: $\frac{net\ sales\ year\ 2 - net\ sales\ year\ 1}{net\ sales\ year\ 1}$

3 Types of Comparison:

1. Intracompany basis - comparisons within a company
2. Intercompany basis - comparison between 1 or more competitor companies
3. Industry averages

Ratio Analysis (3 Ratios)

1. Liquidity Ratios

a. Measures short-term ability of company to pay its maturing obligations & to meet unexpected needs for cash

b. Short-term lenders & other creditors such as bankers & suppliers are particularly interested in assessing liquidity

--- 7 Main Liquidity Measures ---

(1) Working Capital - measures short-term ability to pay obligations (a) Positive working capital indicates likelihood for paying current liabilities is favourable	*Working Capital = Current Assets - Current Liabilities*
(2) Current Ratio - measures short-term ability to pay obligations (a) More dependable indicator of liquidity than working capital	$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$

(3) Cash Current Debt Coverage (a) Better indicator of liquidity because uses cash provided (or used) by operating activities that cover a period of time, rather than current assets that represent a balance at a point in time	$$\textit{Cash Current Debt Coverage} = \frac{\textit{Cash Provided (Used) by Operating Activities}}{\textit{Average Current Liabilities}}$$
(4) Receivables Turnover - measures # of of times, on average, that receivables are collected during year	$$\textit{Receivables Turnover} = \frac{\textit{Net Credit Sales}}{\textit{Average Gross Receivables}}$$
(5) Average Collection Period	$$\textit{Average Collection Period} = \frac{365\ \textit{days}}{\textit{Receivables Turnover}}$$
(6) Inventory Turnover - measures # of times, on average, that inventory is sold during period	$$\textit{Inventory Turnover} = \frac{\textit{Cost of Goods Sold}}{\textit{Average Inventory}}$$
(7) Days in Inventory - measures average age of inventory	$$\textit{Days in Inventory} = \frac{365\ \textit{Days}}{\textit{Inventory Turnover}}$$

2. Solvency Ratios

a. Measures ability of company to survive over a long period of time
b. Long-term creditors & shareholders are interested in company's long-run solvency, especially its ability to pay interest as it comes due & to repay face value of debt at maturity

--- 4 Main Solvency Measures ---

(1) Debt to Total Assets Ratio - % of assets financed by lenders & other creditors (a) Higher % of debt financing, riskier the business & lower company's solvency	$$\textit{Debt to Total Assets} = \frac{\textit{Total Liabilities}}{\textit{Total Assets}}$$
(2) Times Interest Earned - company's ability to meet interest payments as they come due	$$\textit{Times Interest Earned} = \frac{\textit{Profit + Interest Expense + Income Tax Expense (EBIT)}}{\textit{Interest Expense}}$$
(3) Cash Total Debt Coverage - company's ability to repay its liabilities from cash generated from operating activities (without having to liquidate productive assets) (a) Higher the cash total debt coverage ratio is, the more solvent a company is	$$\textit{Cash Total Debt Coverage} = \frac{\textit{Cash Provided (Used) by Operating Activities}}{\textit{Average Total Liabilities}}$$
(4) Free Cash Flow - describes cash remaining from operating activities	*Free Cash Flow = Net Cash Provided (Used) by Operating Activities - Net Capital Expenditures - Dividends Paid*

3. Profitability Ratios

a. Measures the earnings or operating success of a company for a given period of time
b. Profitability ratios are important because a company's profits or lack of it, affects its ability to obtain debt & equity financing, its liquidity position & its growth
c. Creditors & investors are interested in evaluating profitability
d. Profitability is frequently used as ultimate test of management's operating effectiveness

--- 9 Main Profitability Ratios ---

(1) Return on Common Shareholders' Equity (a) Widely used ratio that measures profitability from common shareholders' viewpoint (b) Profits available to common shareholders are profits less any preferred dividends	$$Return\ on\ Common\ S.E = \frac{Profit - Preferred\ Dividends}{Avg.\ Common\ S.E}$$
(2) Return on Assets (a) Overall measure of profitability (b) Return on assets ratio indicates amount of profit generated by each dollar invested in assets	$$Return\ on\ Assets = \frac{Profit}{Average\ Total\ Assets}$$
(3) Profit Margin (a) Measures how much selling price covers all expenses (including COGS)	$$Profit\ Margin = \frac{Profit}{Net\ Sales}$$
(4) Asset Turnover (a) Indicates how efficiently a company is able to generate sales with a given amount of assets, in other words, how many dollars of sales are generated by each dollar invested in assets	$$Asset\ Turnover = \frac{Net\ Sales}{Average\ Total\ Assets}$$
(5) Gross Profit Margin (in %) (a) Indicates a company's ability to maintain an adequate selling price above its COGS	$$Gross\ Profit\ Margin = \frac{Gross\ Profit}{Net\ Sales}$$
(6) Earnings per Share (EPS) (a) Measures profit earned on each common share (b) Provides a useful perspective for determining investment return	$$Earnings\ Per\ Share = \frac{Profit - Preferred\ Dividends}{Weighted\ Average\ Number\ of\ Common\ Shares}$$
(7) Price-Earnings (P-E) Ratio (a) Measures ratio of market price of each common share to its earnings per share (b) Known as "Market Measure" because it uses a company's share price, which reflects stock market's (investors) expectations for company	$$Price\text{-}\ Earnings\ Ratio = \frac{Share\ price}{Earning\ Per\ Share}$$

(8) Payout Ratio (a) Measures % of profit distributed in from of cash dividends to common shareholders	$Payout\ Ratio = \frac{Cash\ Dividends}{Profit}$
(9) Dividend Yield (a) Reports a rate of return a shareholder earned from dividends during year (b) Known as "Market Measure" because use of stock market price in calculation	$Dividend\ Yield = \frac{Dividend\ per\ Share}{Market\ Price\ per\ Share}$

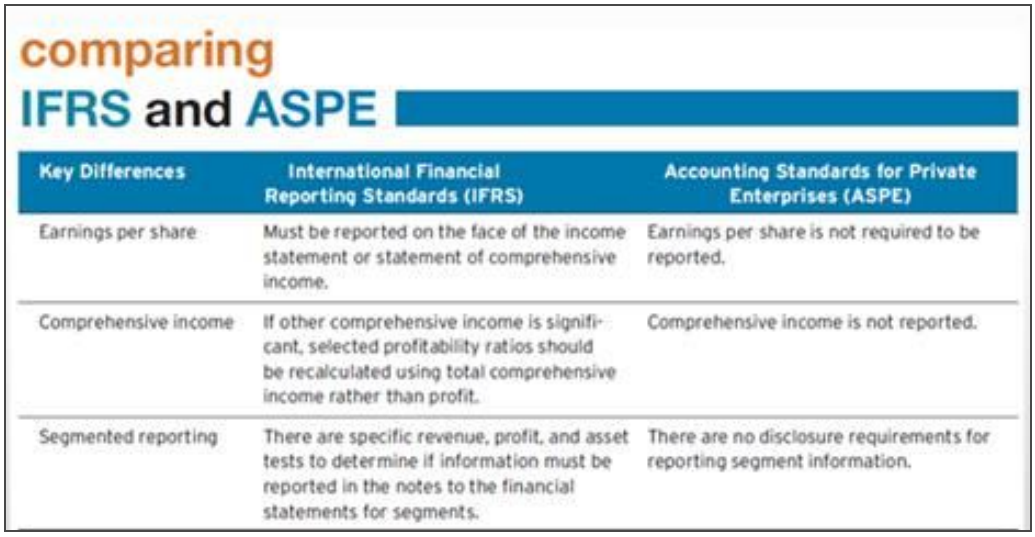
6 Limitations of Financial Analysis

Can be impacted by…

1) Alternative accounting principles
    a) Variations among companies in the application of GAAP may lessen the comparability of their statements
        i) Companies may choose from a large number of acceptable accounting policies. Different choices result in different financial positions, which again affect how easily their results can be compared
        ii) Although different accounting policies may be detectable from reading the notes to the financial statements, adjusting the data to compensate for differences is difficult, if not impossible.
2) Professional judgement
    a) Management must use professional judgement in choosing the most appropriate accounting principle for the circumstance
        i) Management's choices may be biased in favour of a presentation that furthers certain company objectives
        ii) Estimates are used in determining the allowance for uncollectible receivables, estimated useful lives and residual values for depreciation, and the fair values of certain investment securities and properties
        iii) To the extent that these estimates are inaccurate or biased, ratios and percentages that are based on such information will also be inaccurate or biased
3) Comprehensive income
    a) Most financial ratios exclude total comprehensive income, or other comprehensive income, from the analysis
    b) There are no standard ratio formulas incorporating comprehensive income
4) Inflation
    a) Our accounting information system does not adjust data for price-level changes
        i) Comparisons are still relevant because data that has not been adjusted for inflation is being used consistently for both revenues and expenses, and for each period
        ii) In Canada, inflation is not very significant
5) Diversification

a) Diversification can limit the usefulness of financial analysis. Many companies are so diversified that they cannot be classified by industry
    i) Deciding what industry a company is in can actually be one of the main challenges to an effective evaluation of its results
    ii) Companies may appear to be comparable but are not
    iii) When companies have significant operations in different lines of business, they are required to report additional disclosures in a segmented information note to their financial statements. There are specific revenue, profit, and asset tests to determine if a company is required to reported segmented information or not

6) Economic factors
    a) Economic factors measure such as the rate of interest, unemployment, and changes in demand and supply can have a significant impact on a company's performance
    b) One must use their information, along with non-financial information, to try to assess what changes related to the economic situation and what changes related to factors that management can, or should be able to, control.



comparing
IFRS and ASPE

Key Differences	International Financial Reporting Standards (IFRS)	Accounting Standards for Private Enterprises (ASPE)
Earnings per share	Must be reported on the face of the income statement or statement of comprehensive income.	Earnings per share is not required to be reported.
Comprehensive income	If other comprehensive income is significant, selected profitability ratios should be recalculated using total comprehensive income rather than profit.	Comprehensive income is not reported.
Segmented reporting	There are specific revenue, profit, and asset tests to determine if information must be reported in the notes to the financial statements for segments.	There are no disclosure requirements for reporting segment information.