Master Budgets and Performance Planning

1

Learning Objectives (1 of 2)

CONCEPTUAL

C1 Describe the benefits of budgeting and the process of budget administration.

C2 Describe a master budget and the process of preparing it.

ANALYTICAL

A1 Analyze expense planning using activity-based budgeting.

2

Learning Objectives (2 of 2)

PROCEDURAL

P1 Prepare the operating budget components of a master budget -- for a manufacturing company.

P2 Prepare a cash budget.

P3 Prepare budgeted financial statements.

P4 Prepare each component of a master budget and link each to the budgeting process—for a merchandising company. (Appendix 20A)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

Benefits of Budgeting

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

Benefits of Budgeting

Coordination: activities of all units contribute to meeting the company's overall goals.

Communication: management plans throughout the organization.

Motivation: through participation in the budgeting process and establishment of attainable goals.

Planning: focuses on future opportunities.

Control: provides a benchmark for evaluating performance.

Negative Outcomes of Budgeting (1 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

- Budgets can be a positive motivating force when:
  1. Affected employees are consulted
  2. Goals are challenging but attainable
  3. Actual and budgeted differences carefully analyzed.

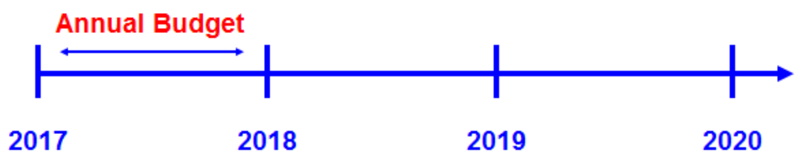
Negative Outcomes of Budgeting (2 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

- Potential negative outcomes of budgeted include:
  1. Employees may understate sales and overstate expenses to allow cushion.
  2. Pressure to meet results may lead to unethical behavior or fraud.
  3. Employees may purchase unnecessary items to ensure budget is not reduced next period.

Budget Reporting and Timing (1 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

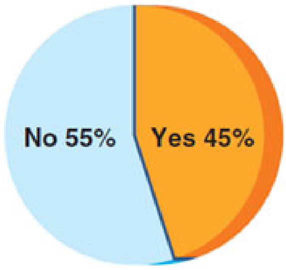


Continuous budgeting applied by preparing rolling budgets over a twelve-month period that rolls forward one month as the current month is completed.

Budget Reporting and Timing (2 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

Companies Using Rolling Budgets



NEED-TO-KNOW 20-1 (1 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

Label each item below with yes if it describes a benefit of budgeting or no if it describes a potential negative outcome of budgeting.

1. Budgets provide goals for employees to work toward. <u>Yes</u>
2. Written budgets help communicate plans to all employees. <u>Yes</u>

NEED-TO-KNOW 20-1 (2 of 2)

Learning Objective C1: Describe the benefits of budgeting and the process of budget administration.

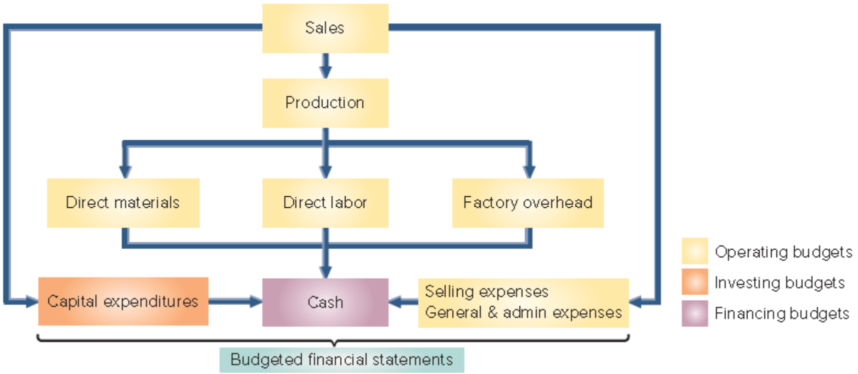
3. Some employees might understate sales targets in budgets. No
4. A budget forces managers to spend time planning for the future. Yes
5. Some employees might always spend budgeted amounts. No
6. With rolling budgets, managers can continuously plan ahead. Yes

Learning Objective C2: Describe a master budget and the process of preparing it.

Master Budget Components

Learning Objective C2: Describe a master budget and the process of preparing it.

Exhibit 20.2



Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Sales Budget (1 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The first step in preparing the master budget is the sales budget, which shows the planned sales units and the expected dollars from these sales.

- Analysis of economic and market conditions + Business capacity and advertising plans
  - Estimated Unit Sales
  - Estimated Unit Price
    - Sales Budget

Sales Budget (2 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Example: In September 2017, *Toronto Sticks Company* sold 700 hockey sticks at $60 each. Toronto Sticks prepared the following sales budget for the next three months:

Sales Budget (3 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Example: TSC sold 700 hockey sticks at $60 per unit. After considering sales predictions and market conditions, TSC prepares its sales budget for the next three months.

Exhibit 20.4

	A	B	C	D	E
1		TORONTO STICKS COMPANY			
2		Sales Budget			
3		October 2017–December 2017			
4		October	November	December	Totals
5	Budgeted sales (units)	1,000	800	1,400	3,200
6	Selling price per unit	× $ 60	× $ 60	× $ 60	× $ 60
7	Total budgeted sales (dollars)	$60,000	$48,000	$84,000	$192,000

Production Budget (1 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

A manufacturer prepares a production budget, which shows the number of units to be produced in a period.

Exhibit 20.5

The production budget is based on the unit sales projected in the sales budget, along with inventory considerations.

Total units to be produced in the period = Budgeted ending inventory (units of safety stock) + Budgeted sales units for the period (from the sales budget) − Number of units In beginning inventory

Production Budget (2 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Budgeted ending inventory (units of safety stock) + Budgeted sales units for the period (from the sales budget) are the Required units for the period

Note: A production budget does not show costs; it is always expressed in units of product.

Production Budget (3 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The production budget is based on the unit sales projected in the sales budget, along with inventory considerations.

Exhibit 20.6

TORONTO STICKS COMPANY
Production Budget
October 2017–December 2017

	October	November	December
Next month's budgeted sales (units) from sales budget*	800	1,400	900
Ratio of inventory to future sales	× 90%	× 90%	× 90%
Budgeted ending inventory (units)	720	1,260	810
Add: Budgeted sales (units)	1,000	800	1,400
Required units of available production	1,720	2,060	2,210
Deduct: Beginning inventory (units)	1,010**	720	1,260
Units to be produced	710	1,340	950

Budgeted ending inventory
+ Budgeted sales
− Beginning inventory
= Units to produce

*From sales budget (Exhibit 22.4); January budgeted sales of 900 units from next quarter's sales budget.
**October's beginning inventory (1,010 units) is inconsistent with company policy.

NEED-TO-KNOW 20-2

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

A manufacturing company predicts sales of 220 units for May and 250 units for June. The company wants each month's ending inventory to equal 30% of next month's predicted unit sales. Beginning inventory for May is 66 units.

Compute the company's budgeted production in units for May.

Budgeted ending inventory for May	75	30% of 250 (June's expected sales)
Plus: Budgeted sales for May	220	
Required units of available production	295	
Less: Beginning inventory (units)	(66)	
Total units to be produced during May	229	

Direct Materials Budget

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The **direct materials budget** shows the budgeted costs for the direct materials that will need to be purchased to satisfy the estimated production for the period

Exhibit 20.7

	A	B	C	D
1	TORONTO STICKS COMPANY			
2	Direct Materials Budget			
3	October 2017–December 2017			
4		October	November	December
5	Budgeted production units*	710	1,340	950
6	Materials requirements per unit	× 0.5	× 0.5	× 0.5
7	Materials needed for production (pounds)	355	×50% 670	×50% 475
8	Add: Budgeted ending inventory (pounds)	335	237.5	247.5**
9	Total materials requirements (pounds)	690	907.5	722.5
10	Deduct: Beginning inventory (pounds)	(178)	(335)	(237.5)
11	Materials to be purchased (pounds)	512	572.5	485.0
12				
13	Material price per pound	$ 20	$ 20	$ 20
14	Total cost of direct materials purchases	$10,240	$11,450	$9,700

Materials needed for production
+ Budgeted ending mtls. inventory
− Beginning mtls. inventory
= Materials to be purchased

*From production budget (Exhibit 22.6).
**Computed from January 2018 production requirements, assumed to be 990 units. 990 units × 0.5 lbs. per unit × 50% safety stock = 247.5 lbs.

Direct Labor Budget

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The **direct labor budget** shows the budgeted costs for the direct labor that will be needed to satisfy the estimated production for the period.

Exhibit 20.8

	A	B	C	D
1	TORONTO STICKS COMPANY			
2	Direct Labor Budget			
3	October 2017–December 2017			
4		October	November	December
5	Budgeted production (units)*	710	1,340	950
6	Direct labor requirements per unit (hours)	× 0.25	× 0.25	× 0.25
7	Total direct labor hours needed	177.5	335	237.5
8				
9	Direct labor rate (per hour)	$ 12	$ 12	$ 12
10	Total cost of direct labor	$2,130	$4,020	$2,850

*From production budget (Exhibit 22.6).

NEED-TO-KNOW 20-3 (1 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

A manufacturing company budgets production of 800 units during June and 900 units during July. Each unit of finished goods requires 2 pounds of direct materials, at a cost of $8 per pound. The company maintains an inventory of direct materials equal to 10% of next month's budgeted production. Beginning direct materials inventory for June is 160 pounds. Each finished unit requires 1 hour of direct labor at the rate of $14 per hour.

NEED-TO-KNOW 20-3 (2 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Compute the budgeted (a) cost of direct materials purchases for June and (b) direct labor cost for June.

Budgeted production (units)	800
Materials requirements per unit (lbs.)	2
Materials needed for production (lbs.)	1,600
Add: Budgeted ending inventory (lbs.)	180 (July production of 900 units × 2 lbs. per unit × 10%)
Total materials requirements (lbs.)	1,780
Less: Beginning inventory (lbs.)	(160)
Materials to be purchased (lbs.)	1,620
Material price per pound	$ 8
Total cost of direct materials purchases	$ 12,960

NEED-TO-KNOW 20-3 (3 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Budgeted production (units)	800
Labor requirements per unit (hrs.)	1
Total direct labor hours needed	800
Labor rate (per hour)	$14
Total cost of direct labor	$11,200

Factory Overhead Budget (1 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The factory overhead budget shows the budgeted costs for factory overhead that are needed to complete the estimated production for the period.

Exhibit 20.9

	A	B	C	D
1	TORONTO STICKS COMPANY			
2	Factory Overhead Budget			
3	October 2017–December 2017			
4		October	November	December
5	Budgeted production (units)*	710	1,340	950
6	Variable factory overhead rate	× $ 2.50	× $ 2.50	× $ 2.50
7	Budgeted variable overhead	1,775	3,350	2,375
8	Budgeted fixed overhead	1,500	1,500	1,500
9	Budgeted total overhead	$3,275	$4,850	$3,875

*From production budget (Exhibit 22.6).

Factory Overhead Budget (2 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The variable portion of factory overhead is assigned at the rate of $2.50 per unit of production. The fixed overhead is $1,500 per month.

Product Cost Per Unit (1 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

TSC's can compute product cost per unit from the three manufacturing budgets (direct materials, direct labor, and factory overhead).

For budgeting purposes, TSC assumes it will normally produce 3,000 units of product each quarter, yielding fixed overhead of $1.50 per unit. TSC's other product costs are all variable.

Product Cost Per Unit (2 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Exhibit 20.10

Product Cost	**Per Unit**
Direct materials: 1/2 pound of materials × $20 per pound of materials..........	$10.00
Direct labor: 0.25 hours of direct labor × $12 per hour of direct labor..........	3.00
Variable overhead (from predetermined overhead rate)..........	2.50
Fixed overhead ($4,500 total fixed overhead per quarter/3,000 units of expected production per quarter)..........	1.50
Total product cost per unit*..........	$17.00

*At the normal production level of 3,000 units per quarter

Selling Expense Budget (1 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The **selling expense budget** is an estimate of the types and amounts of selling expenses expected during the budget period.

- TSC pays sales commissions equal to 10% of total sales.
- TSC pays a monthly salary of $ 2,000 to its sales manager.

Let's prepare the selling expense budget for *Toronto Sticks Company*.

Selling Expense Budget (2 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Exhibit 20.11

	A	B	C	D	E
1		TORONTO STICKS COMPANY			
2		Selling Expense Budget			
3		October 2017–December 2017			
4		October	November	December	Totals
5	Budgeted sales*	$60,000	$48,000	$ 84,000	$192,000
6	Sales commission %	× 10%	× 10%	× 10%	× 10%
7	Sales commissions	6,000	4,800	8,400	19,200
8	Salary for sales manager	2,000	2,000	2,000	6,000
9	Total selling expenses	$ 8,000	$ 6,800	$ 10,400	$ 25,200

*From sales budget (Exhibit 22.4).

Selling Expense Budget (3 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

From TSC's sales budget

- TSC pays sales commissions equal to 10 percent of total sales.
- TSC pays a monthly salary of $2,000 to its sales manager: Salary for sales manager is 2,000 for October, November, December.

General and Administrative Expense Budget (1 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

The **general and administrative expense budget** plans the predicted operating expenses not included in the selling expenses or manufacturing budgets.

- Toronto Sticks Company has general and administrative salaries of $54,000 per year or $4,500 per month.

General and Administrative Expense Budget (2 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Let's prepare the general and administrative expense budget for TSC.

General and Administrative Expense Budget (3 of 3)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Toronto Sticks Company has general and administrative salaries of $54,000 per year or $4,500 per month.

Exhibit 20.12

	A	B	C	D	E
1	TORONTO STICKS COMPANY				
2	General and Administrative Expense Budget				
3	October 2017–December 2017				
4		October	November	December	Totals
5	Administrative salaries	$4,500	$4,500	$4,500	$13,500
6	Total general and administrative expenses	$4,500	$4,500	$4,500	$13,500

NEED-TO-KNOW 20-4 (1 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

A manufacturing company budgets sales of $70,000 during July. It pays sales commissions of 5% of sales and also pays a sales manager a salary of $3,000 per month. Other monthly costs include depreciation on office equipment ($500), insurance expense ($200), advertising ($1,000), and an office manager salary of $2,500 per month. For the month of July, compute the total (a) budgeted selling expense and (b) budgeted general and administrative expense.

NEED-TO-KNOW 20-4 (2 of 2)

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

Budgeted selling expense	**Total**
Sales commissions ($70,000 × 5%)	$3,500
Sales manager's salary	3,000
Advertising expense	1,000
Total budgeted selling expense	$7,500

Budgeted general and administrative expense	**Total**
Depreciation on office equipment	$500
Insurance expense	200
Office manager's salary	2,500
Total budgeted and administrative expense	$3,200

Capital Expenditures Budget

Learning Objective P1: Prepare the operating budget components of a master budget -- for a manufacturing company.

- The **capital expenditures budget** shows dollar amounts estimated to be spent to purchase additional plant assets and amounts to be received from plant asset disposals.
- TSC does not anticipate disposal of any plant assets through December 2017, but management is planning to acquire additional equipment for $25,000 cash in December 2017.
- *Since this is the only budgeted capital expenditure for the quarter, no separate capital expenditures budget is shown.

Learning Objective P2: Prepare a cash budget.

Cash Budgets

Learning Objective P2: Prepare a cash budget.

- The next step is to prepare the **cash budget**, which shows expected cash inflows and outflows during the budget period.

Exhibit 20.13

- The general formula for a cash budget is:
- Beginning cash balance + Budgeted cash receipts − Budgeted cash payments = Preliminary cash balance
  - Adequate
    - Loan activity: Repay loans, buy securities
  - Too low
    - Loan activity: Increase short-term loans

Cash Receipts from Sales

Learning Objective P2: Prepare a cash budget.

- 40% of TSC's sales are for cash.
- The remaining 60% are credit sales that are collected in full in the month following the sale.

Let's prepare the cash receipts budget for TSC.

Budgeted Cash Receipts from Sales (1 of 2)

Learning Objective P2: Prepare a cash budget.

Exhibit 20.14

	A	B	C	D	E
1	TORONTO STICKS COMPANY				
2	Schedule of Cash Receipts from Sales				
3	October 2017–December 2017				
4		September	October	November	December
5	Sales*	$42,000	$60,000	$48,000	$84,000
6	Less: Ending accounts receivable (60%)	25,200**	36,000	28,800	50,400
7	Cash receipts from				
8	Cash sales (40% of sales)		24,000	19,200	33,600
9	Collections of prior month's receivables		25,200	36,000	28,800
10	Total cash receipts		$49,200	$55,200	$62,400

*From sales budget (Exhibit 22.4).
**Accounts receivable balance from September 30 balance sheet (Exhibit 22.3).

Budgeted Cash Receipts from Sales (2 of 2)

Learning Objective P2: Prepare a cash budget.

- From TSC' sales budget → Sales* September ($ 42,000)
- Accounts receivable balance at the end of each month is 60% of that month's budgeted sales. → Less: Ending accounts receivable (60%) September (25,200**)
- Cash sales are 40% of each month's sales → Cash sales (40% of sales) October (24,000)

Cash Payments for Materials (1 of 3)

Learning Objective P2: Prepare a cash budget.

Managers use the beginning balance sheet and the direct materials budget prepared earlier, to help prepare a schedule of cash payments for materials.

- TSC's purchases of materials are entirely on account.
- Full payment is made in the month following the purchase.

Let's look at the schedule of cash payments for materials for TSC.

Cash Payments for Materials (2 of 3)

Learning Objective P2: Prepare a cash budget.

Exhibit 20.15

	A	B	C	D
1	TORONTO STICKS COMPANY			
2	Schedule of Cash Payments for Direct Materials			
3	October 2017–December 2017			
4		October	November	December
5	Materials purchases*	$10,240	$11,450	$ 9,700
6	Cash payments for			
7	Current month purchases (0%)	0	0	0
8	Prior month purchases (100%)	7,060**	10,240	11,450
9	Total cash payments for direct materials	$ 7,060	$10,240	$11,450

*From direct materials budget (Exhibit 22.7).
**Accounts Payable balance from September 30 balance sheet (Exhibit 22.3).

From direct materials budget → $10,240

Cash Payments for Materials (3 of 3)

Learning Objective P2: Prepare a cash budget.

- TSC’s purchases of materials are entirely on account.
- Full payment is made in the month following the purchase.

Preparing the Cash Budget

Learning Objective P2: Prepare a cash budget.

Beginning Cash Balance + Budgeted Cash Receipts − Budgeted Cash Payments = Preliminary Cash Balance

- Preliminary Cash Balance
  - If adequate, repay loans or buy securities.
  - If inadequate, increase short-term loans.
- **Additional information for TSC’s cash budget:**
  - Has a September 30 cash balance of $20,000.
  - Will pay a cash dividend of $3,000 in November.

Cash Budget (1 of 2)

Learning Objective P2: Prepare a cash budget.

- **Toronto Sticks Company:**
  - Has an income tax liability of $20,000 from the previous quarter that will be paid in October.
  - Will purchase $25,000 of equipment in December.
  - Has an agreement with its bank for loans at the end of each month to enable a minimum cash balance of $20,000.
  - Pays interest each month equal to one percent of the prior month's ending loan balance.

Cash Budget (2 of 2)

Learning Objective P2: Prepare a cash budget.

- Repays loans when the ending cash balance exceeds $20,000.
- Owes $10,000 on this loan arrangement on September 30.
- Has 40 percent income tax rate.
- Will pay taxes for current quarter next year.

Exhibit 20.16 (1 of 4)

Learning Objective P2: Prepare a cash budget.

	A	B	C	D
1	TORONTO STICKS COMPANY			
2	Cash Budget			
3	October 2017–December 2017			
4		October	November	December
5	Beginning cash balance	$20,000	$20,000	$38,881
6	Add: Cash receipts from customers (Exhibit 22.14)	49,200	55,200	62,400
7	Total cash available	69,200	75,200	101,281
8	Less: Cash payments for			
9	Direct materials (Exhibit 22.15)	7,060	10,240	11,450
10	Direct labor (Exhibit 22.8)	2,130	4,020	2,850
11	Variable overhead (Exhibit 22.9)	1,775	3,350	2,375
12	Sales commissions (Exhibit 22.11)	6,000	4,800	8,400
13	Sales salaries (Exhibit 22.11)	2,000	2,000	2,000
14	General and administrative expenses (Exhibit 22.12)	4,500	4,500	4,500
15	Income taxes payable (Exhibit 22.3)	20,000		
16	Dividends		3,000	
17	Interest on bank loan			
18	October ($10,000 × 1%)*	100		
19	November ($4,365 × 1%)**		44	
20	Purchase of equipment			25,000
21	Total cash payments	43,565	31,954	56,575
22	Preliminary cash balance	$25,635	$43,246	$44,706
23	Loan activity			
24	Additional loan from bank			
25	Repayment of loan to bank	5,635	4,365	
26	Ending cash balance	$20,000	$38,881	$44,706
27	Loan balance, end of month†	$ 4,365	$ 0	$ 0

* Beginning loan balance (note payable) from Exhibit 22.3. ** Rounded to the nearest dollar.
† Beginning loan balance + New loans – Loan repayments. For October: $10,000 – $5,635 = $4,365.

Exhibit 20.16 (2 of 4)

Learning Objective P2: Prepare a cash budget.

- Add: Cash receipts from customers (Exhibit 22.14) (55,200) → From Cash Receipts Budget
- Add: Cash receipts from customers (Exhibit 22.14) (49,200) → TSC's cash balance at the beginning of October is $20,000. Budgeted cash receipts for October are $49,200, resulting in a total of $69,200 available for the month.

Now we are ready to look at TSC's cash payments

Exhibit 20.16 (3 of 4)

Learning Objective P2: Prepare a cash budget.

- Income taxes of $20,000 were due as of the end of September 30, and payable in October.
- We next subtract expected cash payments for direct materials, direct labor, overhead, selling expenses, and general and administrative expenses.
- TSC has a $10,000 loan and pays interest at the rate of one percent per month. October's interest is $100.
- TSC has a dividend payment of $3,000 that it plans to pay in November.

Exhibit 20.16 (4 of 4)

Learning Objective P2: Prepare a cash budget.

- Repayment for loan to bank (5,635) → TSC has an agreement with its bank for loans at the end of each month to provide a minimum cash balance of $20,000. If the cash balance exceeds $20,000 at a month-end, as it does here, TSC uses the excess to repay loans.
- Ending cash balance for October is the beginning November balance.
- TSC interest on it's outstanding loan amount in November is $44.
- One last item, before our cash budget is complete…TSC plans to pay $25,000 in December to purchase new equipment.

NEED-TO-KNOW 20-5 (1 of 5)

Learning Objective P2: Prepare a cash budget.

Diaz Co. predicts sales of $80,000 for January and $90,000 for February. Seventy percent of Diaz’s sales are for cash, and the remaining 30% are credit sales. All credit sales are collected in the month after sale. January’s beginning accounts receivable balance is $20,000. Compute budgeted cash receipts for January and February.

NEED-TO-KNOW 20-5 (2 of 5)

Learning Objective P2: Prepare a cash budget.

Budgeted Cash Receipts	**January**	**February**
Sales	$80,000	$90,000
Less: Ending accounts receivable (30%)	24,000	27,000
Cash receipts from:		
Cash sales (70% of sales)	56,000	63,000
Collections of prior month's receivables	20,000	24,000
Total cash receipts	$76,000	$87,000

NEED-TO-KNOW 20-5 (3 of 5)

Learning Objective P2: Prepare a cash budget.

Use the following information to prepare a cash budget for the month ended January 31 for Garcia Company. The company requires a minimum $30,000 cash balance at the end of each month. Any preliminary cash balance above $30,000 is used to repay loans (if any). Garcia has a $2,000 loan outstanding at the beginning of January.

NEED-TO-KNOW 20-5 (4 of 5)

Learning Objective P2: Prepare a cash budget.

a. January 1 cash balance, $30,000
b. Cash receipts from sales, $132,000
c. Budgeted cash payments for materials, $63,500
d. Budgeted cash payments for labor, $33,400
e. Other budgeted cash expenses,* $8,200
f. Cash repayment of bank loan, $2,000

*Including loan interest for January.

NEED-TO-KNOW 20-5 (5 of 5)

Learning Objective P2: Prepare a cash budget.

Garcia Company Cash Budget For Month Ended January 31		
Beginning cash balance	$30,000	
Add: Cash receipts from sales	132,000	
Total cash available		$162,000
Less Cash payments for:		
Direct materials	63,500	
Direct labor	33,400	
Other cash expenses	8,200	
Total cash payments		105,100
Preliminary cash balance		56,900
Loan activity:		
Repayment of loan to bank		2,000
Ending cash balance		$54,900
Loan balance, end of month		$0

Learning Objective P3: Prepare budgeted financial statements.

Budgeted Income Statement (1 of 3)

Learning Objective P3: Prepare budgeted financial statements.

- The **budgeted income statement** is a managerial accounting report showing predicted amounts of sales and expenses for the budget period.
- Cash Budget: Completed → Budgeted Income Statement
- Let's prepare the budgeted income statement for Toronto Sticks Company.

Budgeted Income Statement (2 of 3)

Learning Objective P3: Prepare budgeted financial statements.

Exhibit 20.17

TORONTO STICKS COMPANY
Budgeted Income Statement
For Three Months Ended December 31, 2017

Sales (Exhibit 22.4, 3,200 units @ $60)		$192,000
Cost of goods sold (3,200 units @ $17)*		54,400
Gross profit		137,600
Operating expenses		
Sales commissions (Exhibit 22.11)	$19,200	
Sales salaries (Exhibit 22.11)	6,000	
Administrative salaries (Exhibit 22.12)	13,500	
Interest expense (Exhibit 22.16)	144	38,844
Income before income taxes		98,756
Income tax expense ($98,756 × 40%)**		39,502
Net income		$ 59,254

*$17 product cost per unit from Exhibit 22.10. **Rounded to the nearest dollar.

Budgeted Income Statement (3 of 3)

Learning Objective P3: Prepare budgeted financial statements.

- All information in this budgeted income statement is taken from the component budgets we've examined on previous slides.
- The predicted amount of income tax expense for the quarter, computed as 40% of the budgeted pretax income, is included.

Budgeted Balance Sheet (1 of 3)

Learning Objective P3: Prepare budgeted financial statements.

- The **budgeted balance sheet** shows predicted amounts for the company's assets, liabilities, and equity as of the end of the budget period.
- Budgeted Income Statement: Completed → Budgeted Balance Sheet
- Let's prepare the budgeted balance sheet for Toronto Sticks Company.

Budgeted Balance Sheet (2 of 3)

Learning Objective P3: Prepare budgeted financial statements.

Exhibit 20.18

TORONTO STICKS COMPANY
Budgeted Balance Sheet
December 31, 2017

Assets		
Cash[a]		$ 44,706
Accounts receivable[b]		50,400
Raw materials inventory[c]		4,950
Finished goods inventory[d]		13,770
Equipment[e]	$225,000	
Less: Accumulated depreciation[f]	40,500	184,500
Total assets		$298,326
Liabilities and Equity		
Liabilities		
Accounts payable[g]	$ 9,700	
Income taxes payable[h]	39,502	$ 49,202
Stockholders' equity		
Common stock[i]	150,000	
Retained earnings[j]	99,124	249,124
Total liabilities and equity		$298,326

Budgeted Balance Sheet (3 of 3)

Learning Objective P3: Prepare budgeted financial statements.

The budgeted balance sheet for TSC is prepared using information from the other budgets.

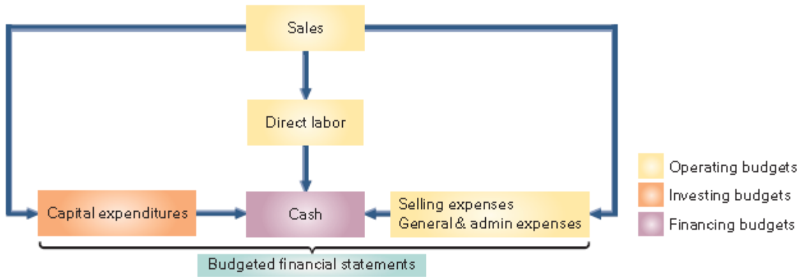
Budgeting for Service Companies

Learning Objective P3: Prepare budgeted financial statements.

Service providers also use master budgets but typically need fewer operating budgets than manufacturers.

Important budgets for a service companies include:

Exhibit 20.19



Learning Objective A1: Analyze expense planning using activity-based budgeting.

Activity-Based Budgeting (1 of 2)

Learning Objective A1: Analyze expense planning using activity-based budgeting.

Activity-based budgeting is based on **activities** rather than traditional items such as salaries, supplies, depreciation, and utilities.

Exhibit 20.21

Accounting Department Comparison of Activity-Based Budget with Traditional Budget

Traditional Budget	
Salaries……………………	$152,000
Supplies…………………..	22,000
Depreciation…………..	36,000
Utilities……………………	14,000
Total……………………..…	$224,000

Activity-Based Budget	
Auditing……………………	$ 58,000
Tax reporting…………..	71,000
Financial reporting……	63,000
Cost accounting……….	32,000
Total…………………….….	$224,000

Activity-Based Budgeting (2 of 2)

Learning Objective A1: Analyze expense planning using activity-based budgeting.

An understanding of the resources required to perform the activities, the costs associated with these resources, and the way resource use changes with changes in activity levels allows management to better assess how expenses will change to accommodate changes in activity levels.

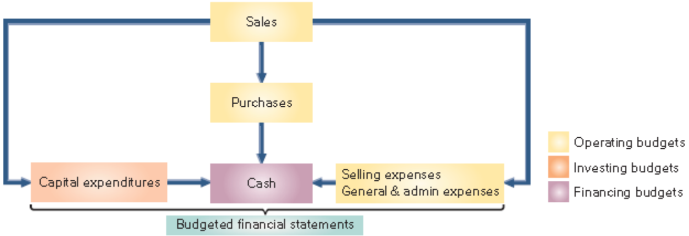
Learning Objective P4 (Appendix A): Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

Merchandise Purchases Budget (1 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

Unlike a manufacturing company, a merchandiser must prepare a merchandise purchases budget rather than a production budget.

Exhibit 20A.1



Merchandise Purchases Budget (2 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

Example: Let's look at the merchandise purchases budget for Hockey Den (HD), a retailer of hockey sticks…

Merchandise Purchases Budget (3 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

Example: Hockey Den buys hockey sticks for $60 each and maintains an ending inventory equal to 90 percent of the next month's budgeted sales. On September 30, 1,010 hockey sticks are on hand.

Exhibit 20A.2

The general layout for the purchases budget in equation form is:

Merchandise Inventory to be purchased = Budgeted ending merchandise Inventory + Budgeted sales for the period − Budgeted beginning merchandise Inventory

Let's prepare the purchases budget for Hockey Den.

Merchandise Purchases Budget (4 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

Exhibit 20A.3

	A	B	C	D
1	HOCKEY DEN			
2	Merchandise Purchases Budget			
3	October 2017–December 2017			
4		October	November	December
5	Next month's budgeted sales (units)	800	1,400	900
6	Ratio of inventory to future sales	× 90%	× 90%	× 90%
7	Budgeted ending inventory (units)	720	1,260	810
8	Add: Budgeted sales (units)	1,000	800	1,400
9	Required units of available merchandise	1,720	2,060	2,210
10	Deduct: Beginning inventory (units)	1,010*	720	1,260
11	Total units to be purchased	710	1,340	950
12				
13	Budgeted cost per unit	$ 60	$ 60	$ 60
14	Budgeted cost of merchandise purchases	$42,600	$80,400	$57,000

*Does not comply with company policy.

Merchandise Purchases Budget (5 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

- Next month budget sales (units) (800) → From the sales budget.
- Budgeted ending inventory (units) (720) → Ending inventory for a month in units, should equal 90% of next month's unit sales.
- Add: Budgeted sales units (1000) → Next we add the unit sales for each month to the desired ending inventory to get the total needs for each month.

Merchandise Purchases Budget (6 of 6)

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process—for a merchandising company.

- Required units of available merchandise. → 1,720
- Deduct: beginning inventory (units) (1,010*) → Subtract beginning inventory to determine the budgeted number of units to be purchased.
- Budgeted cost of the purchases, computed as: number of units × cost per unit.

NEED-TO-KNOW 20-8

Learning Objective P4: Prepare each component of a master budget and link each to the budgeting process— for a merchandising company.

In preparing monthly budgets for the third quarter, a company budgeted sales of 120 units for July and 140 units for August. Management wants each month’s ending inventory to be 60% of next month’s sales. The June 30 inventory consists of 50 units, which does not comply with the company's inventory policy. How many units should be purchased in July?

Next month's budgeted sales (units)	140
Ratio of inventory to future sales	60%
Budgeted ending inventory (units)	84
Add: Budgeted sales (units)	120
Required units of available merchandise	204
Deduct: Beginning inventory (units)	(72)
Units to be purchased	132

End of Presentation