

**AGENDA: FLEXIBLE BUDGETS AND PERFORMANCE ANALYSIS**

- A. Preparing flexible budgets.
- B. Calculating activity variances.
- C. Calculating revenue and spending variances.
- D. Preparing flexible budgets with more than one cost driver.
- E. Understanding common errors made with performance reports.

## **PLANNING BUDGETS VS. FLEXIBLE BUDGETS**

A planning budget is prepared before the period begins and is valid for only the planned level of activity.

- Comparing actual costs to a static, unchanging planning budget is misleading because it results in “apples to oranges” cost comparisons.

A flexible budget is an estimate of what revenues and costs should have been, given the actual level of activity for the period.

- Comparing actual costs to what the costs should have been for the actual level of activity for the period results in meaningful “apples to apples” cost comparisons.

## DEFICIENCIES OF THE STATIC PLANNING BUDGET: AN EXAMPLE

Rick Manzi, owner of Rick's Hairstyling, prepared the March budget that appears below:

Rick's Hairstyling  
Planning Budget  
For the Month Ended March 31

<i>Budgeted</i> client-visits (q).....	1,000
Revenue (\$180.00q) .....	<u>\$180,000</u>
Expenses:	
Wages and salaries (\$65,000 + \$37.00q) .....	102,000
Hairstyling supplies (\$1.50q) .....	1,500
Client gratuities (\$4.10q) .....	4,100
Electricity (\$1,500 + \$0.10q) .....	1,600
Rent (\$28,500) .....	28,500
Liability insurance (\$2,800) .....	2,800
Employee health insurance (\$21,300) .	21,300
Miscellaneous (\$1,200 + \$0.20q) .....	<u>1,400</u>
Total expense .....	<u>163,200</u>
Net operating income .....	<u>\$ 16,800</u>

Notice, Rick created formulas for his revenue and his expenses.

- The hairstyling supplies and client gratuities are variable costs.
- The wages and salaries, electricity, and miscellaneous are mixed costs.
- The rent, liability insurance, and employee health insurance are fixed costs.

Based on a review of the cost formulas shown above, can you explain why these cost behavior classifications are correct?

### THE EXAMPLE CONTINUED

At the end of March, Rick found that his actual profit was \$21,230 as shown in the income statement below:

Rick's Hairstyling  
Income Statement  
For the Month Ended March 31

Actual client-visits .....	1,100
Revenue .....	<u>\$194,200</u>
Expenses:	
Wages and salaries .....	106,900
Hairstyling supplies.....	1,620
Client gratuities.....	6,870
Electricity .....	1,550
Rent.....	28,500
Liability insurance .....	2,800
Employee health insurance .....	22,600
Miscellaneous.....	<u>2,130</u>
Total expense .....	<u>172,970</u>
Net operating income.....	<u>\$ 21,230</u>

Notice, Rick's actual net operating income (\$21,230) is higher than the net operating income in his planning budget (\$16,800). The question Rick wants to answer is—what is responsible for the difference in net operating income? Is it:

- Higher prices?
- Lower costs?
- Something else?

### THE EXAMPLE CONTINUED

In an attempt to analyze what happened in March, Rick prepared a report that compares actual performance to the planning budget. Notice, the planning budget is based on 1,000 client visits and the actual number of client visits was 1,100.

Rick's Hairstyling					
Comparison of Planning Budget to Actual Results					
For the Month Ended March 31					
	Planning Budget	Actual Results	Variances		
Client-visits .....	1,000	1,100			
Revenue .....	<u>\$180,000</u>	<u>\$194,200</u>	<u>\$14,200</u>	F	
Expenses:					
Wages and salaries .....	102,000	106,900	4,900	U	
Hairstyling supplies.....	1,500	1,620	120	U	
Client gratuities.....	4,100	6,870	2,770	U	
Electricity .....	1,600	1,550	50	F	
Rent.....	28,500	28,500	0		
Liability insurance .....	2,800	2,800	0		
Employee health insurance .....	21,300	22,600	1,300	U	
Miscellaneous.....	<u>1,400</u>	<u>2,130</u>	<u>730</u>	U	
Total expense .....	<u>163,200</u>	<u>172,970</u>	<u>9,770</u>	U	
Net operating income.....	<u>\$ 16,800</u>	<u>\$ 21,230</u>	<u>\$4,430</u>	F	

How would you interpret the usefulness of this report?

### PREPARING A FLEXIBLE BUDGET: THE EXAMPLE CONTINUED

A flexible budget approach recognizes that a budget can be adjusted to show what costs should be for the actual level of activity. Let's assume that Rick's accountant Victoria Kho prepared the flexible budget for March that is shown below:

Rick's Hairstyling  
Flexible Budget  
For the Month Ended March 31

<i>Actual</i> client-visits (q) .....	1,100
Revenue (\$180.00q) .....	<u>\$198,000</u>
Expenses:	
Wages and salaries (\$65,000 +\$37.00q) .....	105,700
Hairstyling supplies (\$1.50q) .....	1,650
Client gratuities (\$4.10q) .....	4,510
Electricity (\$1,500 + \$0.10q) .....	1,610
Rent (\$28,500) .....	28,500
Liability insurance (\$2,800) .....	2,800
Employee health insurance (\$21,300) .	21,300
Miscellaneous (\$1,200 + \$0.20q) .....	<u>1,420</u>
Total expense .....	<u>167,490</u>
Net operating income .....	<u>\$ 30,510</u>

Can you explain how Victoria computed the revenue and cost figures in this exhibit?

### ACTIVITY VARIANCES: THE EXAMPLE CONTINUED

Part of the discrepancy between Rick's planned and actual net operating incomes is because the actual level of activity was higher than expected. The activity variances below reveal this portion of the discrepancy:

Rick's Hairstyling Activity Variances For the Month Ended March 31			
	Planning Budget	Flexible Budget	Activity Variances
Client-visits .....	1,000	1,100	
Revenue (\$180.00q) .....	<u>\$180,000</u>	<u>\$198,000</u>	<u>\$18,000</u> F
Expenses:			
Wages and salaries (\$65,000 +\$37.00q) .....	102,000	105,700	3,700 U
Hairstyling supplies (\$1.50q) .....	1,500	1,650	150 U
Client gratuities (\$4.10q) .....	4,100	4,510	410 U
Electricity (\$1,500 + \$0.10q) .....	1,600	1,610	10 U
Rent (\$28,500) .....	28,500	28,500	0
Liability insurance (\$2,800) .....	2,800	2,800	0
Employee health insurance (\$21,300) .....	21,300	21,300	0
Miscellaneous (\$1,200 + \$0.20q) .....	<u>1,400</u>	<u>1,420</u>	<u>20</u> U
Total expense .....	<u>163,200</u>	<u>167,490</u>	<u>4,290</u> U
Net operating income .....	<u>\$ 16,800</u>	<u>\$ 30,510</u>	<u>\$13,710</u> F

The activity variances reveal the following important insights:

- Revenue should be \$18,000 higher than expected (denoted by a favorable variance) simply because the actual level of activity was higher than expected.
- All variable and mixed costs should be higher than expected (denoted by the unfavorable variances) simply because the actual level of activity was higher than expected.

## REVENUE AND SPENDING VARIANCES: THE EXAMPLE CONTINUED

The other portion of the discrepancy between Rick's planned and actual net operating incomes relates to how well he controlled revenues and expenses. We isolate this portion of the discrepancy by computing the revenue and spending variances shown below:

Rick's Hairstyling Revenue and Spending Variances For the Month Ended March 31			
	Flexible Budget	Actual Results	Revenue and Spending Variances
Client-visits	1,100	1,100	
Revenue (\$180.00q) .....	<u>\$198,000</u>	<u>\$194,200</u>	<u>\$3,800</u> U
Expenses:			
Wages and salaries (\$65,000 +\$37.00q) .....	105,700	106,900	1,200 U
Hairstyling supplies (\$1.50q) .....	1,650	1,620	30 F
Client gratuities (\$4.10q) .....	4,510	6,870	2,360 U
Electricity (\$1,500 + \$0.10q) .....	1,610	1,550	60 F
Rent (\$28,500) .....	28,500	28,500	0
Liability insurance (\$2,800) .....	2,800	2,800	0
Employee health insurance (\$21,300) .....	21,300	22,600	1,300 U
Miscellaneous (\$1,200 + \$0.20q) .....	<u>1,420</u>	<u>2,130</u>	<u>710</u> U
Total expense .....	<u>167,490</u>	<u>172,970</u>	<u>5,480</u> U
Net operating income .....	<u>\$ 30,510</u>	<u>\$ 21,230</u>	<u>\$9,280</u> U

A revenue (spending) variance is the difference between what the total revenue (costs) should have been, given the actual level of activity for the period, and the actual amount of the revenue (cost).

## FLEXIBLE BUDGETS WITH MULTIPLE COST DRIVERS

Thus far, the Rick's Hairstyling example has assumed that there is only one cost driver—the number of client visits. However, in the activity-based costing chapter, we found that more than one cost driver might be needed to explain costs in an organization.

If we assume that Rick determined that the number of hours of operation was another important cost driver, then Rick might prepare a flexible budget like the one shown below:

Rick's Hairstyling  
Flexible Budget  
For the Month Ended March 31

<i>Actual</i> client-visits ( $q_1$ ).....	1,100
<i>Actual</i> hours of operation ( $q_2$ ) .....	185
Revenue (\$180.00 $q_1$ ).....	<u>\$198,000</u>
Expenses:	
Wages and salaries (\$65,000 + \$220 $q_2$ ) .....	105,700
Hairstyling supplies (\$1.50 $q_1$ ) .....	1,650
Client gratuities (\$4.10 $q_1$ ) .....	4,510
Electricity (\$390 + \$0.10 $q_1$ + \$6.00 $q_2$ ) .....	1,610
Rent (\$28,500) .....	28,500
Liability insurance (\$2,800).....	2,800
Employee health insurance (\$21,300) .	21,300
Miscellaneous (\$1,200 + \$0.20 $q_1$ ) .....	<u>1,420</u>
Total expense .....	<u>167,490</u>
Net operating income.....	<u>\$ 30,510</u>

Notice, for example, that the cost formula for electricity includes a fixed component (\$390 per month) a component that varies with client-visits (\$0.10) and a component that varies with hours of operation (\$6.00).

## COMMON ERRORS WHEN PREPARING PERFORMANCE REPORTS

There are two common errors when preparing reports designed to compare expected and actual financial performance.

- The first mistake is to implicitly assume all income statement items are fixed. This is equivalent to comparing the planning budget to actual results as shown on an earlier transparency.
- The second mistake is to implicitly assume that all income statement items are variable. An example of this type of faulty analysis is shown below:

Rick's Hairstyling					
For the Month Ended March 31					
	(1)	(2)	(3)	Variances	
	Planning Budget	Planning Budget × (1,100/1,000)	Actual Results	(3) – (2)	
Client-visits .....	1,000		1,100		
Revenue .....	<u>\$180,000</u>	<u>\$198,000</u>	<u>\$194,200</u>	<u>\$3,800</u>	U
Expenses:					
Wages and salaries .	102,000	112,200	106,900	5,300	F
Hairstyling supplies..	1,500	1,650	1,620	30	F
Client gratuities.....	4,100	4,510	6,870	2,360	U
Electricity .....	1,600	1,760	1,550	210	F
Rent.....	28,500	31,350	28,500	2,850	F
Liability insurance....	2,800	3,080	2,800	280	F
Employee health insurance.....	21,300	23,430	22,600	830	F
Miscellaneous.....	<u>1,400</u>	<u>1,540</u>	<u>2,130</u>	<u>590</u>	U
Total expense .....	<u>163,200</u>	<u>179,520</u>	<u>172,970</u>	<u>6,550</u>	F
Net operating income.	<u>\$ 16,800</u>	<u>\$ 18,480</u>	<u>\$ 21,230</u>	<u>\$2,750</u>	F

Can you explain the flaws with this approach?