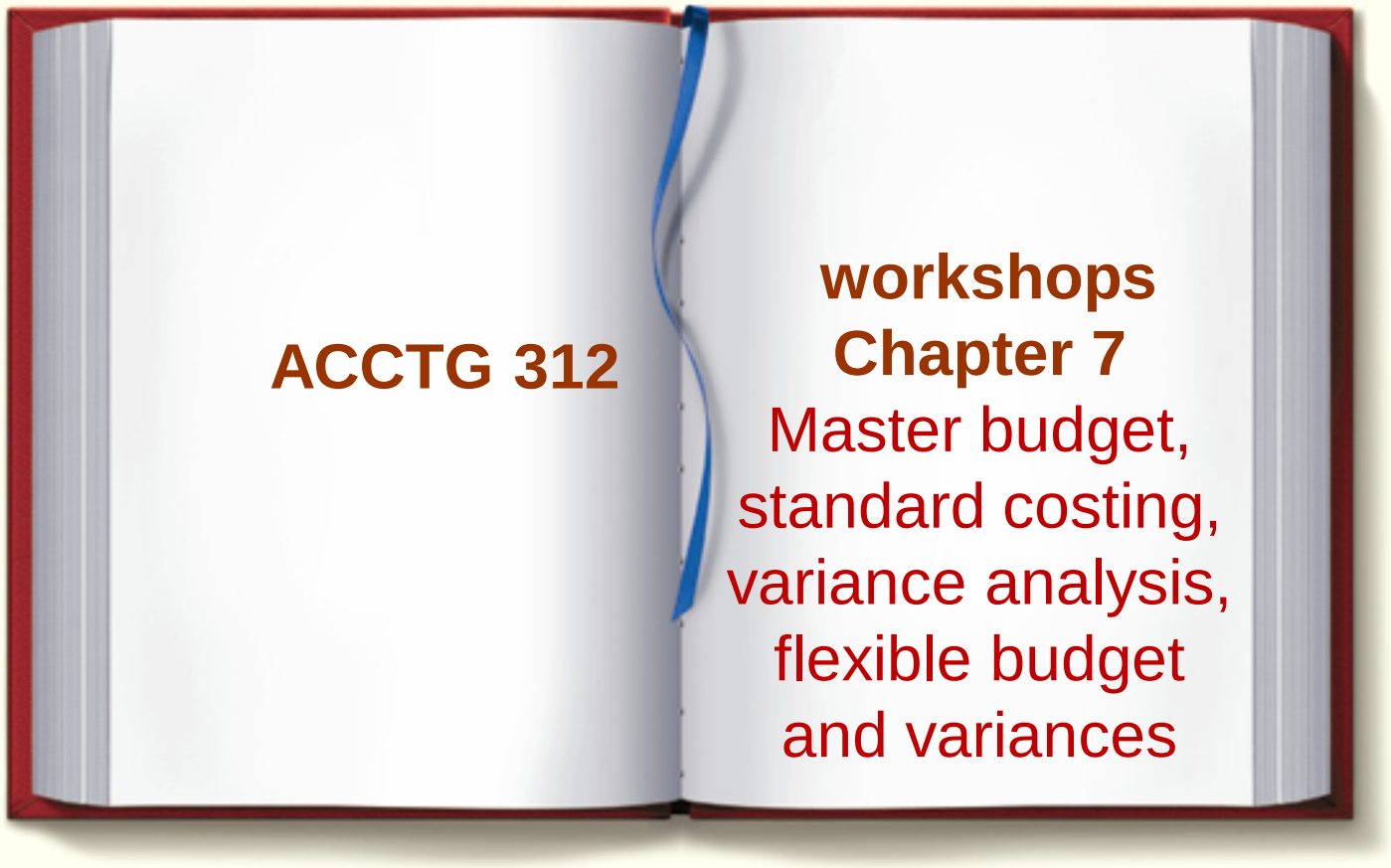

ACCTG 312
workshops
Chapter 7
Master budget,
standard costing,
variance analysis,
flexible budget
and variances

This presentation includes:

Exercises 7-17, 7-18

Problem 7-35

Exercise 7-17

Flexible budget Connor Company's budgeted prices for direct materials, direct manufacturing labor, and direct marketing (distribution) labor per computer case are $40, $8, and $12, respectively.

The president is pleased with the following performance report:

	Actual Costs	Static Budget	Variance
Direct materials	$364,000	$400,000	$36,000 F
Direct manufacturing labor	78,000	80,000	2,000 F
Direct marketing (distribution) labor	110,000	120,000	10,000

Actual output was 8,800 computer cases. Assume all three direct-cost items above are variable costs.

Question:

Is the president's pleasure justified?

Prepare a revised performance report that uses a flexible budget and a static budget.

The existing performance report is a Level 1 analysis, based on a static budget.

It makes no adjustment for changes in output levels.

The budgeted output level is 10,000 units (direct materials of $400,000 in the static budget ÷ budgeted direct materials cost per computer case of $40.)

Level 2 analysis that presents a flexible-budget variance and a sales-volume variance of each direct cost category

Variance Analysis for Connor Company

	Actual Results (1)	Flexible-Budget Variances (2) = (1) – (3)	Flexible Budget (3)	Sales-Volume Variances (4) = (3) – (5)	Static Budget (5)
Output units	8,800	0	8,800	1,200 U	10,000
Direct materials	$364,000	$12,000 U	$352,000	$48,000 F	$400,000
Direct manufacturing labor	78,000	7,600 U	70,400	9,600 F	80,000
Direct marketing labor	110,000	4,400 U	105,600	14,400 F	120,000
Total direct costs	$552,000	$24,000 U	$528,000	$72,000 F	$600,000

$24,000 U — Flexible-budget variance

$72,000 F — Sales-volume variance

$48,000 F — Static-budget variance

The Level 1 analysis shows total direct costs have a $48,000 favorable variance. However, the Level 2 analysis reveals that this favorable variance is due to the reduction in output of 1,200 units from the budgeted 10,000 units.

Each direct cost category has an actual unit variable cost that exceeds its budgeted unit cost:

	Actual	Budgeted
Units	8,800	10,000
Direct materials	$ 41.36	$ 40.00
Direct manufacturing labor	$ 8.86	$ 8.00
Direct marketing labor	$ 12.50	$ 12.00

Therefore, the Presidents pleasure is not really justified based on these results.

Analysis of price and efficiency variances for each cost category could assist in further the identifying causes of these more aggregated (Level 2) variances.

Exercise 7-18

Flexible-budget preparation and analysis

Bank Management Printers, Inc., produces luxury checkbooks with three checks and stubs per page. Each checkbook is designed for an individual customer and is ordered through the customer's bank.

The company's operating budget for September 2009 included these data:

Number of checkbooks	15,000
Selling price per book	$ 20
Variable cost per book	$ 8
Fixed costs for the month	$145,000

The actual results for September 2009 were:

Number of checkbooks	12,000
Selling price per book	$ 21
Variable cost per book	$ 7
Fixed costs for the month	$150,000

1. Prepare a static-budget-based variance analysis of the September performance

Variance Analysis for Bank Management Printers for September 2009

Level 1 Analysis

	Actual Results (1)	Static-Budget Variances (2) = (1) – (3)	Static Budget (3)
Units sold	12,000	3,000 U	15,000
Revenue	$252,000[a]	$ 48,000 U	$300,000[c]
Variable costs	84,000[d]	36,000 F	120,000[f]
Contribution margin	168,000	12,000 U	180,000
Fixed costs	150,000	5,000 U	145,000
Operating income	$ 18,000	$ 17,000 U	$ 35,000

$17,000 U
Total static-budget variance

2. Prepare a flexible-budget-based variance analysis of the September performance

Reminder: the sales volume variance is the difference between actual and budged output times budgeted contribution margin or (3,000 x 12)

	Actual Results (1)	Flexible-Budget Variances (2) = (1) – (3)	Flexible Budget (3)	Sales Volume Variances (4) = (3) – (5)	Static Budget (5)
Units sold	12,000	0	12,000	3,000 U	15,000
Revenue	$252,000[a]	$12,000 F	$240,000[b]	$60,000 U	$300,000[c]
Variable costs	84,000[d]	12,000 F	96,000[e]	24,000 F	120,000[f]
Contribution margin	168,000	24,000 F	144,000	36,000 U	180,000
Fixed costs	150,000	5,000 U	145,000	0	145,000
Operating income	$ 18,000	$19,000 F	$ (1,000)	$36,000 U	$ 35,000

$19,000 F — Total flexible-budget variance

$36,000 U — Total sales-volume variance

$17,000 U — Total static-budget variance

[a] 12,000 × $21 = $252,000
[b] 12,000 × $20 = $240,000
[c] 15,000 × $20 = $300,000
[d] 12,000 × $7 = $ 84,000
[e] 12,000 × $8 = $ 96,000
[f] 15,000 × $8 = $120,000

3. Why might Bank Management find the flexible-budget-based variance analysis more informative than the static-budget-based variance analysis?

Level 2 analysis breaks down the static-budget variance into a flexible-budget variance and a sales-volume variance.

The primary reason for the static-budget variance being unfavorable ($17,000 U) is the reduction in unit volume from the budgeted 15,000 to an actual 12,000.

One explanation for this reduction is the increase in selling price from a budgeted $20 to an actual $21.

Operating management was able to reduce variable costs by $12,000 relative to the flexible budget.

This reduction could be a sign of efficient management. Alternatively, it could be due to using lower quality materials (which in turn adversely affected unit volume).

Problem 7-35

Direct manufacturing labor and direct materials variances, missing data

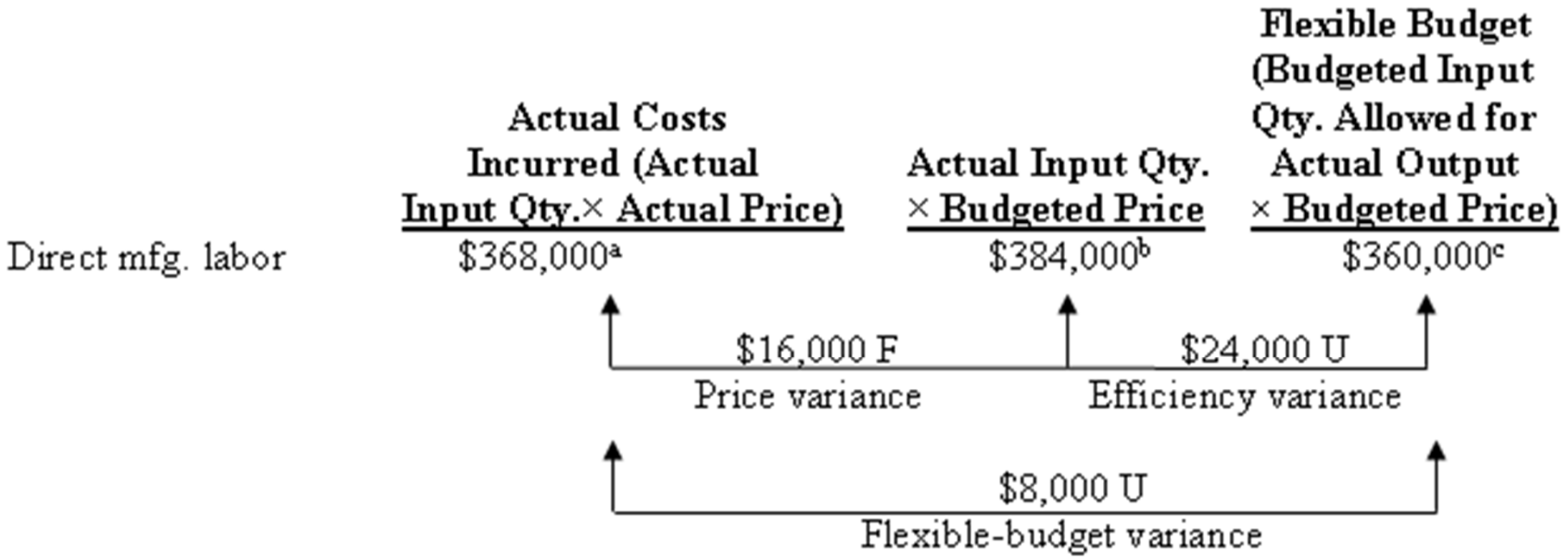
Morro Bay Surfboards manufactures fiberglass surfboards. The standard cost of direct materials and direct manufacturing labor is $100 per board. This includes 20 pounds of direct materials, at the budgeted price of $2 per pound, and five hours of direct manufacturing labor, at the budgeted rate of $12 per hour.

Following are additional data for the month of July:

Units completed	6,000 units
Direct material purchases	150,000 pounds
Cost of direct material purchases	$292,500
Actual direct manufacturing labor-hours	32,000
Actual direct-labor cost	$368,000
Direct materials efficiency variance $	12,500 U

There were no beginning inventories.

1. Compute direct manufacturing labor variances for July



[a] Given (or 32,000 hours × $11.50/hour)
[b] 32,000 hours × $12/hour = $384,000
[c] 6,000 units × 5 hours/unit × $12/hour = $360,000

2. Compute the actual pounds of direct materials used in production in July

Budgeted pounds allowed for the output achieved:

6,000 × 20 = 120,000 pounds

Actual pounds of direct materials used:

120,000 + 6,250 = 126,250 pounds

Unfavorable direct materials efficiency variance of $12,500 indicates that more pounds of direct materials were actually used than the budgeted quantity allowed for actual output.

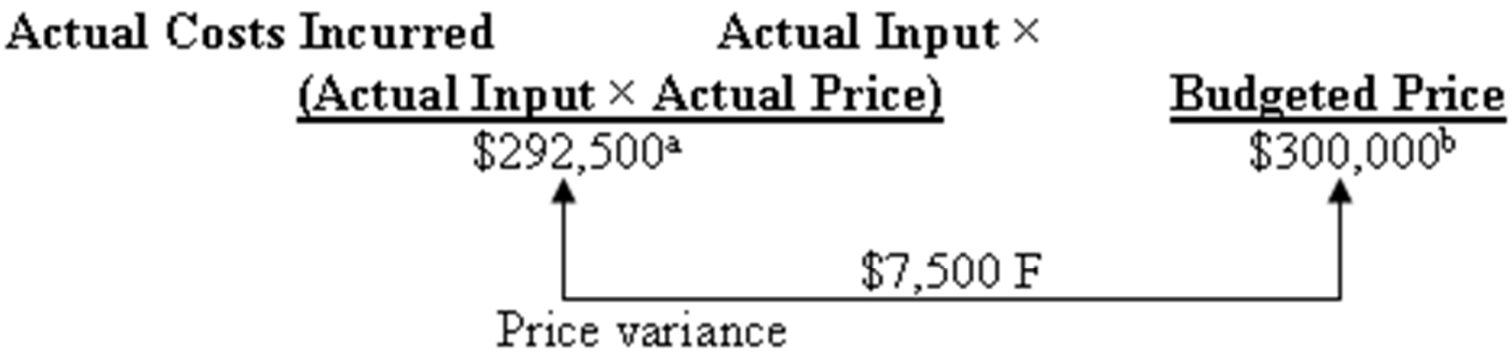
$$\frac{\$12{,}500 \text{ efficiency variance}}{\$2 \text{ per pound budgeted price}}$$

The 6,250 excess units can also be computed by dividing the efficiency variance by the standard price

3. Calculate the actual price per pound of direct materials purchased

$$\text{Actual price paid per pound} = \frac{\$292{,}500}{150{,}000}$$
$$= \$1.95 \text{ per pound}$$

4. Calculate the direct materials price variance



[a] Given
[b] 150,000 pounds × $2/pound = $300,000