

CHAPTER 8

Planning and Budgeting

- **The planning process**
- **Budget types**
 - **Statistics budget**
 - **Revenue budget**
 - **Expense budget**
 - **Operating budget**
- **Flexible budgeting and variance analysis**
- **Cash budget**

The Planning Process

- The **strategic plan** is the foundation of the planning process. It contains the organization's:
 - Values statement
 - Mission statement
 - Vision statement
 - Goals
 - Objectives
- The **operating, or five-year, plan** is the “how we expect to meet our objectives” portion of the planning process.
- The planning process takes place more or less continuously throughout the year.

Operating (Five-Year) Plan Format

Chapter 1: Values, vision, mission, and goals

Chapter 2: Corporate objectives

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Chapter 7: Functional area plans

A. Marketing

B. Operations

C. Finance

D. Administration and human resources

E. Facilities

Note that the plan is most detailed for the first year.

Financial Plan Format

C. Finance

1. **Financial condition, investments, and financing**
 - a. **Financial condition analysis**
 - b. **Capital budget**
 - c. **Forecasted financial statements**
 - d. **External financing requirements**
2. **Working capital management**
 - a. **Overall working capital policy**
 - b. **Cash budget**
 - c. **Cash and marketable securities management**
 - d. **Inventory management**
 - e. **Credit policy and receivables management**
 - f. **Short-term financing**

Financial Plan Format (Cont.)

3. Managerial accounting (first year only)

- a. Statistics budget
- b. Revenue budget
- c. Expense budget
- d. Operating budget
- e. Control procedures

? What are the keys to an effective planning process?

Budgeting Basics

- **Budgets** are detailed plans, expressed in *dollar terms*, that specify how resources will be used over some period of time.
- Budgets may be developed and applied to any *level* within an organization:
 - Aggregate
 - By department
 - By service line
 - By contract
 - By the nature of the expenditure

Budgeting Basics (Cont.)

- To be effective, budgets must not be thought of as financial staff tools, but rather as *managerial tools*.
- Budgets are used for:
 - Planning
 - Communication
 - Control
- ? What is meant by “communication”?
- ? How are budgets used for control?

Statistics Budget

- The **statistics budget** is the foundation budget, in that it develops the input data needed for the other budgets.
- It contains *basic* forecasts for:
 - Volume of services provided
 - Resources (labor and capital) needed to provide those services
- Smaller organizations may not have one.
- ? How easy is it to create?
- ? How important is the statistics budget?

Revenue Budget

- The **revenue budget** combines volume data from the statistics budget with reimbursement expectations to forecast revenues.
- The end result is a revenue forecast:
 - In the aggregate
 - By department
 - By service
 - By diagnosis (or other clinical basis)

Expense Budget

- The **expense budget** combines volume data from the statistics budget with detailed resource utilization data to forecast expenses.
- To be most useful, expenses must be broken down into *fixed* and *variable* components.
- Like revenues, expenses must be forecasted at multiple levels.

Expense Budget (Cont.)

■ Major components

● Labor

- Salaries
- Wages
- Fringe benefits
- Overtime
- Training and education

● Nonlabor

- Facilities (depreciation and leases)
- Medical and administrative supplies
- Utilities

■ At larger organizations, each category will have a separate budget.

Operating Budget

- For larger organizations, the **operating budget**, which focuses on *projected profitability*, combines information from the revenue and expense budgets.
- Smaller organizations may use a single operating budget in place of multiple budget types.

Budget Timing

- All organizations use **annual budgets** to set standards for the coming year.
- Most also use quarterly (or more frequent) budgets to ensure timely feedback and control.
- Not all budget types have to follow the same timing pattern.
- Out-year budgets are more for planning than for control purposes.

Conventional vs. Zero-Based Budgets

- Traditionally, health providers have used the **conventional** approach to budgeting.
 - The old budget is the starting point.
 - Typically, only minor changes are made.
 - Changes often are applied equally.
- In **zero-based budgeting**, each new budget is started from scratch.
- ? What are the advantages and disadvantages of each approach?

Top-Down vs. Bottom-Up Budgets

■ **Bottom-up** budgets:

- Begin at the subunit (departmental) level.
- Are reviewed and compiled by the finance department.
- Are approved by senior management.

■ **Top-down** budgets:

- Begin at the finance department with senior management guidance.
- Are sent to the departments for review.

? What are the advantages and disadvantages of each?

Simple Operating Budget Example

- Consider the **2007** operating budget of Carroll Clinic shown on the following four slides. This budget was created at the end of **2006**.
- The budget is divided into four parts:
 - Volume assumptions
 - Revenue assumptions
 - Cost assumptions
 - Pro forma P&L statement

2007 Operating Budget (Part I)

I. Volume Assumptions:

A. FFS	<u>36,000</u>	visits
B. Capitated lives	30,000	members
Number of member months	360,000	
Utilization/member month	<u>0.15</u>	
Number of visits	<u>54,000</u>	visits
C. Total expected visits	<u><u>90,000</u></u>	visits

2007 Operating Budget (Part II)

II. Revenue Assumptions:

A. FFS	\$	25	per visit
		× 36,000	visits
		\$ 900,000	
B. Capitated lives	\$	3	PMPM
		× 360,000	member months
		\$1,080,000	
C. Total revenues		\$1,980,000	

2007 Operating Budget (Part III)

III. Cost Assumptions:

A. Variable Costs:

Labor	\$1,200,000
(48,000 hours at \$25/hour)	
Supplies	150,000
(100,000 units at \$1.50/unit)	
Total variable costs	\$1,350,000
Variable cost per visit	\$ 15
(\$1,350,000/90,000)	

B. Fixed Costs:

Overhead, plant, and equipment	\$ 500,000
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C. Total expected costs	\$1,850,000
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2007 Operating Budget (Part IV)

IV. Pro Forma P&L Statement:

Revenues:

FFS	\$ 900,000
Capitated	<u>1,080,000</u>
Total	<u>\$1,980,000</u>

Costs:

Variable:

FFS	\$ 540,000
Capitated	<u>810,000</u>
Total	<u>\$1,350,000</u>

Contribution margin	\$ 630,000
Fixed costs	<u>500,000</u>

Projected profit	<u><u>\$ 130,000</u></u>
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Variance Analysis

- A **variance** is the difference between the *actual results* and the *budgeted (standard) value*.
- **Variance analysis** is a technique applied to budget data to:
 - Identify problem areas
 - Enhance control
- ? Why is variance analysis so useful to health services managers?

Static, Actual, and Flexible Data

- In variance analysis, there are three types of data used:
 - The **static budget** is the original budget, *unadjusted* for realized volume.
 - The **realized**, or **actual**, **data** reflect *after-the-fact results*.
 - A **flexible budget** is one that has been *adjusted* to reflect realized volume, but using *all other static budget (initial) assumptions*.
- ? Why might a flexible budget be useful in variance analysis?

Variance Analysis Example

- To illustrate variance analysis, we will use Carroll Clinic's *forecasted 2007* budget presented in slides 17–20 as the **static (original) budget**.
- Assume it is now *January 2008*, and the operating results for *2007* have been compiled. These results, which constitute the **actual data**, are shown on the next four slides.

2007 Results (Part I)

I. Volume:

A. FFS	<u>40,000</u>	visits
B. Capitated lives	30,000	members
Number of member months	360,000	
Utilization/member month	<u>0.20</u>	
Number of visits	<u>72,000</u>	visits
C. Total actual visits	<u><u>112,000</u></u>	visits

? How does this compare with the static budget?

2007 Results (Part II)

II. Revenues:

A. FFS	\$	24 per visit	
		× 40,000	actual visits
	\$	<u>960,000</u>	
B. Capitated lives	\$	3 PMPM	
		× 360,000	member months
		<u>\$1,080,000</u>	
C. Total actual revenues		<u><u>\$2,040,000</u></u>	

? How does this compare?

2007 Results (Part III)

III. Cost:

A. Variable Costs:

Labor	\$1,557,400
(59,900 hours at \$26/hour)	
Supplies	<u>234,600</u>
(124,800 units at \$1.88/unit)	
Total variable costs	<u>\$1,792,000</u>
Variable cost per visit	\$ 16
(\$1,792,000/112,000)	

B. Fixed Costs:

Overhead, plant, and equipment	<u>\$ 500,000</u>
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C. Total actual costs

\$2,292,000

2007 Results (Part IV)

IV. P&L Statement:

Revenues:

FFS	\$ 960,000
Capitated	<u>1,080,000</u>
Total	<u>\$2,040,000</u>

Costs:

Variable:

FFS	\$ 640,000
Capitated	<u>1,152,000</u>
Total	<u>\$1,792,000</u>

Contribution margin	\$ 248,000
Fixed costs	<u>500,000</u>

Realized profit	<u><u>(\$ 252,000)</u></u>
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Variance Analysis Example (Cont.)

- Summaries of Carroll Clinic's operating budgets and actual results for 2007 are presented on the next slide.
- These data will be used to illustrate variance analysis.
- Note that in most real-world analyses, *multiple flexible budgets* would be needed (i.e., if the number of covered lives changed).
- Also, many more types of variances than are shown here would be calculated.

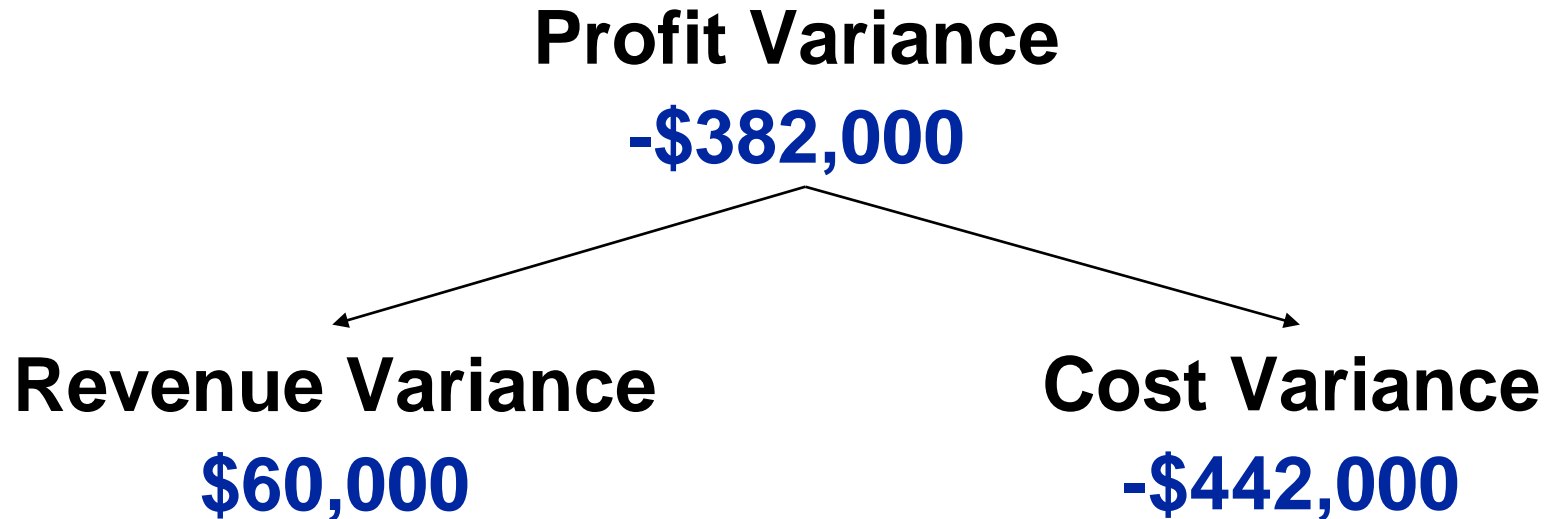
	<u>Static</u>	<u>Flexible</u>	<u>Actual</u>
Assumptions:			
FFS visits	36,000	40,000	40,000
Cap. visits	54,000	72,000	72,000
Total	<u>90,000</u>	<u>112,000</u>	<u>112,000</u>
Revenues:			
FFS	\$ 900,000	\$1,000,000	\$ 960,000
Cap.	1,080,000	1,080,000	1,080,000
Total	<u>\$1,980,000</u>	<u>\$2,080,000</u>	<u>\$2,040,000</u>
Costs:			
Variable:			
FFS	\$ 540,000	\$ 600,000	\$ 640,000
Cap.	810,000	1,080,000	1,152,000
Total	<u>\$1,350,000</u>	<u>\$1,680,000</u>	<u>\$1,792,000</u>
Total CM	\$ 630,000	\$ 400,000	\$ 248,000
Fixed costs	<u>500,000</u>	<u>500,000</u>	<u>500,000</u>
Profit	<u><u>\$ 130,000</u></u>	<u><u>(\$ 100,000)</u></u>	<u><u>(\$ 252,000)</u></u>

Variance Analysis Example (Cont.)

Note the following points about the *flexible budget* on the previous slide:

- It is based on the *actual volume* of **40,000** FFS visits and **72,000** capitated visits.
- FFS revenues reflect static reimbursement (**\$25** per visit).
- If the number of enrollees had changed, a second flexible budget would be required.
- Costs are based on realized volume applied to *initial assumptions* regarding labor productivity and wage rates and supplies usage and costs.

Profit Variance and Breakdown



Profit variance = Actual profit - Static profit.

Revenue variance = Actual revenues - Static revenues.

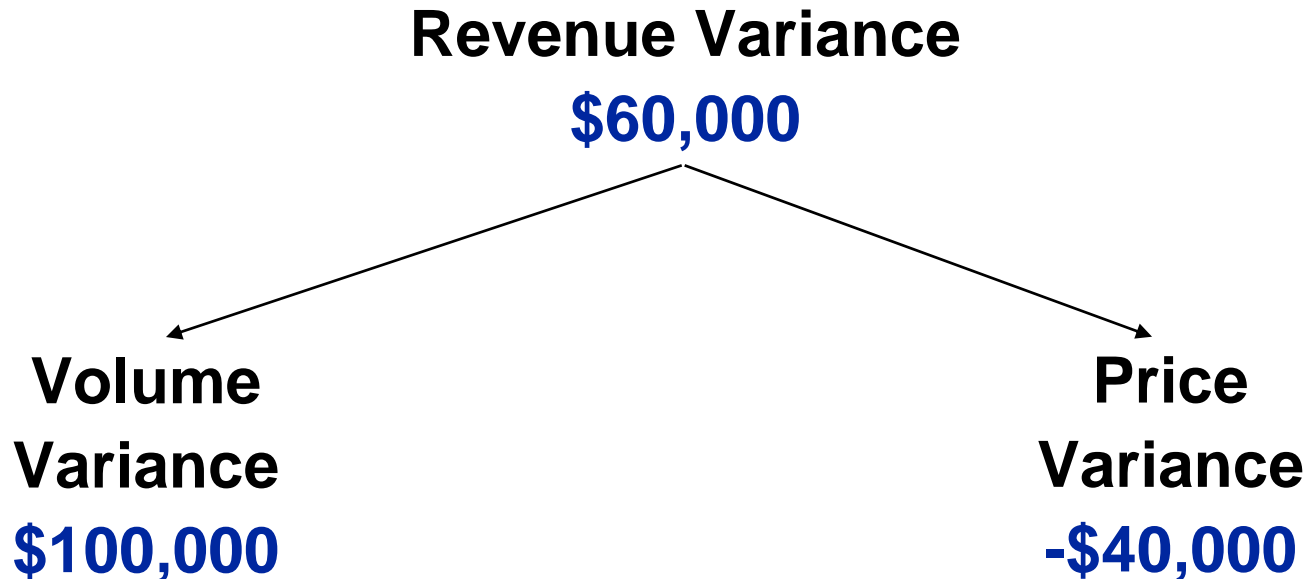
Cost variance = Static costs - Actual costs.

Note that variances are defined such that a negative (-) variance is “bad.”

Profit Variance and Breakdown (Cont.)

- In 2007, the clinic's profit fell **\$382,000** short of *standard*, which is much worse than indicated by the P&L statement loss of **\$252,000**.
- The profit shortfall was due entirely to a cost overrun (from standard) that amounted to **-\$442,000**.
- A small portion of the cost overrun was offset by revenues that were **\$60,000** higher than expected.

Revenue Variance Breakdown



Revenue variance = Actual revenues - Static revenues.

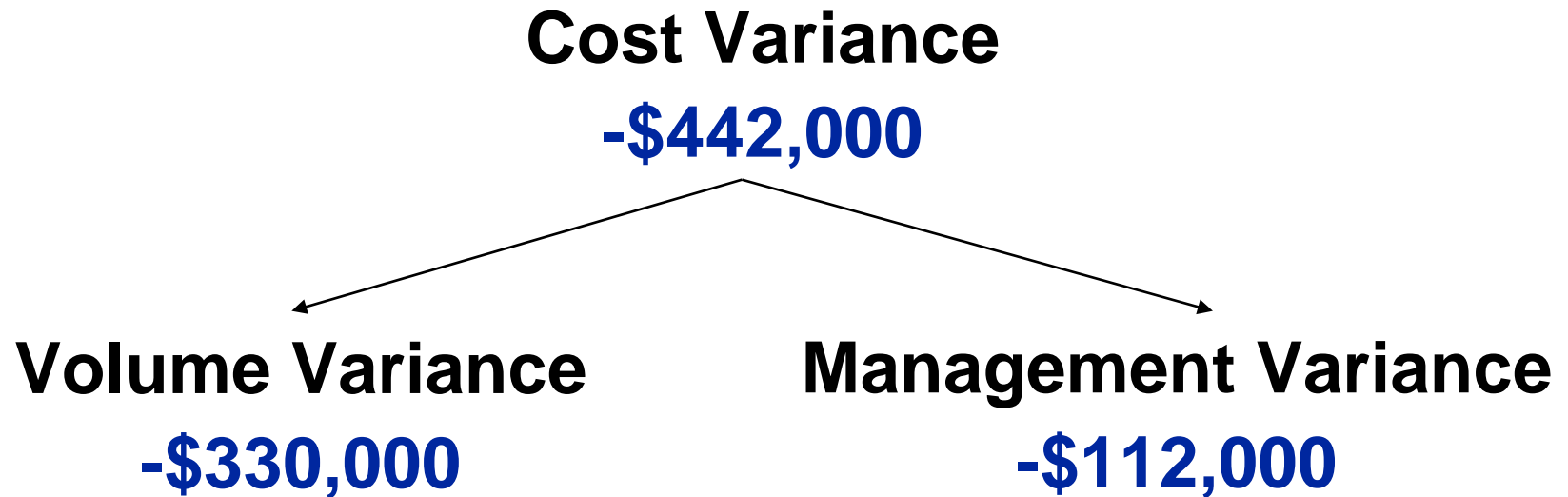
Volume variance = Flexible revenues - Static revenues.

Price variance = Actual revenues - Flexible revenues.

Revenue Variance Breakdown (Cont.)

- On the revenue side, the **\$100,000** positive volume variance is due to increased utilization by FFS patients.
- However, the higher volume by FFS patients was partially offset (**-\$40,000**) by lower-than-expected reimbursement.
- Note that to simplify the illustration, enrollment was held constant. If there had been an enrollment variance, a second flexible budget would be necessary, which would allow managers to decompose the volume variance into *enrollment* and *utilization* components.

Cost Variance Breakdown



Cost variance = Static costs - Actual costs.

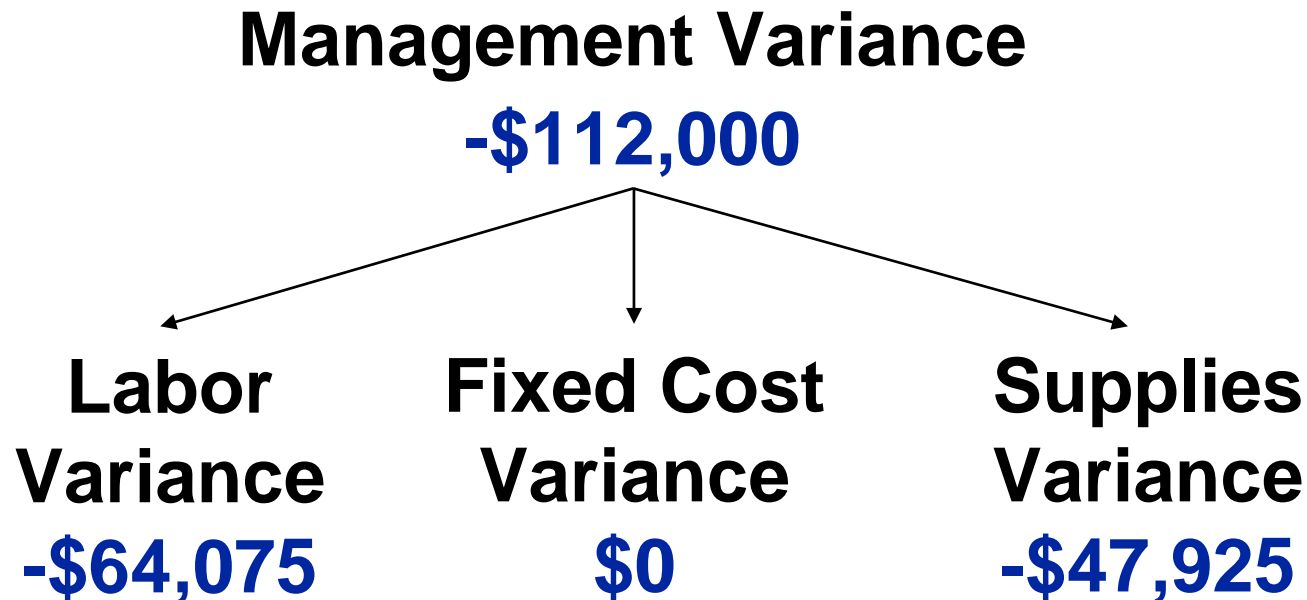
Volume variance = Static costs - Flexible costs.

Management variance = Flexible costs - Actual costs.

Cost Variance Breakdown (Cont.)

- On the cost side, **\$330,000** of the total cost overrun was due to higher volume (utilization) of services by both capitated and FFS patients. Presumably, this overrun was not due to managerial (at the department level) inefficiencies.
- But **\$112,000** of the cost overrun was due to factors that department managers have some control over.

Management Variance Breakdown



Management variance = **Flexible costs** - **Actual costs**.

Labor variance = **Flexible LC** - **Actual LC**.

Fixed cost variance = **Flexible FC** - **Actual FC**.

Supplies variance = **Flexible SC** - **Actual SC**.

Management Variance Breakdown (Cont.)

- Focusing on the **\$112,000** cost overrun caused by factors controllable by management, **\$64,075** was due to higher-than-expected labor costs (after adjusting for realized volume).
- The other **\$47,925** was due to higher-than-expected supplies costs (after adjusting for realized volume).
- Note that this breakdown requires calculations beyond the data that are shown on the three budgets.

Variance Analysis Example Recap

- Again, please note that variance analysis in practice typically is much more detailed than presented in this illustration.
 - Also, variance analysis is applied to operating data such as census, labor hours, number of outpatient visits, and so on, often on a weekly (or even daily) basis.
 - Now, however, you have the picture of what it's all about.
- ? Is all this work worth it?

Cash Budget

- Thus far, we have focused on the *operating budget*, which uses accrual accounting concepts.
- The **cash budget** focuses exclusively on the *cash flows* that come into and go out of an organization.
 - It can be thought of as a short-term version of the statement of cash flows.
 - It is used for cash management purposes.
- Consider the simplified cash budget of Petite Clinic, which has a target cash balance of **\$10,000**.

Sample Cash Budget (Part I)

	March	April	May	June
<i>Collections Worksheet:</i>				
1. Billed charges	\$150,000	\$130,000	\$110,000	\$100,000
2. Collections:				
a. Within 30 days (5%)			5,500	5,000
b. 30-60 days (70%)			91,000	77,000
c. 60-90 days (25%)			37,500	32,500
3. Total collections			\$134,000	\$114,500
<i>Supplies Worksheet:</i>				
4. Supplies ordered		\$10,000	\$ 15,000	
5. Payments for supplies			\$ 10,000	\$ 15,000

Sample Cash Budget (Part II)

	May	June
<i>Net Cash Gain (Loss):</i>		
6. Total collections (from Line 3)	\$134,000	\$114,500
7. Total purchases (from Line 5)	\$ 10,000	\$ 15,000
8. Wages and salaries	60,000	70,000
9. Rent	2,500	2,500
10. Other expenses	1,000	1,500
11. Taxes		20,000
12. Payment for capital assets		0
13. Total payments	\$ 73,500	\$109,000
14. Net cash gain (loss)	\$ 60,500	\$ 5,500

? What information do we obtain from this cash budget?

Sample Cash Budget (Part III)

	<u>May</u>	<u>June</u>
<i>Surplus/Deficit Summary:</i>		
15. Cash at beginning with no borrowing	\$ 10,000	\$ 70,500
16. Cash at end with no borrowing	\$ 70,500	\$ 76,000
17. Target cash balance	<u>10,000</u>	<u>10,000</u>
18. Cumulative surplus cash (deficit)	<u><u>\$ 60,500</u></u>	<u><u>\$ 66,000</u></u>

? Does this mean that Petite Clinic is sailing in smooth waters?

Sample Cash Budget (Alternative Scenario)

	May	June
<i>Surplus/Deficit Summary:</i>		
15. Cash at beginning with no borrowing	\$ 10,000	\$ 1,100
16. Cash at end with no borrowing	\$ 1,100	(\$ 3,500)
17. Target cash balance	10,000	10,000
18. Cumulative surplus cash (deficit)	(\$ 8,900)	(\$ 13,500)

Here, we are assuming net cash outflows of \$8,900 in May and \$4,600 in June. Now what does the budget tell Petite's managers?

Cash Budget (Cont.)

- **The example shows monthly cash budgets for two months. An actual cash budget would probably contain 12 months.**
- ? **Should depreciation expense appear on the cash budget?**
- ? **How can uncertainty be incorporated?**
- ? **What is the value of the cash budget?**

Conclusion

- This concludes our discussion of ***Chapter 8*** (Planning and Budgeting).
- Although not all concepts were discussed in class, you are responsible for all of the material in the text.
- ? Do you have any questions?