LO 1: Static Budgets

Terms
Budgetary control
Static budget

Budgetary Control:
Consists of taking steps by management to see that planned objectives are met
1. Develop budget
2. Analyze difference between actual and budget
3. Take corrective action
4. Modify future plans

Return to step 1 with modified plan

Static Budget:
- Based on one projected level of activity
- Compares budgeted to actual results and finds differences as favorable or unfavorable
- Because it is only based on one level of activity, it is appropriate
    - for fixed manufacturing cost or fixed selling and administrative expenses
    - when evaluating behavior of costs in response to changes in activity level

LO 2: Flexible Budgets

Terms
Flexible budget

Developing a Flexible budget:
- "Flexed" to accommodate actual level of production
- Use costs (variable and fixed) and revenue formulas from static budgets

Steps:
1. Identify the activity index and the relevant rand of activity
2. Identify the variable costs and determine the budgeted variable cost per unit of activity for each cost
3. Identify the fixed cost and determine the budgeted amount for each cost (Note: fixed costs do not change in total as activity changes)
4. Prepare the budget for selected increments of activity within the relevant range

Total variable cost per unit of activity	X	Activity Level	=	Variable Costs
Fixed Costs	+	Variable Costs	=	Total Budgeted Costs

Differences:
- Difference between how much an expense should have been at the actual level of activity and the actual amount of expense incurred.

- Favorable differences occurs when the cost is less than expected at the actual level of activity for the period.
- Unfavorable differences occurs when the cost is greater than expected at the actual level of activity for the period.

Flexible Budget Report:
- Show production data for a selected activity index
- Show cost data for variable and fixed costs

Practice #1

The May static income statement information for T Company is shown below:

	Static Budget	Actual	Difference
Units sold	100	110	
Sales	$3,000	$3,200	200 F
Variable expenses	$1,800	$1,920	120 U
Contribution margin	$1,200	$1,280	80 F
Fixed expenses	$700	$680	20 F
Operating income	$500	$600	100 F

Required: Determine what the flexible budget should be and determine if differences are favorable or unfavorable

LO 3: Responsibility Accounting

Terms

Responsibility accounting	Cost center
Decentralization	Profit center
Segment	Investment center
Controllable cost	Direct fixed costs
Management by exception	Indirect fixed costs
Responsibility reporting system	Controllable margin

Responsibility Accounting:
- Accumulating and reporting costs based on the manager who has the authority to make the day-to-day decisions about the items
- Gives managers responsibility for controllable cost at each level of authority
- Valuable in a decentralized organization
- A segment identifies areas of responsibility
- Distinction is made between controllable and noncontrollable items
- Performance reports include only controllable items by individual managers- this is included in the responsibility reporting system

Controllable vs noncontrollable:
- Whether the cost or revenue is controllable is determined by level in which it is associated

- All cost are controllable by top management
- Fewer costs are controllable as it moves to lower levels of management
- Costs incurred directly by a level of responsibility are controllable at that level

Evaluation:
- Management by exception reviews only differences in actual vs planned activities
- Human factors of performance
  - Managers of responsibility centers should have direct input into the process of establishing goals
  - Should be based on matters that are controllable
  - Top management should support the evaluation process
  - Process should include response by managers
  - Should evaluate both good and bad performances

Responsibility Centers:

Cost Centers
  - Incur costs but do not directly generate revenue
  - Examples include production or service departments
  - Performance evaluated on cost controls

Profit Centers
  - Incur costs and generate revenue
  - Examples include individual departments of a retail store
  - Performance evaluated on profitability

Investment Centers
  - Incur costs, generate revenue, and has control over decisions regarding assets available for use
  - Performance evaluated on profitability of center and rate of return

Responsibility Report
- Shows controllable revenue and costs to determine controllable margin

Sales	-	Variable Cost	=	Contribution Margin	-	Controllable Fixed Cost	=	Controllable Margin

LO 4: Evaluate Performance

Terms

Return on Investment (ROI)

- ROI measures the segments ability to utilize its operating assets to generate income. ROI focuses on how efficiently the assets are used since it expressed as a percent of the assets used. The ability to generate income by utilizing operating assets varies widely by industry and by company within an industry.
- Return on Investment (ROI) formula:

$$\text{ROI} = \frac{\text{Controllable Margin}}{\text{Average operating assets}}$$

- ROI may be improved in several ways:
  - Reduce expenses which increases controllable margin
  - Increase sales which increases controllable margin
  - Reduce operating assets

Practice #2

Company provides the following information:

Sales	$4,000,000
Controllable Margin	400,000
Average operating assets	1,600,000

Required:
a) Compute the company's return on investment.
b) The owner is convinced that sales will increase next year by 150% and that controllable margin will increase by 100%, with no increase in average operating assets. What would be the company's ROI?
c) The chief financial officer of the company believes a more realistic scenario would be a $1,000,000 increase in sales, requiring a $400,000 increase in average operating assets, with a resulting $250,000 increase in controllable margin. What would be the company's ROI in this situation?

LO 5: Residual Income

Terms
Minimum Rate of Return
Residual income

- **ROI** ignores the minimum rate of return on a company's operating assets
- **Residual income** evaluates income that remains after subtracting the controllable margin from the minimum rate of return on operating assets

Controllable Margin	-	Minimum Rate of Return X Average Operating Assets	=	Residual Income

Practice #3

Montana Company has reported the following results for last year's operations:

Sales	$50,000,000
Controllable Margin	6,000,000
Average operating assets	20,000,000

Required:
a) Compute Montana's ROI
b) Management has set a minimum required rate of return on average operating assets of 25%. What is the residual income?

Solution #1

	Revenue and Cost Formula	Flexible Budget		Actual	Difference
Units sold		110	→	110	
Sales		$3,200		$3,200	0
Variable expenses	$18 * 110	1,980		$1,920	60 F
Contribution Margin		1,220		1,280	60 F
Fixed expenses	$700 in total	700		$680	20 F
Operating income		520		$600	80 F

Step 1: Cost formula = static budget / units sold for revenue and variable expenses and total static budget fixed costs
Step 2: Create flexible budget based on actual units sold and the cost formula.

Solution #2

a) $\text{ROI} = \dfrac{\text{Controllable Margin}}{\text{Average operating assets}} \quad \dfrac{\$400{,}000}{\$1{,}600{,}000} = 25\%$

b) $\text{ROI} = \dfrac{\text{Controllable Margin}}{\text{Average operating assets}} \quad \dfrac{\$400{,}000 + 400{,}000}{\$1{,}600{,}000} = 50\%$

c) $\text{ROI} = \dfrac{\text{Controllable Margin}}{\text{Average operating assets}} \quad \dfrac{\$400{,}000 + 250{,}000}{\$1{,}600{,}000 + 400{,}000} = 32.5\%$

Solution #3

a)

$\text{ROI} = \dfrac{\text{Controllable Margin}}{\text{Average operating assets}} \quad \dfrac{\$6{,}000{,}000}{\$20{,}000{,}000} = 30\%$

b)

Average operating assets	$20,000,000
Minimum rate of return	25%
Minimum required income	$5,000,000
Controllable Margin	$6,000,000
Residual Income	$1,000,000