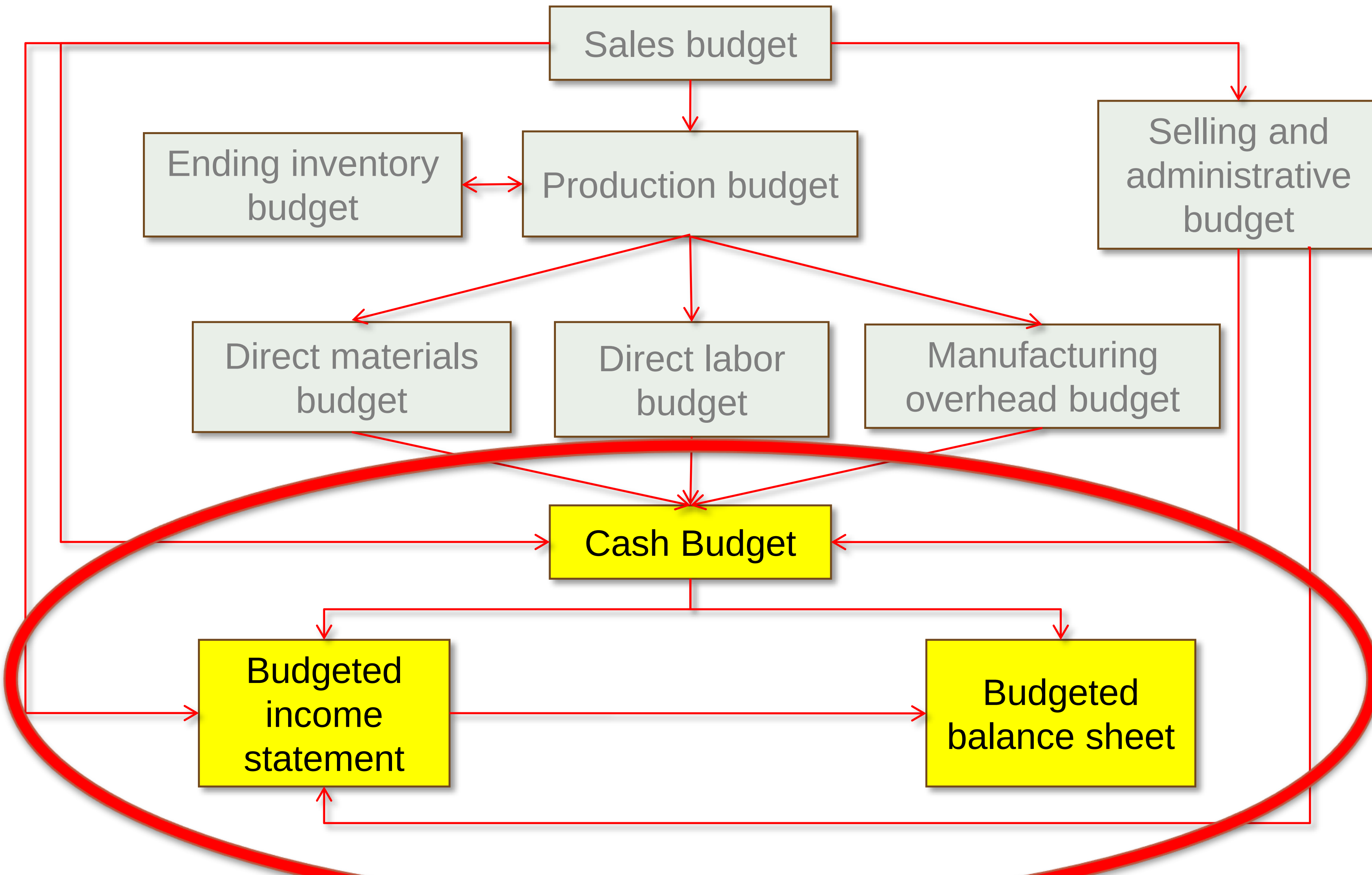
Master Budgeting

Chapter 8 – Part III

The Master Budget – An Overview



Learning Objective 8

Prepare a cash budget.

Format of the Cash Budget

The cash budget is divided into four sections:

1. Cash receipts section lists all cash inflows excluding cash received from financing;
2. Cash disbursements section consists of all cash payments excluding repayments of principal and interest;
3. Cash excess or deficiency section determines if the company will need to borrow money or if it will be able to repay funds previously borrowed; and
4. Financing section details the borrowings and repayments projected to take place during the budget period.

Cash budget – excess (deficiency) of cash

Beginning cash balance	XXXX
Add cash receipts	XXXX
Total cash available	XXXX
Less cash disbursements	XXXX
Excess (deficiency) of cash available over disbursements	XXXX

Additional Cash Budget Information

Assume the following information for Royal:

- Maintains a 16% open line of credit for $75,000.
- Maintains a minimum cash balance of $30,000.
- Borrows on the first day of the month and repays loans on the last day of the month.
- Pays a cash dividend of $49,000 in April.
- Purchases $143,700 of equipment in May and $48,300 in June (both purchases paid in cash).
- Has an April 1 cash balance of $40,000.

The Cash Budget – Total Cash Available

	April	May	June	Quarter
Beginning cash balance	$ 40,000			
Add: Cash collections	170,000			
Total cash available	$ 210,000			
Less: Cash disbursements				
Materials				
Direct labor				
Manufacturing overhead				
Selling and administrative				
Equipment purchase				
Dividend				
Total disbursements				
Excess (deficiency)				
Financing:				
Borrowing				
Repayment				
Interest				
Total financing				
Ending cash balance				

Schedule of Expected Cash Collections

The Cash Budget – Computations for April

	April	May	June	Quarter
Beginning cash balance	$ 40,000			
Add: Cash collections	170,000			
Total cash available	$ 210,000			
Less: Cash disbursements				
Materials	40,000			
Direct labor	13,000			
Manufacturing overhead	56,000			
Selling and administrative	70,000			
Equipment purchase	-			
Dividend	49,000			
Total disbursements	228,000			
Excess (deficiency)	(18,000)			
Financing:				
Borrowing				
Repayment				
Interest				
Total financing				
Ending cash balance				

Schedule of Expected Cash Disbursements

Manufacturing Overhead Budget

Selling and Administrative Expense Budget

The Cash Budget – April Deficiency

	April	May	June	Quarter
Beginning cash balance	$ 40,000			
Add: Cash collections	170,000			
Total cash available	$ 210,000			
Less: Cash disbursements				
Materials	40,000			
Direct labor	13,000			
Manufacturing overhead	56,000			
Selling and administrative	70,000			
Equipment purchase	-			
Dividend	49,000			
Total disbursements	228,000			
Excess (deficiency)	(18,000)			
Financing:				
Borrowing				
Repayment				
Interest				
Total financing				
Ending cash balance				

Because Royal maintains a cash balance of $30,000, the company must borrow $48,000 on its line-of-credit.

The Cash Budget – April Ending Cash

	April	May	June	Quarter
Beginning cash balance	$ 40,000			
Add: Cash collections	170,000			
Total cash available	$ 210,000			
Less: Cash disbursements				
Materials	40,000			
Direct labor	13,000			
Manufacturing overhead	56,000			
Selling and administrative	70,000			
Equipment purchase	-			
Dividend	49,000			
Total disbursements	228,000			
Excess (deficiency)	(18,000)			
Financing:				
Borrowing	48,000			
Repayment	-			
Interest	-			
Total financing	48,000			
Ending cash balance	$ 30,000			

Because Royal maintains a cash balance of $30,000, the company must borrow $48,000 on its line-of-credit.

Ending cash balance for April is the beginning May balance.

The Cash Budget – Final Computations

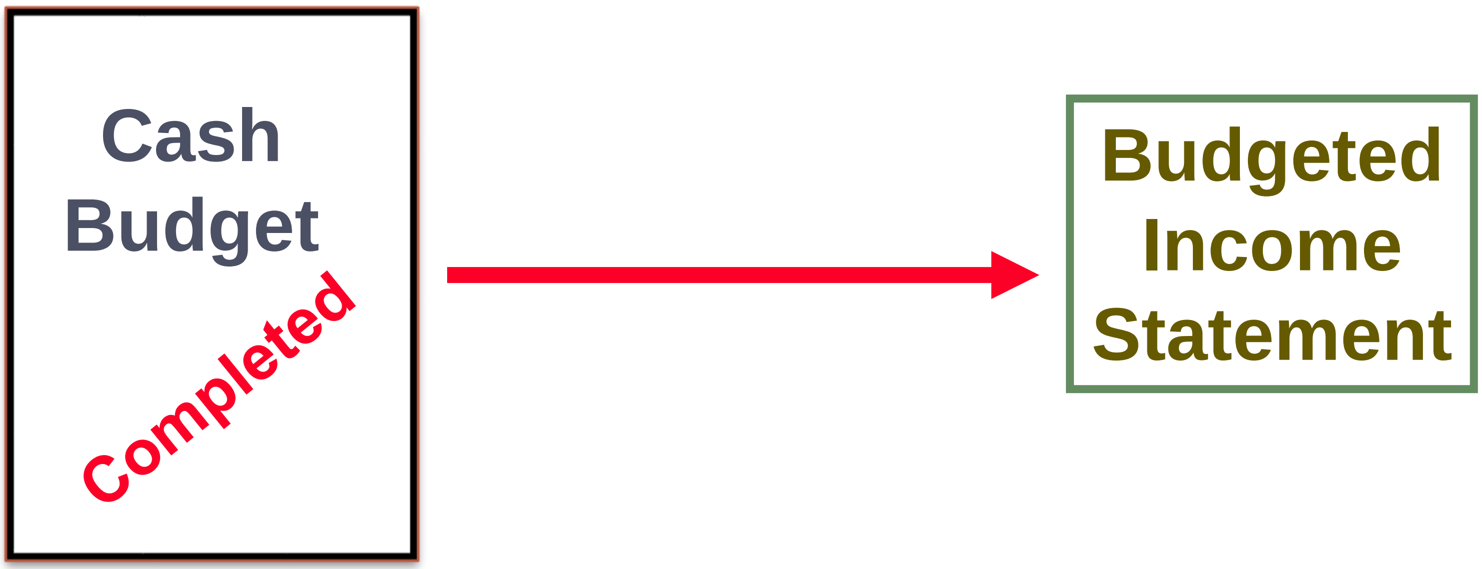
$48,000 × 16% × 3/12 = $1,920
(Borrowings on April 1 and repayment on June 30)

	April	May	June	Quarter
Beginning cash balance	$ 40,000	$ 30,000	$ 40,000	$ 40,000
Add: Cash collections	170,000	410,000	360,000	940,000
Total cash available	$ 210,000	$ 440,000	$ 400,000	$ 980,000
Less: Cash disbursements				
Materials	40,000	72,300	72,700	185,000
Direct labor	13,000	23,000	14,500	50,500
		76,000	59,000	191,000
		85,000	75,000	230,000
		143,700	48,300	192,000
		-	-	49,000
Total disbursements	228,000	400,000	269,500	897,500
Excess (deficiency)	(18,000)	40,000	130,500	82,500
Financing:				
Borrowing	48,000	-		48,000
Repayment	-	-	(48,000)	(48,000)
Interest	-	-	(1,920)	(1,920)
Total financing	48,000	-	(49,920)	(1,920)
Ending cash balance	$ 30,000	$ 40,000	$ 80,580	$ 80,580

The Cash Budget – Borrowings

$\$48{,}000 \times 16\% \times 3/12 = \$1{,}920$
(Borrowings on April 1 and repayment on June 30)

The Budgeted Income Statement



With interest expense from the cash budget, Royal can prepare the budgeted income statement.

Learning Objective 9

Prepare a budgeted income statement.

The Budgeted Income Statement

Royal Company
Budgeted Income Statement
For the Three Months Ended June 30

Sales (100,000 units @ $10)	$ 1,000,000
Cost of goods sold (100,000 @ $4.99)	499,000
Gross margin	501,000
Selling and administrative expenses	260,000
Operating income	241,000
Interest expense	1,920
Net income	$ 239,080

Sales Budget

Ending Finished Goods Inventory

Selling and Administrative Expense Budget

Cash Budget

Learning Objective 10

Prepare a budgeted balance sheet.

Additional Budgeted Balance Sheet Information

Royal reported the following account balances prior to preparing its budgeted financial statements:

- Land - $50,000
- Common stock - $150,000
- Retained earnings - $248,650 (April 1)
- Net income - $239,080
- Dividends - $49,000
- Equipment - $175,000

Budgeted Balance Sheet

Royal Company Budgeted Balance Sheet June 30		
Assets:		
Cash	$	80,580
Accounts receivable		90,000
Raw materials inventory		4,600
Finished goods inventory		24,950
Land		50,000
Equipment		367,000
Total assets	$	617,130
Liabilities and Stockholders' Equity		
Accounts payable	$	28,400
Common stock		150,000
Retained earnings		438,730
Total liabilities and stockholders' equity	$	617,130

30% of June sales of $300,000.

11,500 lbs. at $0.40/lb.

5,000 units at $4.99 each.

50% of June purchases of $56,800.

The Budgeted Balance Sheet - Computations

Royal Company Budgeted Balance Sheet June 30		
Assets:		
Cash	$	80,580
Accounts receivable		90,000
Raw materials inventory		4,600
Finished goods inventory		24,950
Land		50,000
Equipment		367,000
Total assets	$	617,130
Liabilities and Stockholders' Equity		
Accounts payable	$	28,400
Common stock		150,000
Retained earnings		438,730
Total liabilities and stockholders' equity	$	617,130

Treeforms Outfitters is a retailer that is preparing its budget for the upcoming fiscal year. Management has prepared the following summary of its budgeted cash flows:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Total cash receipts	$650,000	$700,000	$490,000	$510,000
Total cash disbursements	$850,000	$485,000	$460,000	$525,000

The company's beginning cash balance for the upcoming fiscal year will be $35,000. The company requires a minimum cash balance of $25,000 and may borrow any amount needed from a local bank at a quarterly simple interest rate of 5%. The company may borrow any amount at the beginning of any quarter and may repay its loans, or any part of its loans, at the end of any quarter. Interest payments are due on any principal at the time it is repaid.

Required:
Prepare the company's cash budget for the upcoming fiscal year.

[Ex.01]

***Required*:** Prepare the company's cash budget for the upcoming fiscal year.

Treeforms Outfitters

Cash Budget

	Q1	Q2	Q3	Q4	Year
Cash balance, beginning	$ 35,000	$ 25,000	$ 31,000	$ 61,000	$ 35,000
Total cash receipts	650,000	700,000	490,000	510,000	2,350,000
Total cash available	685,000	725,000	521,000	571,000	2,385,000
Less total cash disbursements	850,000	485,000	460,000	525,000	2,320,000
Excess (deficiency) of cash available over disbursements	(165,000)	240,000	61,000	46,000	65,000
Financing:					
Borrowings (at beginning)	190,000				190,000
Repayments (at ending)		(190,000)			(190,000)
Interest		(19,000)			(19,000)
Total financing	190,000	(209,000)	0	0	(19,000)
Cash balance, ending	$ 25,000	$ 31,000	$ 61,000	$ 46,000	$ 46,000

Recap. Exercises on Budget

Hillyard Company, an office supplies specialty store, prepares its master budget on a quarterly basis. The following data have been assembled to assist in preparing the master budget for the first quarter.

a. As of December 31 (the end of the prior quarter), the company's ledger showed the following accounts balances:

	Debits	Credits
Cash	$ 48,000	
Accounts receivable	224,000	
Inventory	60,000	
Buildings and equipment (net)	370,000	
Accounts payable		$ 93,000
Common stock		500,000
Retained earnings		109,000
	$702,000	$702,000

b. Actual sales for December and budgeted sales for the next four months are as follows:

December (actual)	$280,000
January	$400,000
February	$600,000
March	$300,000
April	$200,000

c. Sales are 20% for cash and 80% on credit. All payments on credit sales are collected in the month following sale. The accounts receivable at December 31 are a result of December credit sales.

d. The company’s gross margin is 40% of sales (cost of goods sold is 60% of sales).

e. Monthly expenses are budgeted as follows: salaries and wages $27,000 per month; advertising, $70,000 per month; shipping 5% of sales; other expenses: 3% of sales. Depreciation, including depreciation on new assets acquired during the quarter, will be $42,000 for the quarter.

f. Each month’s ending inventory should equal 25% of the following month’s cost of goods sold.

g. One-half of a month’s inventory purchases is paid for in the month of purchase; the other half is paid in the following month.

h. During February, the company will purchase a new copy machine for $1,700 cash. During March, other equipment will be purchased for cash at a cost of $84,500.

i. During January, the company will declare and pay $45,000 in dividends.

ii. Management wants to maintain a minimum cash balance of $30,000. The company has an agreement with a local bank that allows the company to borrow in increments of $1,000 at the beginning of each month. The interest rate on these loans is 1% per month and for simplicity we will assume that interest is not compounded. The company would, as far as it is able, repay the loan plus accumulated interest at the end of the quarter.

Required:
Using the data above, complete the following statements and schedules for the first quarter.
1. Schedule of expected cash collections:

	January	February	March	Quarter
Cash sales	$ 80,000			
Credit sales	224,000			
Total cash collections	$304,000			

2. a) Merchandise purchase budget:

	January	February	March	Quarter
Budgeted cost of goods sold	$240,000*	$360,000		
Add desired ending inventory	90,000†			
Total needs	330,000			
Less beginning inventory	60,000			
Required purchases	$270,000			

*$400,000 sales × 60% cost ratio = $240,000.
†$360,000 × 25% = $90,000.

2. b) Schedule of expected cash disbursements for merchandise purchases:

	January	February	March	Quarter
December purchases	$ 93,000			$ 93,000
January purchases	135,000	135,000		270,000
February purchases	—			
March purchases	—			
Total cash disbursements for purchases	$228,000			

3. Cash budget:

	January	February	March	Quarter
Beginning cash balance	$ 48,000			
Add cash collections	304,000			
Total cash available	352,000			
Less cash disbursements:				
Inventory purchases	228,000			
Selling and administrative expenses	129,000			
Equipment purchases	—			
Cash dividends	45,000			
Total cash disbursements	402,000			
Excess (deficiency) of cash	(50,000)			
Financing:				
Etc.				

Solutions

1. Schedule of expected cash collections: (* Given).

	January		February	March	Quarter
Cash sales	$ 80,000	*	$120,000	$ 60,000	**$ 260,000**
Credit sales	224,000	*	320,000	480,000	**1,024,000**
Total cash collections	$304,000	*	$440,000	$540,000	**$1,284,000**

2. a. Merchandise purchases budget:

	January		February		March	Quarter
Budgeted cost of goods sold[1]	$240,000	*	$360,000	*	$180,000	**$780,000**
Add desired ending merchandise inventory[2]	90,000	*	45,000		30,000	**30,000**
Total needs	330,000	*	405,000		210,000	**810,000**
Less beginning merchandise inventory	60,000	*	90,000		45,000	**60,000**
Required purchases	$270,000	*	$315,000		$165,000	**$750,000**

[1]For January sales: $400,000 × 60% cost ratio = $240,000.

[2]At January 31: $360,000 × 25% = $90,000. At March 31: $200,000 April sales × 60% cost ratio × 25% = $30,000.

b. Schedule of expected cash disbursements for merchandise purchases:

	January		February		March		**Quarter**	
December purchases	$ 93,000	*					**$ 93,000**	*
January purchases	135,000	*	$135,000	*			**270,000**	*
February purchases			157,500		$157,500		**315,000**	
March purchases	______		______		82,500		**82,500**	
Total cash disbursements for purchases	$228,000	*	$292,500		$240,000		**$760,500**	

3. Cash budget:

	January		February	March	**Quarter**
Beginning cash balance	$ 48,000	*	$ 30,000	$ 30,800	**$ 48,000**
Add collections from customers	304,000	*	440,000	540,000	**1,284,000**
Total cash available	352,000	*	470,000	570,800	**1,332,000**
Less cash disbursements:					
Inventory purchases	228,000	*	292,500	240,000	**760,500**
Selling and administrative expenses**	129,000	*	145,000	121,000	**395,000**
Equipment purchases	0		1,700	84,500	**86,200**
Cash dividends	45,000	*	0	0	**45,000**
Total cash disbursements	402,000	*	439,200	445,500	**1,286,700**
Excess (deficiency) of cash available over disbursements	(50,000)	*	30,800	125,300	**45,300**
Financing:					
Borrowings	80,000		0	0	**80,000**
Repayments	0		0	(80,000)	**(80,000)**
Interest ($80,000 × 1% × 3)	0		0	(2,400)	**(2,400)**
Total financing	80,000		0	(82,400)	**(2,400)**
Ending cash balance	$ 30,000		$ 30,800	$ 42,900	**$ 42,900**

February: $27,000 + $70,000 + [$600,000 × (5% + 3%)] = $145,000.