

# Strategic Cost Management

# Budgetary Planning

## **Role of budgets in organizations**

- Planning and control cycle
- Benefits of budgeting
- Behavioral effects of budget
- Components of the master budget

## **Prepare the operating budgets**

- Sales budget
- Production budget
- Raw materials purchases budget
- Direct labor budget
- Manufacturing overhead budget
- Budgeted cost of good sold
- Selling and administrative expense budget
- Budgeted income statement

## **Prepare the cash budget and merchandise purchases budget**

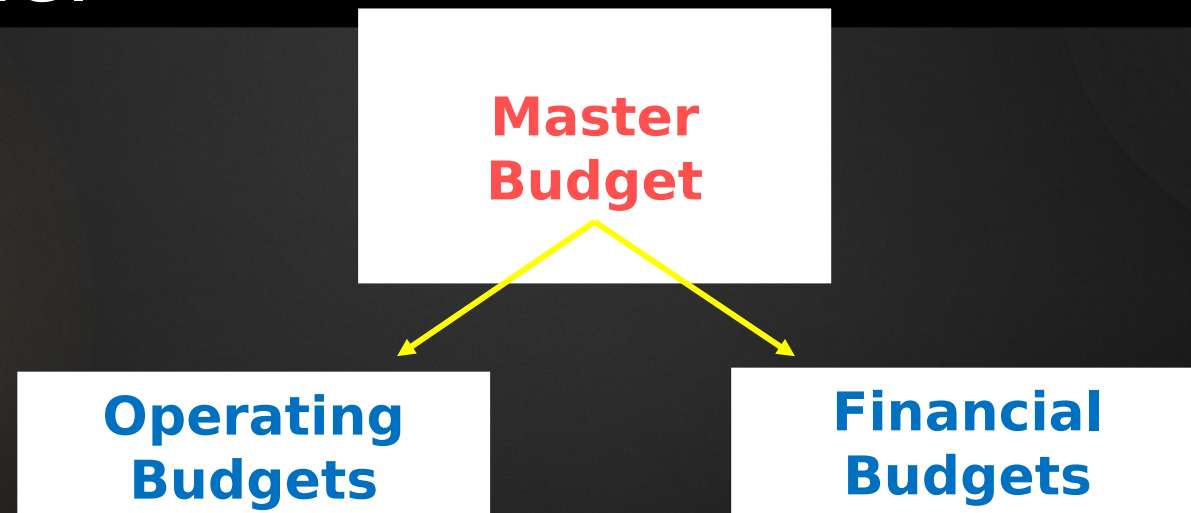
- Budgeted cash receipts
- Budgeted cash payments
- Cash budget
- Budgeted balance sheet
- Budgeting in non-manufacturing firms

## **Role of Budgets in the organization**

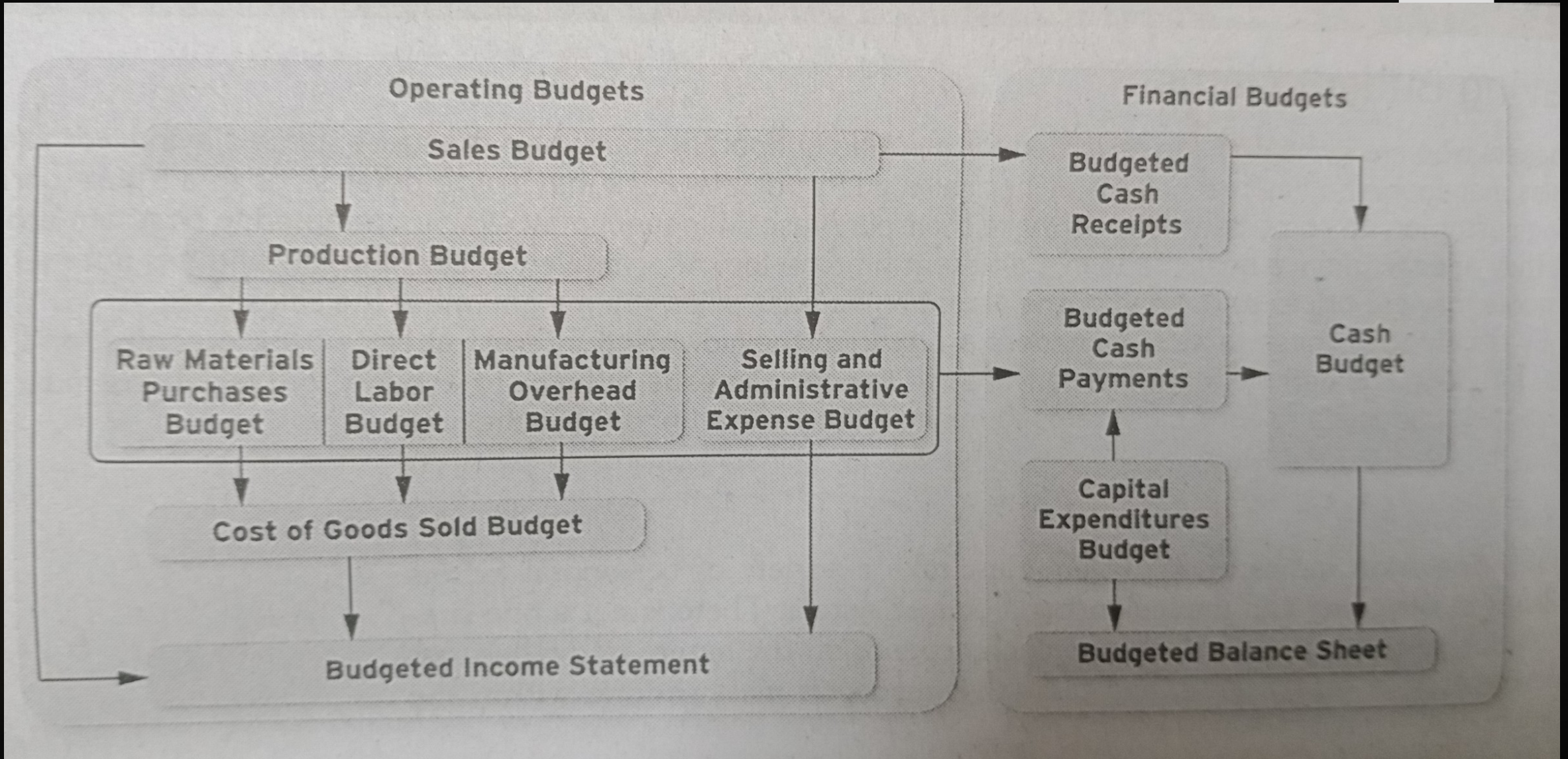
Planning and control cycle of management:  
Budget reflects what managers expect to  
happen in the future

## Master Budget Relationship

**Master Budget** - Is a comprehensive set of budgets that covers all phases of an organization's planned activities for a specific period of time.



# Master Budget Relationship



# 1. Operating Budget

The budgeted sales price is expected to remain constant at an average of P5 per unit for total budgeted sales revenue of P425,000

Schedule 1					
Cold Stone Creamery					
Sales Budget					
For the Year Ended December 31, 2014					
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Budgeted unit sales	15,000	20,000	27,000	23,000	85,000
Budgeted sales price	₱5.00	₱5.00	₱5.00	₱5.00	₱5.00
Budgeted sales revenue	₱75,000	₱100,000	₱135,000	₱115,000	₱425,000

## Schedule 2

Cold Stone Creamery  
Production Budget

For the Year Ended December 31, 2014

	Quarter 1 Jan - Mar	Quarter 2 Apr - Jun	Quarter 3 Jul - Sep	Quarter 4 Oct - Dec.	Yearly Total
Budgeted unit sales (Sched 1)	15,000	20,000	27,000	23,000	85,000
Add: Ending finished goods inventory (5% of current quarter sales)	750	1,000	1,350	1,150	1,150
Less: Beginning finished goods inventory (5% of previous quarter sales)	-900	-750	-1,000	-1,350	-900
<b>Budgeted production</b>	<b>14,850</b>	<b>20,250</b>	<b>27,350</b>	<b>22,800</b>	<b>85,250</b>

Notes: Ending inventory for quart 1 = 15,000 x 5% = 750

Beginning inventory for quarter 1 is assumed to be 900 units, but cannot be determine from the information provided

$$\text{Budgeted unit sales} + \text{Budgeted Ending Finished Goods Inventory} - \text{Budgeted Ending Finished Goods Inventory} = \text{Budgeted Production Units}$$

## Schedule 3

## Cold Stone Creamery

**Raw Materials Purchases Budget**

For the Year Ended December 31, 2014

	Quarter 1 Jan - Mar	Quarter 2 Apr - Jun	Quarter 3 Jul - Sep	Quarter 4 Oct - Dec.	Yearly Total
Budgeted production (Sched 2)	14,850	20,250	27,350	22,800	<b>85,250</b>
Materials requirements (10 oz. per unit)	10	10	10	10	<b>10</b>
Raw materials needed for production (ounces)	148,500	202,500	273,500	228,000	<b>852,500</b>
Add: Ending raw materials inventory (3% of next quarter's production needs)	6,075	8,205	6,840	3,510	<b>3,510</b>
Less: Beginning raw materials inventory (3% of current quarter production needs)	-4,455	-6,075	-8,205	-6,840	<b>-4,455</b>
Total purchases of raw materials (ounces)	150,120	204,630	272,135	224,670	<b>851,555</b>
Cost of raw materials (P0.05 per ounce)	P0.05	P0.05	P0.05	P0.05	<b>P0.05</b>
Budgeted cost of raw materials purchases	<b>P7,506</b>	<b>P10,232</b>	<b>P13,607</b>	<b>P11,234</b>	<b>P42,578</b>

Notes: Ending inventory for quarter 1 = 202,500 x 33% = 6,075; Beginning inventory for quarter 1 = 148,500 x 3% = 4,455.

Ending inventory for quarter 4 is assumed to be 3,510 ounces, but cannot be determined based on information given

$$\begin{array}{r} \text{Raw Materials} \\ \text{Needed for} \\ \text{Production} \end{array} + \begin{array}{r} \text{Budgeted Ending} \\ \text{Raw Materials} \\ \text{Inventory} \end{array} - \begin{array}{r} \text{Budgeted Ending} \\ \text{Raw Materials} \\ \text{Inventory} \end{array} = \begin{array}{r} \text{Budgeted Raw} \\ \text{Materials} \\ \text{Purchases} \end{array}$$

## Schedule 4

## Cold Stone Creamery

**Direct Labor Budget**

For the Year Ended December 31, 2014

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Budgeted production (Sched 2)	14,850	20,250	27,350	22,800	<b>85,250</b>
Direct labor requirements (0.10 hours per unit)	0.10	0.10	0.10	0.10	<b>0.10</b>
Total direct labor hours required	1,485	2,025	2,735	2,280	<b>8,525</b>
Direct labor cost per hour	₱10.00	₱10.00	₱10.00	₱10.00	<b>₱10.00</b>
Total budgeted direct labor cost	<b>₱14,850</b>	<b>₱20,250</b>	<b>₱27,350</b>	<b>₱22,800</b>	<b>₱85,250</b>

## Schedule 5

## Cold Stone Creamery

**Manufacturing Overhead Budget**

For the Year Ended December 31, 2014

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Budgeted production (Sched 2)	14,850	20,250	27,350	22,800	<b>85,250</b>
Variable overhead rate(P0.10 per unit)	₱0.10	₱0.10	₱0.10	₱0.10	<b>₱0.10</b>
Total variable manufacturing overhead	₱1,485	₱2,025	₱2,735	₱2,280	<b>₱8,525</b>
Fixed manufacturing overhead	8,525	8,525	8,525	8,525	<b>34,100</b>
Total budgeted manufacturing overhead	<b>₱10,010</b>	<b>₱10,550</b>	<b>₱11,260</b>	<b>₱10,805</b>	<b>₱42,625</b>

<b>Budgeted Manufacturing Costs</b>	<b>Per unit</b>
Direct materials (10 oz./unit x P0.05/oz.)	₱0.50
Direct labor (0.10 hrs./unit x P10/hr.)	1.00
Variable manufacturing overhead (P0.10 per unit)	0.10
Fixed manufacturing overhead (P34,100/yr. ÷ 82,250 units)	0.40
<b>Budgeted Manufacturing Costs per unit</b>	<b>₱2.00</b>

## Schedule 6

## Cold Stone Creamery

**Cost of Goods Sold Budget**

For the Year Ended December 31, 2014

	<b>Quarter 1</b>	<b>Quarter 2</b>	<b>Quarter 3</b>	<b>Quarter 4</b>	<b>Yearly</b>
	<b>Jan - Mar</b>	<b>Apr - Jun</b>	<b>Jul - Sep</b>	<b>Oct - Dec.</b>	<b>Total</b>
Budgeted unit sales (Sched 1)	15,000	20,000	27,000	23,000	<b>85,000</b>
Budgeted manufacturing cost per unit	₱2.00	₱2.00	₱2.00	₱2.00	<b>₱2.00</b>
Budgeted cost of goods sold	<b>₱30,000</b>	<b>₱40,000</b>	<b>₱54,000</b>	<b>₱46,000</b>	<b>₱170,000</b>

## Schedule 7

## Cold Stone Creamery

**Selling and Administrative Expense Budget**

For the Year Ended December 31, 2014

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Budgeted sales revenue (Sched 1)	₱75,000	₱100,000	₱135,000	₱115,000	<b>₱425,000</b>
Variable selling expenses (5% of budgeted sales revenue)	3,750	5,000	6,750	5,750	<b>21,250</b>
Fixed administrative expenses (P10,000)	10,000	10,000	10,000	10,000	<b>40,000</b>
Budgeted selling and administrative expenses	<b>₱13,750</b>	<b>₱15,000</b>	<b>₱16,750</b>	<b>₱15,750</b>	<b>₱61,250</b>

## Schedule 8

## Cold Stone Creamery

**Budgeted Income Statement**

For the Year Ended December 31, 2014

	<b>Quarter 1</b>	<b>Quarter 2</b>	<b>Quarter 3</b>	<b>Quarter 4</b>	<b>Yearly</b>
	<b>Jan - Mar</b>	<b>Apr - Jun</b>	<b>Jul - Sep</b>	<b>Oct - Dec.</b>	<b>Total</b>
Budgeted sales revenue (Sched 1)	₱75,000	₱100,000	₱135,000	₱115,000	₱425,000
Less: Budgeted cost of goods sold	-30,000	-40,000	-54,000	-46,000	-170,000
Budgeted gross margin	₱45,000	₱60,000	₱81,000	₱69,000	₱255,000
Less: Budget selling and administrative expenses	-13,750	-15,000	-16,750	-15,750	-61,250
Budgeted net operating income	₱31,250	₱45,000	₱64,250	₱53,250	₱193,750

# 2. Financial Budgets

**The Cash Budget consists of three sections:**

- Budgeted cash receipts (also called **Collections**)
- Budgeted cash payments (also called **disbursements**)
- Cash borrowed or repaid (also called **financing**)

$$\begin{array}{ccccccc} \text{Beginning} & & \text{Budgeted} & & \text{Budgeted} & & \text{Cash Borrowed} & & \text{Ending} \\ \text{Cash} & & \text{Cash} & & \text{Cash} & & \text{or Repaid} & & \text{Cash} \\ \text{Balance} & + & \text{Receipts} & - & \text{Payments} & + & & = & \text{Balance} \\ & & & & & - & & & \end{array}$$

**Assumptions:**

- 75% of credit sales collected in the quarter of sale;
- 25% of credit sales collected in the quarter following the sale

## Schedule 9

## Cold Stone Creamery

**Budgeted Cash Receipts**

For the Year Ended December 31, 2014

	Quarter 1 Jan - Mar	Quarter 2 Apr - Jun	Quarter 3 Jul - Sep	Quarter 4 Oct - Dec.	Yearly Total
Budgeted sales revenue (Sched 1)	₱75,000	₱100,000	₱135,000	₱115,000	₱425,000
Cash sales (40% of total sales)	₱30,000	₱40,000	₱54,000	₱46,000	₱170,000
Credit sales (60% of total sales)					
Collected during the quarter of sale (75% of credit sales)	33,750	45,000	60,750	51,750	191,250
Collected in the quarter following sale (25% of credit sales)	25,000	11,250	15,000	20,250	71,500
<b>Budgeted cash receipts</b>	<b>₱88,750</b>	<b>₱96,250</b>	<b>₱129,750</b>	<b>₱118,000</b>	<b>₱432,750</b>

Notes: Quarter 1: Cash sales =  $P75,000 \times 40\% = P30,000$ .Quarter 1: Cash collected from quarter 1 credit sales =  $P75,000 \times 60\% \times 75\% = P33,750$ .Quarter 1: Cash collected from previous quarter credit sales is assumed to be  $P25,000$ .

## Assumptions:

- 20% of raw materials are paid for in the quarter purchased;
- 80% of raw materials are paid for in the quarter following purchase;
- Manufacturing overhead includes P3,000 in depreciation expense (a non cash item);
- All other operating expenses are paid in cash during the quarter incurred.
- Management plans to invest in a new refrigeration system during quarter 1 at a total cost of P120,000. They will pay 50% cash and pay the remaining balance evenly across quarters 2, 3 and 4.

Schedule 10					
Cold Stone Creamery					
<b>Budgeted Cash Payments</b>					
For the Year Ended December 31, 2014					
	Quarter 1 Jan - Mar	Quarter 2 Apr - Jun	Quarter 3 Jul - Sep	Quarter 4 Oct - Dec.	Yearly Total
Budgeted cost of raw materials purchases (Sched 3)	₱7,506	₱10,232	₱13,607	₱11,234	₱42,578
Cash paid during the quarter of purchase (20%)	₱1,501	₱2,046	₱2,721	₱2,247	₱8,516
Cash paid in the quarter following purchase (80%)	5,000	6,005	8,185	10,885	₱30,075
Cash paid for raw materials	₱6,501	₱8,051	₱10,907	₱13,132	₱38,591
Cash paid for direct labor (Sched 4)	14,850	20,250	27,350	22,800	85,250
Manufacturing overhead (Sched 5)	10,010	10,550	11,260	10,805	42,625
Less: Depreciation (noncash expense)	-3,000	-3,000	-3,000	-3,000	-12,000
Cash paid for selling and administrative expenses	13,750	15,000	16,750	15,750	61,250
Cash paid for equipment	60,000	20,000	20,000	20,000	120,000
<b>Budgeted cash payments</b>	<b>₱102,111</b>	<b>₱70,851</b>	<b>₱83,267</b>	<b>₱79,487</b>	<b>₱335,716</b>

**Assumptions:**

- Cash on hand at the beginning of quarter 1 was P55,200;
- The company wants to maintain a minimum cash balance of P50,000;
- Cold Stone Creamery has an agreement with the bank that it can borrow and repay cash in increments of P5,000. No interest is charged if the loan is paid off by the end of the next quart
- The balance on the loan at the beginning of quarter 1 is zero.

## Schedule 11

## Cold Stone Creamery

**Cash Budget**

For the Year Ended December 31, 2014

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Beginning cash balance	₱55,200	₱51,839	₱67,238	₱113,721	₱55,200
Add: Budgeted cash receipts (Sched 9)	88,750	96,250	129,750	118,000	432,750
Less: Budgeted cash payments (Sched 10)	-102,111	-70,851	-83,267	-79,487	-335,716
Cash balance before financing	₱41,839	₱77,238	₱113,721	₱152,234	₱152,234
Cash borrowed or repaid	10,000	-10,000			
Ending cash balance	<b>₱51,839</b>	<b>₱67,238</b>	<b>₱113,721</b>	<b>₱152,234</b>	<b>₱152,234</b>

## Budgeted Balance Sheet

### Assumptions:

- The P152,234 cash balance at the end of quarter 4 would appear as an asset on the balance sheet;
- Any sales not collected by December 31 would be included in Accounts Receivable. Quarter 4 sales were P115,000, 60% on credit and 25% collected in the quarter following the sale. Thus, the uncollected portion of quarter 4 credit sales would be P17,250 ( $P115,000 \times 60\% \times 25\%$ );
- Raw materials on hand at the end of the quarter 4 (3,510 ounces  $\times$  P0.05 per ounce = P175.50) would appear as Raw Materials Inventory;
- The 1,150 units in ending inventory would appear as Finished Goods Inventory and be valued at the full manufacturing cost of P2.00 per unit ( $1,150 \times P2.00 = P2,300$ );
- The cost of raw materials purchased in quarter 4 but not paid as of December 31 would be included in Accounts Payable in the liabilities section of the balance sheet ( $P11,234 \times 80\% = P8,987.20$ );
- All other amounts (Property, Plant and Equipment; Long-Term Liabilities; and Owner's Equity) are assumed.

## Schedule 12

## Cold Stone Creamery

**Budgeted Balance Sheet**

December 31, 2014

**Assets**

Cash (Quarter 4 ending cash balance)

₱152,234

Accounts Receivable (25% of quarter 4 credit sales)

17,250

Raw Materials Inventory (3,510 ounces x P0.05 per ounce)

176

Finished Goods Inventory (1,150 units x P2.00 per unit)

2,300

Property, Plant, and Equipment (Assumed)

650,000

Total Assets

**₱821,960****Liabilities**

Accounts Payable (60% of quarter 4 raw materials purchases)

₱8,987

Long-Term Liabilities (Assumed)

250,000

Total Liabilities

258,987

**Owner's Equity**

562,973

Total Liabilities and Owner's Equity

**₱821,960**

## Merchandise Purchases Budget

### Assumptions:

- The quarter 1 ending inventory of 4,000 is based on 20% of quarter 2 sales ( $0.20 \times 20,000$ )
- Quarter 1 beginning inventory is the same as the previous quarter's ending inventory, which would have been based on 20% of quarter 1 sales ( $30,000 \times 20\% =$

Schedule A					
GAP					
<b>Merchandise Purchases Budget</b>					
For the Year Ended December 31, 2014					
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec.	Total
Budgeted unit sales	30,000	20,000	10,000	40,000	<b>100,000</b>
Add: Planned ending inventory (20% of next quarter sales)	4,000	2,000	8,000	6,000	<b>6,000</b>
Less: Planned beginning inventory (20% of current quarter sales)	-6,000	-4,000	-2,000	-8,000	<b>-6,000</b>
Budgeted production	28,000	18,000	16,000	38,000	100,000
Cost of merchandise (P16 per unit)	P16.00	P16.00	P16.00	P16.00	P16.00
	<b>P448,000</b>	<b>P288,000</b>	<b>P256,000</b>	<b>P608,000</b>	<b>P1,600,000</b>

## Exercis

e

1. Big Ben Clock Company's budget for the first two months of the year included the following:

	January	February
Budgeted sales revenue	P120,000	P140,000
Budgeted raw materials purchases	80,000	70,000
All other expenses	20,000	30,000

### Other information follows:

- 60 % of sales are received in cash. The remaining 40% of sales is on credit, collected as follows: 30% in month of sales, 65% the following month, 5% percent never collected.
- 80% of raw materials purchases is paid for in the month of purchase and the remainder in the following month.
- All other expenses are paid in cash with the exception of P5,000.

Based on this information, calculate Big Ben's budgeted cash receipts and payments for February.