Summary

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Session One

Accounting - A source of information for decision-making
Managerial Accounting - A TOOL for PLANNING and CONTROL for MANAGERS
Managerial Accounting - A tool for managers used to get information to make decisions about the future (plan, forecast, strategize) to maximize net income, and result the share price in order to create value to shareholders (owners)

Financial Accounting	Managerial Accounting
GAAP	No GAAP
Mandatory	Not Mandatory
Auditing: CA, CGA, CMA	No Auditing
Historical Data	Provide Info to Managers

Financial Statement - Merchandising Co. (E.g. Loblaws)

Revenues	R
COGS (BI + Purchases - EI)	C
Gross Margin	R-C (GM)
S&A Expenses	SA
Net Income	GM - SA (NI)

Financial Statement - Manufacturing Co. (E.g. Lays)

Revenues	
COGS (BI + COGM - EI)	
Gross Margin	
S&A Expenses	
Net Income	

Session Two

Cost - Sum Of expenses, classified bu **Function**, **Volume**, **Cost Object**, **Decision**

Cost According to Function
- Manufacturing (Production Process: Direct materials, Direct labour, Overhead)
- Marketing and Selling (Advertising, Sales travel, Sales salaries)
- Administrative Costs (Accounting salaries, Secretarial salaries)

Product Costs
- Only Manufacturing costs
- Calculated in "Schedule of Cost of Goods Manufactured"
- Cost of product not sold is a Current Asset in Balance Sheet

Period Costs

Marketing and Administration Costs

Schedule of Cost of Goods Manufactured

Items of COGM

Direct Materials

Direct Labour

Manufacturing Overhead

Direct Materials Used		????
+ Beginning Inventory	???	
+ Purchases	???	
Materials Available for Use	???	
- Ending Inventory	???	
Direct Labour		???
Manufacturing Overhead		???
Total Manufacturing Costs		???
+ Beginning work in progress		???
- Ending work in progress		???
Cost Of Goods Manufactured		???
Finished Products (Units)		???
Production Cost per Unit		???

Income Statement

Sales		???
Cost of Goods Sold		???
+ Finished Goods Inventory, beginning	???	
+ COGM	???	
Goods Available for sale	???	
- Finished Goods Inventory, ending	???	
Gross Margin		???
Operating Expenses		???
Selling Expenses	???	
Administrative expenses	???	
Operating Income		???

According to Volume

Variable Costs

Costs that varies, in total, in direct proportion with the volume of activity

Units produced/ Units sold
Ex. Direct materials, Direct labour
Y = bx (x = volume, B = Variable cost/ unit)
Fixed on a per unit basis

Fixed Costs
Costs that remain constant, in total, when the volume changes within a relevant range
Ex. Depreciation, rent, administrative salaries
Variable on a per unit basis
Y = a

Mixed Cost
Y=a + bX

According to Cost Object

Cost Object - Anything for which cost data is desired

Direct Cost
Cost that can be traced to a cost object (Staff, materials)
Indirect cost
Cost that cannot be traced to the cost object (Hydro Bill)
Allocated to Cost Object using Allocation Basis

According to Decision Making

Relevant Cost
Cost that can affect the decision
Ex. Differential Costs, Opportunity costs

Differential Cost - Cost that differs between two options
Opportunity Cost - Potential benefit that is given up when another option is selected

Sunk Costs - Costs that do not affect the decision, Costs already incurred. Should be ignored

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Process System
Used in situations where the Company produces many homogenous units of a single product
Eg. Cereal, pens
Total man. costs / Total units produced
Job System
Used when many different products are produced each period
Eg. Watches, cars
Total man. costs / # Jobs

Session Three

See Variable, Fixed, and Mixed Costs above. Graph examples on page 13/14

Four Main Tools to Identify the nature of a cost

- Account Analysis and Engineering Approach
- Scattergraph method
- Linear regression Method
- High-Low method

High Low Method

Example Data:

Month	**Maintenance Cost**	**Units Produced**
January	$2400	700 units
February	$3200	1100
March	$2800	900
April	$2600	800
May	$3400	1200
June	$3000	1000

CALCULATE VARIABLE COST
Over a certain period, find the high and low level of units produced. Find the corrosponding costs.

High - 1200 ($3400)
Low - 700 ($2400)

3400 - 2400 = $1000
1200 - 700 = 500 units

b = $1000/500 = $2
Variable Cost / Unit = $2

CALCULATE FIXED COST
$3400 = a +2(1200)
a = 1000

EQUATION OF MAINTENANCE
Y = $1000 +$2X, where X = Units Produced

INCOME STATEMENT 1		INCOME STATEMENT 2	
Sales	200 000	Sales	200 000
COGS V = 100 000, F = 40 000	140 000	Variable Costs Manufacturing 100 000 S&A 20 000	120 000
GROSS MARGIN	60 000	CONTRIBUTION MARGIN	80000
S&A Expenses V = 20 000, F = 30 000	50 000	Fixed Costs Manufacturing 40 000 S&A 30 000	70 000
OPERATING INCOME	10 000	OPERATING INCOME	10 000

Session Four

Cost-Volume-Profit Relationship

Sale Price: 20
Total Variable Cost: 10/ unit
Total Fixed Cost = 90,000
Calculate the break even point in units and in dollars

$20x = 10x + 90000 + 0$
$10x = 90000$
$x = 9000$ units
9000 units X $20/unit = 180 000

18 000 profit
Sale price: 20000
$a(20000) = 200000 + 90000 + 18000$
Sale price = $15.40

ONLY ONE PRODUCT SOLD
Break Even Point = Total Fixed Cost / % of Contribution Margin
Break Even Point Units = TFC / (Cont. Marg. / Unit)

MORE THAN ONE PRODUCT
Break Even Point = Total Fixed Cost / % (Average Cont. Marg.)
Break Even Point Units = TFC / (AVERAGE Cont. Marg. / Unit)

MARGIN OF SAFETY ()
Actual Sales (Units) - Break Even Point (Units)
OR
Actual Sales ($) - Break Even Point ($)

OPERATING LEVERAGE
A measure of how sensitive Operating leverage is to a given % change in sales
A measure, at a given level of sales, of how a % change in sales volume will affect profits
Cont. Marg. ($) / Net Income ($)
OR
Cont. Marg. ($) / (Cont. Marg. ($) - Fixed Costs ($))

Assume O/L = 2
Then if sales increase by 10%, Net income increases by (2*10%) = 20%

Session Five and Six

Definition of Budgeting
Planning - Developing objectives and preparing budgets to achieve them
Control - Comparison of actual and budgets / To identify and explain variances

SAMPLE BUDGETS FOR MERCHANDISING COMPANY:

Sales Budget

	January	February	March	Quarter
Sales (Units)	4000	6000	10000	20000
Sales ($)	40000	60000	100000	200000

Cash Collections Budget

	January	February	March	Quarter
December Sales	20000			20000
January Sales	20000	20000		40000
February Sales		30000	30000	60000
March Sales			50000	50000
Total Collections	40000	50000	80000	170000

Merchandise Purchases Budget

	January	February	March	Quarter
Desired Ending Inventory	16000	14000	8000	8000*
Sales	4000	6000	10000	20000
Total Needs	20000	20000	18000	58000
Less Beginning Inventory	7000	16000	14000	7000*
Required Purchases (Units)	13000	4000	4000	21000
Required Purchases ($)	78000	24000	24000	126000

Purchase Disbursements Budget

	January	February	March	Quarter
December Purchases	36000			36000
January Purchases	39000	39000		78000
February Purchases		12000	12000	24000
March Purchases			12000	12000
Total Disbursements	75000	51000	24000	150000

Operating Expenses Budget

	January	February	March	Quarter
Salaries	6000	6000	6000	18000
Rent	2000	2000	2000	6000
Advertising	2000	3000	5000	10000
Total Before Depreciation	10000	11000	13000	34000

Depreciation	2000	2000	2000	6000
Total Expenses	12000	13000	15000	40000

Cash Budget

	January	February	March	Quarter
Cash Balances, Beginning	5000	5000	5000	5000*
Total Cash Collections	40000	50000	80000	170000
Total Receipts	45000	55000	85000	175000
Less Disbursements				
Purchases	75000	51000	24000	150000
Operating Expenses	10000	11000	13000	34000
Dividends		3000		3000
Income Tax	2000	2000	2000	6000
Total Disbursements	87000	67000	39000	193000
Excess (Deficiency) of Cash	(42000)	(12000)	46000	(18000)
Borrowings (Repayments)	47000	17000	(39000)	25000
Interest on Borrowings	-	-	(1750)	(1750)
Cash Balance, Ending	5000	5000	5250	5250*

SAMPLE BUDGETS FOR MANUFACTURING COMPANY

Production Budget

	July	August	September
Desired Ending Inventory	20000	26000	15500
Budgeted Sales (Units)	40000	50000	70000
Total Needs	60000	76000	85000
Less Beginning Inventory	17000	20000	26000
Required production (Units)	43000	56000	59500

Direct Materials Budget

	July	August	September
Budgeted Production (Units)	43000	56000	59500
Material Needed Per Unit	3	3	3
Total Needs (kgs)	129000	168000	178500
Desired Ending Inventory	84000	89250	45750
Total Material Needs	213000	257250	224250
Beginning Inventory	64500	84000	89250

Flexible Budget

	Per Unit	2000 Units	3000 Units	4000 Units

Sales	20.00	40000	60000	80000
TVC				
DM	2.00	4000	6000	8000
DL	1.00	2000	3000	4000
MO	2.00	4000	6000	8000
S&A	1.00	2000	3000	4000
TVC	6.00	12000	18000	24000
CM	14.00	28000	42000	56000
TFC				
MO		16000	16000	16000
S&A		18200	18200	18200
TFC		34200	34200	34200
Operating Income		(10200)	7800	21800

Budgetary Control and Performance Report Steps

1. Adjust the initial budget to the actual volumes
   Replace Volume Budgeted by Actual Budget
2. Compute: Total Static - Budget Variance = Actual - Static Budget
   a) Sales Revenues: Pos Variance = Favourable, Neg Variance - Unfavourable
   b) Expenses: Pos Variance = Unfavourable, Neg Variance = Favourable
3. Analyse: Total Static - Variance Budget in Two Variances
   a) Flexible Budget Variance = Actual - flexible Budget
   b) Sales Volume Variance = Flexible Budget - Actual Budget
4. identify / Explain the causes of variance

Sample Comprehensive Performance Report

	Actual - 3500 units (1)	Flexible Budget - 3500 units (2)	Static Budget - 4000 units (3)	Total Variance (4)	Flexible Budget Variance (5)	Sales Volume Variance (6)
Sales	77000	70000	80000	3000 unfav	7000 fav	10000 unfav
TVC	23000	21000	24000	1000 fav	2000 unfav	3000 fav
CM	54000	49000	56000	2000 unfav	5000 fav	7000 unfav
TFC	33000	34200	34200	1200 fav	1200 fav	0
OI	21000	14800	21800	800 unfav	6200 fav	7000 unfav

Session Eight

Absorption Costing (Gross Margin)

Direct Materials Direct Labour Manufacturing Overhead (V+F)	===>	Finished Goods Inventory (V+F)	===>	Cost of Goods Sold (V+F)	

Operating Expenses (S&A) =====> Period Costs

Product Costing (Contribution Margin)

Direct Materials Direct Labour Manufaturing Overhead (V)	===>	Finished Goods Inventory (V)	===>	Cost of Goods Sold (V)	

Manufacturing Overhead (F) =====> Period Costs
Operating Expenses (S&A) =====> Period Costs

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If Ending Inventory > Beginning Inventory, then Op. Income (Absorption Cost) > Op. Inc. (Variable Cost)
If Ending Inventory = Beginning Inventory, then Op. Income (Absorption Cost) = Op. Inc. (Variable Cost)
If Ending Inventory < Beginning Inventory, then Op. Income (Absorption Cost) < Op. Inc. (Variable Cost)

Session Nine

Relevant Costs for Decision Making - Different Costs for Different Purposes

Short Term Decisions
- Decision to accept/reject a special order
- Decision to drop or not drop a segment
- Decision under scarcity of resources

Irrelevant Costs - Costs that do not affect the decision
- Sunk costs
- Costs that do not differ between choices

Relevant Costs - Costs that affect the decision
- Future costs
- Opportunity costs
- Avoidable costs
- Differential costs

Decision to drop or not drop a segment
- Segment performance evaluation is based on contribution margin statement
- Fixed costs are split into traceable and common
- Segment Margin = Contribution Margin - Traceable Costs

CM - Avoidable Costs > 0: Keep the segment
CM - Avoidable Costs < 0: Drop the segment
In the decision to drop or not, the common fixed costs should not be allocated. They're irrelevant

Session Ten

Responsibility Centers and Performance Evaluation

Evaluation of Responsibility Centers
- Decentralization vs. Centralization
- Reasons
  - Near local market
  - Reaction efficiency
  - Motivation
  - Profitability
- Responsibility Centers

Segment or Responsibility Centers
A segment is any part or activity of an organization about which a manager seeks cost, revenue, or profit data
A segment could be sales territory, service centers, divisions or plants, marketing departments, product lines

Responsibility Centers
- Kinds
  - Cost Centers
  - Revenue Centers
  - Profit Centers
  - Investment Centers

Performance Evaluation: Criteria
- Budgets
- Variance Analysis
- Profitability Criteria
  - Return on Investment
  - Residual Income
- Qualitative Measures

Segment reporting
Segment Performance Evaluation based on contribution margin statement (costs classified by behaviour)
Fixed costs split into traceable costs and common costs
Segment Margin (SM) = CM - Traceable Costs
Residual Income (RI) = Value added by the segment and its manager to the whole organization
Economic Value Added (EVA) = Net Income - Opportunity Costs (Total Assets X Required Rate Of Return)

Segment Reporting

Traceable Costs are fixed costs that can be identified with the segment and could be saved if the segment is dropped

Common Costs are fixed costs that cannot be identified with a particular segment and applies to the overall company.

Common Costs should not be allocated to divisions. These costs remain unchanged even if a division is dropped.

Performance Evaluation: Criteria
- ROI
  - Segment Margin / Average Operating Asset (Total Assets)
    - SM/ AOA
  - Advantages of ROI
    - Easy to compute
    - Helps comparison
  - Criticisms of ROI
    - Short term focus
    - Could be managed
- Residual Income
  - Segment Margin - (RRR% X AOA)
    - SM = Segment Margin
    - RRR% = WACC
    - AOA = Total Assets
  - Advantages
    - Long term focus
    - Value creation
- EVA (Preferred over RI)
  - Advantages
    - Takes into account the required rate of return (Risk of each division)
    - Better fit with the objective of value creation
  - Disadvantages
    - Not easy to compute the Required Rate of Return
- Qualitative measures
  - Are products similar?
  - Age?
  - Comparable Risk?
  - Corporate Strategy?

Session Eleven

Transfer Pricing

The price charged when one segment of a company provides goods or services to another segment of the company
- Needed to evaluate the performance of a center
- Needed to motivate managers
- Helps to maximize corporate profitability

Ways to Set transfer prices
- Cost-Based Transfer Prices
  - Full Cost

- Variable Cost
- Market-Price Bases Transfer prices
  - Market Price
  - Availability of Intermediate market
- Negotiated transfer price
  - A transfer price agreed on between buying and selling divisions
- REMEMBER
  - A segment manager should maximize profit
  - Seller segment will ask for the highest price
  - Buyer segment will ask for the lowest price

The Fundamental Idea of Transfer Pricing

- Sellers Perspective: Transfer price = TVC + Lost CM per unit on outside sales
- Buyers Perspective: Transfer price = Cost of Buying from Outside
- Impact of Idle Capacity

Don't forget calculator

Learn ratios

- Asset turnover ratio