
BUSINESS AND FINANCE
Accounts and Budget service
level -IV

**UNIT OF COMPETENCE: PREPARE
OPERATIONAL BUDGET**

**MODULE TITLE: PREPARING OPERATIONAL
BUDGET**

MODULE CODE: BUF ACB4 11 1012

LEARNING OUT COMES

LO1. Prepare the budget

Lo2. Set the budget time frame

Lo3. Document the budget

LO1. Prepare the budget

1. Introduction to budget

Planning is the key to good management. This is true for all types of business organization family owned companies, large corporation , government agencies, and nonprofit organization as well as for individual for example most successful student like you earn good grade , finance their education and finish their diploma on time do so because they plan their time ,their work and their recreation. Those student are budgeting their scarce resource to make the best use of their time, money and energy. Similarly business owner and manager need to budget their resource which include everything from raw material to human resource to facilitate to make the best and most profitable use of what they have to work with. Budgeting can cover such diverse issue as how much time to spend sanding a piece of wood to how much money the company will a lot to research and development in the coming year.

A budget is a tool that aid managers in both their planning and control function. Budget helps manager plan for the future. However, managers also use them to evaluate what happened in the past. They use budget as a bench mark a measure of estimated or desired performance. Against which they compare actual performance.

Definition

Budget is a detail plan showing how scarce resource are to be acquired and used over specific time interval.

1.1. The need for planning and controlling in budget

Planning is the entire process of creating the budget from initial idea through the development of the budget. Budget deals with what managers plan for the future. However they also can be used to evaluate what happened in the past

Controlling is the comparison of actual result with budgeted data evaluation of difference and taking corrective action to adjust for difference when necessary. A budgeting system builds on historical (actual) performance and expands to include consideration of future (expected) performance. Budget help managers with their control function not only by looking forward but also by looking back ward.

1.2 Budgets and the budgeting cycle

Most of the time many people associate the word budget with limitations of spending if we relate budgeting with government activities we can realize that governments often approve spending budget for their variance agencies. Then they expect the agencies to keep expenditures within the limits prescribed by the budget. In contrast most business organization use budgets to focus attention on organizations operations and finance, not just to limit spending. Budgets high light potential problems advantages early, allowing managers to take steps to avoid these problems or use the advantages wisely.

A budget is a quantitative expression of a plan of action and an aid to the coordination and implementation of this plan. Means budget is

- (i) The quantitative expression a proposed plan of action by the management for a specified period
- (ii) An aid to coordinating what needs to be done to implement that plan.
A budget can cover both financial and non financial aspects of the plan and serves as blue print for the organization to follow in upcoming period. A budget covers financial aspects, quantities management expectations regarding income, cash flows, and financial position. Just as financial statements are prepared for past periods, so can financial statements are prepared for future period for example, a budgeted income statements, a budgeted income statement of cash flows, and a budgeted balance sheet. Underlying those financial budgets can be non financial budgets for, say unit manufactured or sold number of employer's number of new products being introduced to the marketplace.

Well managed organizations usually have the following budgeting cycle

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1. Planning the performance of the organization as a whole, as well as planning the performance of its subunits (such as departments or divisions). Management at all levels agrees on what is expected.
 2. Providing a frame of reference, a set of specific expectations against which actual results can be compared.
 3. Investigating variation from plans. If necessary, corrective action follows investigation.
 4. Planning again, in light of feedback and changed conditions.

1.3 Advantage of budget

1. Formalization of planning

Budget forces manager to think ahead to anticipate and prepare for changing conditions. The budgeting process makes planning an explicit management responsibility.

2. Expectation as a framework for judging performance

Budgeting provides definite expectations that are the best framework for judging subsequent performance as a basis for judging actual results. Budgeted goals and performance are generally regarded as being more appropriate than past performance. Budgeting goals and performance are generally a better basis for judging actual results than in past performance.

3. Communication

Budget tells employees what is expected of them. Nobody likes to drift along, not knowing what the boss expects or hopes to achieve. Good budget process communicates both from the top down and from the bottom up. Top management makes clear the goals and objectives of the organization in its budgetary directives. Employees and lower level managers then inform higher level managers how they plan to achieve the goals and objectives.

4. Coordination

Budget helps manager to coordinate objectives. For example, a budget forces purchasing personnel to integrate their plan with production requirements, while production managers use the sales budget and delivery schedule to help them anticipate and plan for the employees and physical facilities they will need.

5. Motivating managers and employees

An inability to achieve budgeted numbers is viewed as failure. Most individuals are motivated to work more intensely to avoid failure than to achieve success. As individuals get closer to a goal they work harder to achieve, for these reasons, many executives like to set challenging but achievable goals for their subordinates. Creating a little anxiety improves performance. But overly ambitious and unachievable budgets increase anxiety without motivation that is because individuals see little chance of avoiding failure.

2. Types of Budget

2.1 Strategic plan

A plan that set an overall goals and objectives of an organization, some business analyst would not classify the strategic plan as an actual budget, though because it does not deal with a specific time frame and it does not produced forecasted financial statement. However strategic plan leads to long range planning.

2.2. Long range plan

Producing a forecasted financial statement for five to ten years periods, the financial statements produced by long range planning are estimates of what management would like to see in the organizations on future financial statements. Decision made during long range planning including addition or deletion of product line designing and allocation of new plants, acquisition of building and equipment and other long term commitments. Long range plan are coordinated with capital budget.

2.3 capital budget

a budget that detail the planned expenditure for facilities, equipments, new products and other long term investment.

Capital budgeting is making long run planning decision for investment in projects, and a decision making and control tool that spans multiple years.

2.4. Master budget

Express management operating and financial plan for a specified period usually a year and compromise a set of budgeted financial statement.

In addition the above types of budget, there are countless forms of special budget and related report. For example, a report might detail goal and objectives for improvement in quality or customer satisfaction during the budget period.

3. Understanding various variables of budget

Planning is a process of setting goal and objective course of action to achieve them.

Work plan, is supporting document for cost centers which relates input to outputs and the schedule of implementation.

Financial planning,

Control, is the process of monitoring activities to ensure that they are being accomplished as a planned and of correcting any significant deviation.

Budget, is a quantitative expression of a plan of action.

Budgeting is the process of allocating scarce resource to unlimited need for a specific period of time, or the process of preparing a budget.

Government budgeting is the allocation of scarce resources to public programs.

Budget deficit is the excess of expenditures over revenue of the government

Budget surplus, is the excess of revenue over expenditure of the government.

Emergency budget is a budget prepared to meet unexpected contingency.

Encumbrances, is a budget that is reserved to meet outstanding commitment.

Budgetary control is the use of budget to control a firm activity.

Budget cycle is the sequence of activities that involve budget preparation, presentation, and monitoring.

Activity based budget

Participative budgeting

Functional budgeting

Continuous or controlling budget is a common form of master budgets that simply add a month in the future as the month just ended is dropped in this way budgeting becomes an ongoing instead of periodic process. Continuous budget forces managers always think about the next 12 months not just the remaining months in fixed budgeting cycle. As they add a new twelfth month to a continuous budget, manager may update the other 11 month as well. Then they compare actual performance result with both the original plan and the most recently revised plan.

Specific entity is budget prepared for any organization, part of an organization, department, division, specific project or individual.

Specific future time period, like any financial figure budget prepared for specific future time period annually, monthly or quarterly, but a wide spread time period of budget is annual budget. In addition to this prepared for 2, 3 and 5 or more years.

Cost center, is a management or responsibility unit where the budget manager has responsibility for managing resources to achieve agreed outcomes.

Cost driver,

Cost object is anything for which decisions makers desire a separate measurement of costs.

5.1 Master budget

Master budget is a budget expresses management operating and financial plans for a specified period usually a year and compromises a set of budgeted financial statements. The master budget gets its name because it is the initial plan of what the organization intends to accomplish in the period.

The master budget reflects the impact of both operating and financial decisions. Operating decision: deal with the use of scarce resource. Financing decision: deal with how to obtain the fund to acquire those resources.

The master budget quantities targets for sales, cost driver activity, purchases, production, net income, cash position and other objective that management specifies it expresses these amounts in the form of forecasted financial statement and supporting operating schedule. These supporting schedules provide the information that is too highly detailed to appear in the actual financial statement. Thus, master budget is a periodic business plan that includes a coordinated set of detailed operating schedule and financial statement. Master budget also called **proforma statements**. In the process of preparing master budget, managers make many important decisions about how to best deploy the organizations resources.

5.1.1 Components of master budget

The term used to describe specific budget schedule vary from organization to organization. However, most master budgets have common elements.

Operating budget (profit plan) is a part of master budget that focuses on the income statement and supporting schedule. sub component of operating budget.

Operating budget

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- i. Sales budget
 - ii. Purchase budget
 - iii. Cost of goods sold
 - iv. Operating expense budget
 - v. Budgeted income statement
 - vi. Sales budget

Financial budget is part of a master budget that focuses on the effects that the operating budget and other plan (such as capital expenditures budget and repayment of debts) will have on cash. Sub component of financial budget.

Financial budget

- i. Cash budget
- ii. Capital expenditure budget
- iii. Budgeted balance sheet

In preparation of the master budget first identify components and follow each step carefully and completely. Although the process may seem largely mechanical remember that the master budget process generates key decisions regarding all aspects of the organization value chain. Therefore, the first draft of the budget leads to decision that prompt subsequent drafts before a final budget is chosen. To illustrate the budgeting process for XYZ cooperative society a management prepares continues budget to aid financial and operational decision. A society the planning horizon is only for the quarter. In the past sales are increasing in this quarter. However the company's collections have always lagged well behind its sales. As a result, society has often found itself pressed to come up with the cash for purchases, employee wage, and other operating outlays. To help meet this squeeze, the company has used short term loans from commercial banks, paying them back when cash comes in. the company plans to on using this system. The closing balance sheet for the fiscal year ended December 31, 2001 and sales of societies were birr 400,000

XYZ cooperative societies

Balance sheet

December 31, 1999

Asset

Current asset

Cash-----birr 100,000

Account receivable net (40% of December

Sales of birr 400,000) -----birr 160,000

Merchandise inventory (birr 200,000 +0.7(o.8 *January

Sales of birr500, 000) -----birr 480,000

Prepaid insurance -----birr 18,000 ----**birr758, 000**

Plant asset

Equipment, fixture, and other plant assets-----birr370, 000

Less accumulated depreciation -----birr 128,000-----birr242, 000

Total assets ----- **birr1, 000,000**

Liability

Current liability

Account payable (0.5 *December, 1999 purchase

of birr 336, 000)-----birr 168,000

Accrued wage and commission payable

(12,500+birr30, 000)-----birr 42,500

Total liabilities-----birr 210, 500

Owner's equity

Stockholder equity-----birr 789,500

Total liabilities and owners equity -----birr **1, 000,000**

Figure: _5.1 Balance sheet for the fiscal year ended December 31, 1999

Monthly sales forecasts are presented

January-----birr 500,000

February-----birr 800, 000

March-----birr 600,000

April -----birr 500,000

Figure:-5.2 sales forecast

The budget preparation is based on the following basic assumption of management.

1. Sales, cash collection from sales, and taxes management of the company expects future sales collection to follow past experiences.
 - Customer pays 60%of the sales in cash and 40%on credit
 - All credit accounts are collected in the month following sales. The birr 160,000 account receivable on December 31,represents credit sales made in December 2000(40%of birr 400,000)
 - Un collectable accounts are negligible and thus ignored
2. Inventories, purchase, and payment for purchases.
 - Because of deliveries from supplier and customer demands are uncertain at the end of each months the company wants to have on hand a basic inventory of item valued at birr 200,000plus 80% of the expected cost of merchandise sold for the following months. The cost of merchandise sold average 70% of sales. Therefore the inventory on December 31, is birr $200,000 + 0.7 (0.8 \times \text{January sales of birr } 500,000)$
(Birr 200,000+birr 280,000=birr 480,000)
 - The purchase terms available to the company are not30, days. The company pays for each months purchase as follows
 - 50% during that month and
 - 50% during the next monthsTherefore, the account payable balance on December 21 is 50% of December purchase, or $\text{birr } 336,000 * 50\% = \text{birr } 168,000$.
3. Wage and commissions
 - The company pays wage and commission semi monthly, half a month after they are earned. They are divided in to two portions: monthly fixed wages of birr 25,000 and commission equals to15% of sales, which we will assume are uniform throughout each month. Therefore, the December 31 balance of accrued wage and commissions payable is $(0.5 \times \text{birr } 25,000) + 0.5(0.15 \times \text{birr } 400,000) = \text{birr } 12,500 + \text{birr } 30,000 = \text{birr } 42,500$. The company will pay this birr42, 500 on January 15.
4. Capital expenditure

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- XYZ cooperative societies plan to buy new fixtures for birr 30,000 for cash in January.
5. Other monthly expenses
 - Miscellaneous expense-----5%of sales, paid as incurred
 - Rent-----birr 20,000,paid as incurred
 - Insurance-----birr2,000expiration per month
 - Depreciation, including new fixtures-----birr 5,000 per month.
 6. Minimum cash balance, short term borrowings and repayment
 - The company wants a minimum of birr 100,00asa cash balance at the end of each month.
 - The company has a policy of borrowing or repaying loan in multiples of 10,000.mangment plans to borrow no more than necessary and to repay as promptly as possible. Borrowing will occur at he beginning and repayment at the end of the month in question.
 - Interest will pay, under the terms of the credit arrangement, when the related loan is repaid. The interest rate is 12% per year.

5.2 Step in preparing the master budget

The principal steps in preparing the master budget are

1. Basic data

Using the data given you can prepare the following detailed schedules in the order listed for each of the months of the planning horizon.

Sales budget

Cash collection from customers

Purchase budget

Disbursement for purchase s

Operating expense

Disbursements for operating expense budget

2. Operating budget

Using the budgets and schedules listed under above you can prepare a budgeted income statement for three months ending

3. Financial budgeted

Using the data given above, the budgeted and supporting schedules You can prepare the following budgets and budgeted financial statement.

1. Capital budgeted

2. Cash budgeted, including detail of borrowing, repayments, and interest for each month of the planning horizon

3. Budgeted balance sheet as of march 31, 1999

Step 1 Preparing basic data

Step 1.1 sales budget: the sales budget is the starting point for budgeting for XYZ cooperative societies because inventory levels, purchases and operating expense are geared to the expected level of sales. Accurate sales forecasting is essential to effective budgeting. December sales are in the sales budget because they affect cash collection in January in nonprofit organization, forecasts of revenue or some level of services are patient revenue and government reimbursement expected by hospital donations expected by church. If an organization generates no revenue as in the case of municipal fire protection, the sales "sales budget" simply specifies a desired level of service.

XYZ cooperative societies

Sales budget

For Quarter ending March 31, 1999

	December (1999)	January	February	March	
Jan-March					<u>Total</u>
Credit sales, 40%	160,000	200,000	320,000	240,000	
760,000					
Plus cash sales 60%	<u>240,000</u>	<u>300,000</u>	<u>480,000</u>	<u>360,000</u>	
<u>1,140,000</u>					
Total sales	<u>400,000</u>	<u>500,000</u>	<u>800,000</u>	<u>600,000</u>	
<u>1,900,000</u>					

Figure: - 5.3 Sales budget

Step 1.2 cash collection from customers: it is easiest to prepare schedule for cash collection at the same time that you prepare the sales budget. Cash collections from customers include the current month's cash sales and the previous month credit sales. Total collections are used in preparing the cash budget.

XYZ cooperative societies

Cash collections from sales schedule

For Quarter ending March 31, 1999

	January	February	March
Cash sales this month 360, 000	300,000	480,000	
Plus 100% of last month's credit sales <u>320,000</u>	<u>160,000</u>	<u>280,000</u>	
Total collections <u>680,000</u>	<u>460,000</u>	<u>680,000</u>	

Figure: - 5.4 Cash collection from customers

Step 1.3 purchases budget: after budgeting sales and collections, the next budget to prepare is purchase budget. The total merchandise needed will be the sum of the desired ending inventory plus the amount needed to fulfill budgeted sales demand. The total needed will be partially met by the beginning inventory; the remainder must come from planned purchases. These purchases are computed as follows.

Budgeted purchase =desired ending inventory +cost of goods sold -- beginning inventory

XYZ cooperative societies

Purchase budget

For quarter ending March 31, 1999

	December (1999)	January	February	march	Jan - Mar Total
Desired ending inventory	480,000 ¹	648, 000	536,000	480, 000	
Plus cost of goods sold	280,000 ²	350,000	560,000	420,000	
	<u>1,330,000</u>				
Less beginning inventory	424,000 ³	480,000	648,000	536,000	
Purchases	336,000	518,000	448,000	364,000	

1. Birr 200,000 + (0.8 x January cost of goods sold) =birr 200,000 +0.8(birr 350,000)= birr 480,000

2. 0.7 x December ,1999 sales of birr 400,000 =birr 280,000

0.7 X January sales of birr 500,000 =birr 350,000: etc

3. Birr 200,000 + (0.8 X December, 1999 cost of goods sold of birr 280,000)

= birr 200,000 +birr 224,000 =birr 424,000

Figure: -5.5 purchase budget

Step 1.4 Disbursement for purchases: purchases budget is used to develop schedule for disbursement from purchases. In this example, disbursement includes 50% of the previous months purchase. Total disbursement is used to prepare the cash budget.

XYZ cooperative societies

Cash disbursement for purchase schedule

For quarter ending March 31, 1999

	January	February	March
50% of last month's purchases	168,000	259,000	224,000
Plus 50% of this month's	<u>259,000</u>	<u>224,000</u>	<u>182,000</u>
Disbursement for purchases	<u>427,000</u>	<u>483,000</u>	<u>406,000</u>

Figure: -5.6 Disbursements for purchas

Step 1.5 operating expense budgets: The budget of operating expenses depends on several factors. Month to month changes in sales volume and other cost-driver activities directly influence many operating expense. Examples of expenses driven by sales volume include sales commission and many delivery expenses. Other expense such as rent, insurance, depreciation, and salaries, are not influence by sales within appropriate relevant ranges, and are regarded as fixed.

XYZ cooperative societies

Operating expense budget

For quarter ending March 31 1999

	December	January	February	march
Jan_March				
	(1999)			Total

Wage (fixed)	25,000	25, 000	25,000	25, 000	
75,000 Commissions (15% of					
current month's sales)	<u>60,000</u>	<u>75,000</u>	<u>120,000</u>	<u>90,000</u>	
<u>285,000</u> Total wages and					
commissions	<u>85,000</u>	<u>100,000</u>	<u>145,000</u>	<u>115,000</u>	=
<u>360,000</u>					
Miscellaneous expenses					
(5% of current sales)		25,000	40,000	30,000	
95,000					
Rent expense		20,000	20,000	20,000	
60,000					
Insurance expense		2,000	2,000	2,000	
6,000					
Depreciation expense		<u>5,000</u>	<u>5, 000</u>	<u>5,000</u>	
<u>15,000</u>					
Total operation expense		<u>152,000</u>	<u>212,000</u>	<u>172,000</u>	
<u>536,000</u>					

Figure:-5.7Operating expense budget

Step 1.6 Disbursement for operating expenses: disbursements for operating expenses are based on operating expense budget. Disbursements include 50% of last months and this month and this month wage and commissions, and miscellaneous and rent expenses. The total of disbursements will be used in preparing the cash budget.

XYZ cooperative societies

Cash disbursement for operating expenses schedule

For quarter ending March 31, 1999

	January	February	March
Jan - March			
<u>Total</u>			
Wages and commissions 165,000	42,500	50,000	72,500
50% of last month's expenses <u>180,000</u>	<u>50,000</u>	<u>72,500</u>	<u>57,500</u>
50% of this month's expense 345,000	92,500	122,500	130,000
Total wage and commissions 95,000	25,000	40,000	30,000
Miscellanea expenses 10,000	30,000	10,000	10,000
Rent expense <u>10,000</u>	<u>10,000</u>	<u>30,000</u>	<u>10,000</u>
Total disbursements <u>500,000</u>	<u>137,500</u>	<u>182,500</u>	<u>180,000</u>

Figure:-5.8 Disbursement for operating expenses

Step 2 preparing operating the budget

Steps 1.1, 1.3, and 1.5: provide enough information to construct a budgeted income statement from operation. The income statement will be complete after addition of the interest expense, which you can compute while preparing cash budget.

- ✓ Budgeted income from operation is often a benchmark for judging management performance

XYZ cooperative societies Budgeted income statement For quarter ending 31, 1999

Data Source of data

Sales	1,900,000	Figure 5.3
Cost of goods sold	<u>1,330,000</u>	
Figure 5.5		
Gross margin	<u>570,000</u>	
Operating expenses		
Wage and commission	360,000	
Figure 5.7		
Rent expense	60,000	
Figure 5.7		
Insurance expense	6,000	Figure 5.7
Depreciation expense	15,000	Figure 5.7
Miscellaneous expenses	95,000	<u>536,000</u>
Income from operations	34,000	
Interest expense (birr 200 + birr 300) _ Figure 2.13 + birr 900*)	<u>4,000</u>	
Net income	<u>29,900</u>	

*(birr 30,000, the unpaid 10 x 12/100 X 3/12 = birr 900)

Figure: - 5.9 Budgeted income statement

Step 3: Preparation of financial budget

The second major part of the master budget is the financial, budget, which consists of the capital expenditure budget, cash budget, and ending balance sheet. This section focuses on the cash budget and the ending balance sheet.

Step 3.1 capital expenditures budget

In this illustration the birr 30,000 purchase of new fixtures would be included in the capital expenditures budget.

Step 3.2 cash budget

The cash budget is the statement of planned cash receipts and disbursements. The cash budget is heavily affected by the level of operations summarized in the budgeted income statement.

The cash budget has the following major sections, where the letters **W**, **X**, **Y**, and **Z** refers to the line in the cash budget figure 5.10 that summarize the effects of that section ;

- The available cash balance (X) equals the beginning cash balance less the minimum cash balance desired.
- Cash receipts and disbursements(Y)
 1. Cash receipts depends on collections from customer s accounts receivable, cash sales and on other operating cash income sources as interest received on notes receivable. Trace total collections from figure. 5.4
 2. Disbursements for purchase s depend on the credit terms extended by suppliers and the bill-paying habit s of the buyer. Trace payments for merchandise from figure. 5.6
 3. Payroll depends on wage, salary, and commission terms and on payroll dates. Trace wage and commission from fig 5.8.
 4. Some costs and expenses depend on contractual terms for installment payments, mortgage payments, rents, leases, and miscellaneous items. Trace disbursements for operating expenses from fig 5.8.
 5. Other disbursements include outlays for fixed assets long term investments, dividend, and the like. An example is the birr 30,000expenditure for new fixture.
- The cash needed (or used for) financing (**Z**) depending on the total available cash balance (**X**), and the net cash receipts and disbursements, (**Y**).if cash available plus net cash receipts less disbursement is negative, borrowing is necessary the cash budget shows that the company will borrow birr 140,000 in January to cover planned efficiency .if it is positive loan may repaid birr 10,000 and birr 100,000 are paid in February and march respectively. The balance of the loan may be repaid in the following months when positive cash balance is available. The pertinent outlays for interest expenses are usually contained in this section of the cash budget
- The ending cash balance is the beginning cash balance +(**Y**) + (**Z**). Financing, **Z** has either a positive (borrowing) or a negative (repayment) effect on their cash balance. The illustrative cash budget shows the pattern of short term, “self liquidating” financing. Seasonal peaks often result in heavy drains on cash for merchandise purchases and operating expenses before the company makes sales and collects cash from customers. The company uses borrowed money to acquire merchandise for sale, and uses the proceeds from sales to repay the loan. This working capital cycles moves from cash to inventory to receivables and back to

cash. The cash budget helps management to avoid having unnecessary idle cash, on the one hand, and cash deficiencies on the other hand. A well managed financing program keeps cash balances from becoming too large or too small.

XYZ cooperative societies

Cash budget

For quarter ending March 31, 1999

	January	February	March
Beginning cash balance	100,000	105,500	
109,800			
Minimum cash balance desired	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
Available cash balance (X)	0	5,500	
9,800 Cash receipt and disbursements:			
Collection from customer's fig 5.4	460,000	680,000	680,000
Payment for merchandise fig 5.6	(427,000)	(483,000)	(406,000)
Payment for operating expense fig 5.9	(137,500)	(182,500)	(180,000)
Purchase of new fixture (given)	<u>(30,000)</u>	<u> </u>	<u> </u>
Net cash receipts and disbursements (Y)	(134,500)	14,500	94,000
Excess or deficiency of cash			
before financing (X + Y)	(134,500)	20,000	
103,800			
Financing			
Borrowing (at the beginning of month)	140,000*		
Repayments (at the end of months)		10,000	(100,000)
Interest (at 12% per year**)		(200)	(3,000)
Total cash increase or decrease			
from financing (Z)	140,000	(10,200)	
(103,000)			
Ending cash balance			
(Beginning balance + Y + Z)	105,500	109,800	100,800

*Borrowing and repayment of principals are made in multiple of birr 10,000, at an interest rate of 12% per year

** Interest computation

February: birr 10,000 X 12/100 X 2/12 =birr 200

March: birr 100,000 X 12/100 X 3/12 =birr 3000

Figure: - 5.10 cash budget

Step 3.3 budgeted balance sheets:

The final step in preparing the master budget is to construct the budgeted balance sheet that projects each balance sheet item in accordance with the business plan as

expressed in the previous schedules. Specifically, the beginning balance at December 31, 1999 would be increased or decreased in light of the expected cash receipts and cash disbursements in figure 2.13 and in light of the effects of non cash items appearing on the income statement in figure 2.12. For example unexpired insurance would decrease from its balance of birr18, 000 on December, to birr 12,000 on March 31, even though it is a non cash item.

XYZ cooperative societies
Budgeted balance sheet
March 31, 1999

Asset

Current assets

Cash (fig 5.10)	birr 100,800	
Account receivable, net, (0.4 March sales Of birr 600,000) fig 5.3	240,000	
Merchandise inventory (fig 2.8)	480,000	
Prepaid insurance (birr 18,000 -birr 6,000)	12,000	832,800

Plant asset

Equipment, fixtures, and other (birr 370,000 + Birr 30,000 fixtures)	400,000	
Accumulated depreciation (birr 128,000 + birr 15,000)	(143,000)	<u>257,000</u>
Total assets		<u>1,089,800</u>

Liabilities

Current liabilities

Accounts payable (0.5 X march Purchases of birr 364, 000 - fig 2.8)	birr 182,000	
Accrued wages and commissions Payable (0.5 x birr 115,000)	57,000	
Notes payable (birr 140,000 - (birr 10,000 + birr 100, 000) fig 2.3)	30,000	
Interest payable (fig 2.12)	900	270,000
Total liabilities		

Owner equity

Stockholder equity (birr 789,500 + Birr 29,000 net income)	819,000
Total liabilities and Owners' equity	<u>1,089,000</u>

Figure: 5.11 -Budgeted balance sheet

When the complete master budget is formulated, management can consider all the major financial statements as a basis for changing the course of events. For example, the initial

formulation of the financial statements may prompt management to try new sales strategies to generate more demand. Alternatively, management may explore the effects of varicose adjustments in the timing of receipts and disbursements. The large cash deficiency in January, for example, may lead to an emphasis on cash sales or an attempt to speed up collection of account receivable. In any event, the first draft of the master budget is rarely the final draft.

As it is reworked, the budgeted process becomes an integral part of the management process itself -budgeting is planning and communicating.

6. Sales forecasting, financial planning models, and human aspects of budgeting

Overview

Since all elements of the master budget are based on a sales budget, the starting point for budgeting is sales budget. In its turn sales budget depend on sales forecasts. Sales forecasting is difficult because of its complexity and rapid changes in business environment.

Developing mathematical models, called financial planning models enables the master budget to react to any set of assumption.

The success of a budget depends heavily on employee reaction to it. Budgeting generally are more useful when they are formulated with the willing participation of all affected parties. In this section you will learn the difficulties of sales forecasting, financial planning model and the possible human relations caused by budgets.

6.1 Difficulties of sales forecasting

The Sales budget is the foundation of the entire master budget. The accuracy of estimated purchases budget, production schedules, and costs depends on the detail and accuracy (in birr, units, and mix) of the budgeted sales.

Budgeting practice require the sales budget to depend entirely on sales forecasts. Although sales budget and sales forecast sound as if they might be the same thing, be aware that a forecast and a budget are not necessarily identical.

A sales forecast is a prediction of sales under a given set of conditions.

A sales budget is the result of decision to create the conditions that will generate a desired level of sales.

For example, a cooperative society may have forecasts of sales at various levels of advertizing. The forecast for the one level the societies decide to implement becomes the budget.

There are many factors to be considered while important for casting sales. Important factors considered by sales forecaster include the following;-

- (i) **Past pattern of sales**;-past experience combined with detailed past sales by product line, geographical region, and type of customer can help predict future sales.

-
- (ii) **Estimates Made by the sales force**;-a business organizations sales force is often the best source of information about the desires and plans of customers.
 - (iii) **General economic conditions**;-predictions for many economic indicators, such as gross domestic product and industrial production indexes are also best sources of information knowledge of how sales relate to these indicators can aid sales forecasting.
 - (iv) **Competitors action**; - sales depends on the strength and action of competitors. To forecasts sales, a business organization should consider the likely strategies and reaction of competitors, such as changes in their prices, product quality, or services.
 - (v) **Change in the firms prices**; - sales can be increased by decreasing prices and vice versa . A Business organization should consider the effects of price changes on customer demand.
 - (vi) **Changes in product mix**; - changing the mix of products often can affect not only sales levels but also overall contribution margin. Identifying the most profitable products and devising methods to increase their sales is a key part of successful management.
 - (vii) **Marker research studies**; - some large size business organizations are market experts to gather information about market conditions and customer preferences. Such information is useful to managers making sales forecasts and product mix decisions.
 - (viii) **Advertizing and sales promotion plans**;-advertizing and other promotional cost affect sales levels. A sales forecast should be based on anticipated effects of promotional activities.

Sales forecasting usually combines various techniques. In addition to the opinion of the sales staff statically analysis of correlations between sales and economic indicators provide valuable help. The opinion of line management also heavily influences the final sales forecasts. Ultimately, no matter how many technical experts are used in forecasting, the sales budget is the responsibility of line management.

Sales forecasting is still somewhat mystical, but its procedures are becoming more formalized and are being reviewed more seriously because of the intensive of global competitive pressures. Although the detailed discussion of the preparation of the sales budget will be taken care by advanced courses, the importance of an accurate sales forecast cannot be overstressed financial

Interestingly, governments and other nonprofit organizations also face a problem similar to sales forecasting. For example, the budget for city revenues may depend on a variety of factors, such as predicted property taxes, traffic fines, parking fees, license fee, and city income taxes. In turn, property taxes depend on the extent of new construction and general increase in real estate values. Thus, a municipal budget may require forecasting that is just as sophisticated as that required by a private firm

6.2 Financial planning models

Because a well- made budget considers all aspects of the organization (the entire value chain), it serves as an effective model for decision making. For example, managers can use the master budget to predict how various decisions might affect the organization in both the long run and the short run. Using the master budget in this way is a step – by step process in which tentative plans are revised as managers exchange views on various aspects of expected activities to day most large companies have developed financial planning models.

Financial planning models are mathematical models of the master budget that can react to any set of assumptions about sales, costs, product mix, etc. A master budget can be a comprehensive planning model for the organization. As the budget is a formulated activity and ask “what if” questions (sensitive analysis).

Sensitive analysis is a “what if” question technique that examines how a result will change if the original predicted data are not achieved or if an underlying assumption changes.

Departures from budgeted assumptions can occur, for example, because of changes in the competitive environment, general economic conditions etc. Sensitive analysis enables manager the effects of uncertainty on their business and to plan for them.

Financial planning models often use the master budget as their structural base. These models are used for budgeting for revising budget, for conducting “what if” analysis, and for comparing a variety of decision alternatives.

By mathematically describing the relationships among all the operating and financial activities covered in the master budget and among all the other major internal and external factors that can affect the results of management decisions, financial planning models allow managers to assess the predicted impacts of various alternatives before final decisions are selected. For example, a manager might want to predict the consequences changing the mix of products offered for sale to emphasize several products with the highest prospects for growth. A financial planning models would provide operational and financial budget well in to the future under alternative

assumptions about the product mix, sales levels, production constraints, quality level, scheduling, and so on. Most importantly, managers can get answers to “what if” questions, such as “what if” sales are 10% below forecasts. What if material prices increase 8% instead of \$5 as expected? What if the new union contract grants a 6% raise in consideration for productivity improvements”?

Computer – based financial planning models have shortened manager’s reaction times dramatically. A revised plan for a large company that took many accounts many days to prepare by hand can be prepared in minutes.

6.3 Human aspects of budgeting

No matter how accurate sales forecasts are, if budgets are to benefit an organization, they need the support of all the firms’ employees. The attitude of top management will heavily influence lower level workers and managers attitudes toward budget .even with the support of top management; however, budget and the managers who implement them can run in to opposition.

The budgeting techniques themselves are free of emotion. However, the administration of budgeting requires education, persuasion, and intelligent interpretation.

To be effective, budgeting requires “honest” communication about the business from subordinates and lower level managers to their bosses. Therefore, top management should try the best to obtain accurate budget forecasts from lower level managers.

Managers often compare actual results with budget in evaluating subordinates. Few individuals are immediately ecstatic about techniques used to check their performance; lower level managers sometimes regard budgets as embodiments of restrictive, negative top management attitudes. Accountants reinforce this view if they use a budget only to point out managers failings. Such negative attitudes are even greater when the budgets primary purpose is to limit spending. For example, budgets are generally unpopular in government agencies where their only use is to request and authorize funding. To avoid negative attitudes forwards budgets, accountants and top management must demonstrate how budgets can help each manager and top management must demonstrate how budgets can help each manager and employee achieve better results. Only employees at all levels to work forward goals, set objectives, measure results accurately, and direct attention to the areas that need investigation.

Another serious human relations problem that can negate the benefits budgeting arises if budgets stress one set of performance goals but employees and managers are rewarded for different performance measures. For example a budget may concentrate

on current costs of production, but managers and employees may be rewarded on the quality of production (defect rate) and on timely delivery of products to customers (percent on time). These measures of performance could be in direct conflict.

The overemphasized too often, top management and accountants are overly concerned with the mechanics of budgets, ignoring the fact that the effectiveness of any budgeting system depends directly on whether the affected managers and employees understand and accept the budget.

Budget created with the active participation of all affected employees are generally more than budgets imposed on subordinates. This involvement is usually called **participative budgeting**.

7. Static budget, Flexible budget and actual budget

7.1 Static budget

Static budget is a budget that is based on only one levels of activity. Master budgets are also called static budgets, because they are prepared by assuming fixed level of activity. In another wards, a master budget is prepared for only one levels of activity. For example, consider an organization using a traditional costing system with only one cost driver. In **XXX** cooperative society the product has some variations, but may be viewed for any purposes essentially as a single product bearing one selling price. Assume that the cost driver is sales volume (that is volume) is 9,000 units. All of the budget figures are then based on projected sales of 9,000units. All of the budget figures are then based on projected sales of 9,000 units all of the budget figures are then based on projected sales of 9,000 units. All of the budget figures are then based on projected sales of 9,000 units.

All actual results could be compared with the original budgeted amounts, even though, for example, sales volume turned out to be only 7,000units instead of the originally planned 9,000 units.

The comparison is not at all appropriate, because it is not logical to compare revenues and costs of two different levels of activity.

Since master budget (static budget) is prepared for only one levels of activity, it is inflexible. So whenever the level of actual activity, sales or production, differ from the intended level budget period (the static budget) at the start of the budget period, you need to use a new budget for the actual levels of activity.

Master budget that assume only one level of activity cannot be adjusted to the actual level of activity. In evaluating actual results the master budget resulted in the problem of comparing expected results of one level of activity with actual results of another level of activity.

7.2 Master budget (static budget) variance

Variance is a devotion of an actual amount from the expected or budgeted amount.

Master budget variance (static budget variance) is the variance of actual results from the master (static budget)

XXX cooperative societies
Performance report
For the month ended June 30, 1999

	Actual	master budget	Master
	(1)	(2)	
<u>variance (3)</u>			
Units	7,000	9,000	
2,000			
Sales (at 31)		217,000	279,000
			62,000 U
Variables expense			
Variable manufacturing expense		151,270	189,000
			37,730F
Shipping expenses (selling)	5,000	5,400	400F
Administrative expenses		2,000	1,800
			200U
Total variable expenses		<u>158,270</u>	<u>196,200</u>
			<u>37,930F</u>
Contribution margin		58,730	82,800
			24,070U
Fixed expenses			
Fixed manufacturing expenses	37,300	37,000	300U
Fixed selling and administrative			

expense	33,000	33,000	—

Total fixed expenses	70,300	70,000	300U
Operating income (loss)	<u>(11,570)</u>	<u>12,800</u>	<u>24,370U</u>

U= Unfavorable

F= favorable

Fig: 7.1 Performance report using master budget

Actual revenues that exceed expected revenues result in **favorable** revenue variances. When actual revenues are below expected revenues, variances are **unfavorable**.

Actual expenses that exceed budgeted expenses result in **unfavorable expense variances**, and actual expenses that are less than budgeted expenses, result **favorable expense variance**.

Each significant variance should cause a manager to ask “why” by explaining why a variance occurs; managers are forced to recognize changes that have affected revenue or costs and that might affect future decisions.

Suppose the XXX cooperative societies manager asks you to explain why there was an operating loss of birr 11,570 when a profit of birr12, 800 was budgeted. Clearly, sales were birr62, 000 below exceptions, but the favorable variances for the variable costs are misleading. Considering the lower than projected levels of sales activity was control real satisfactory? Would you really expect to pay 196, 200 birr for variable expenses when only 7,000 units are produced? of course not. Therefore, the comparison of actual results with a master budget is not very useful for management by exception.

7.3 Flexible budget

A **flexible budget (sometimes called variable budget)**: is a budget that adjusts for changes in sales volume and other cost driver activities. A flexible budget calculates budgeted revenues and budgeted costs based on the actual output level in the budget period. A flexible budget is prepared at the end of the period when the actual output is known (master budget) is developed at the start of the budget period based on the planned output level for the period.

The flexible budget is identical to the master budget in format, but managers may prepare if for any level of activity. So, when sales turn out to be 7,000 units instead of 9,000 managers can use the flexible budget to prepare a new budget based on this new

cost driver level. You can then see what the total variable expenses should be based on a sales level of 7,000 and compare this amount to the actual result.

For performance evaluation, the flexible budget would be prepared at the actual levels of activity achieved.

Unlike flexible budget, the master budget is kept fixed or static to serve as the original benchmark for evaluating performance. It shows revenue and costs at only the originally planned levels of activity.

The flexible budget approach says, *“Give me any activity level you choose, and I will provide a budget tailored to that particular level.”*

Many organizations routinely “flex” their budget to help evaluate recent financial performance.

The flexible budget is prepared at the end of the period after the actual output level is known. The flexible budget is the budget that would have been prepared at the start of the budget period if accountants had perfectly predicted the actual output level.

The only difference between the static budget and the flexible budget is that the static budget is prepared for the planned output, whereas the flexible budget is based on the actual output.

There are three steps to follow in developing a flexible budget;

Step-1 Identify the actual quantity of out put

Step-2 Calculate the flexible budget for revenues based on budgeted selling prices and actual quantity of output.

Step-3 Calculate the flexible budget for costs based on budgeted variable cost per output units, actual quantity of output, and budget fixed costs.

7.4 Flexible - Budget Formulas

The flexible budget is based on assumption of revenue and cost behavior (within the relevant range) with respect to appropriate cost driver. The flexible budget incorporates effects on each cost and revenue caused by changes in activity. Figure 2.27 and 2.28 show XXX cooperative societies cost functions or flexible budget formulas are believed to be valid within the relevant range 7,000 to 9,000 units.

XXX cooperative societies
Flexible budgets
For the month ended June 1999

	Flexible budget formula	Flexible variance sales	Budget for levels of production	Activity
Budgeted formula per unit				
Units		7,000	8,000	9,000
Sales	<u>Birr 31.00</u>	<u>Birr 217,000</u>	<u>Birr 248,000</u>	<u>Birr 279,000</u>
Variable costs/expenses				
Variable manufacturing costs	Birr 21.00	Birr 147,000	Birr 168,000	Birr 189,000
Shipping expenses (selling administrative)	0.6 <u>0.2</u>	4,200 <u>1,400</u>	4,800 <u>1,600</u>	5,400 <u>1,800</u>
Total variable costs/expenses /	<u>Birr 21.80</u>	<u>Birr 152,600</u>	<u>Birr 174,400</u>	<u>Birr 196,200</u>
Contribution margin	<u>Birr 9.20</u>	<u>Birr 64,400</u>	<u>Birr 73,600</u>	<u>Birr 82,800</u>
Budget formula per month				
Fixed costs				
Fixed manufacturing costs	Birr 37,000	Birr 37,000	Birr 37,000	Birr 37,000
Fixed selling and administrative costs	<u>33,000</u>	<u>33,000</u>	<u>33,000</u>	<u>33,000</u>
Total fixed costs	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>
Operating income or loss		<u>Birr (5,600)</u>	<u>Birr 3,600</u>	<u>Birr 12,800</u>

Fig: 7.2 Flexible budgets

Be sure that you understand of the above figure (7,000, 8,000, 9,000 units respectively) is prepared using the same flexible-budget formulas- and any activity level within the range could be used.

7.5 Activity-based flexible budget

The flexible budget for XXX cooperative societies shown in fig 2.27 is based on a single cost driver unit of product. For an organization that use a traditional, volume based costing system, this is an appropriate approach to flexible budgeting. Organizations that have an activity based costing system use a more detailed approach.

An activity based flexible budget is a budget based on budgeted costs for each activity and related cost driver.

There are four activities processing, setup, marketing, and administration. Within each activity, costs depend on an appropriate cost driver.

XXX cooperative societies
Activity based flexible budget
For the month ended June 30 1999

	<u>Budget</u>	<u>Formula</u>	<u>Units</u>	
		7,000	8,000	9,000
Sales	Birr 31	<u>Birr 217,000</u>	<u>Birr 248,000</u>	<u>Birr</u>
<u>279,000</u>				
ACTIVITY				

Processing

Machine Hours

		<u>Cost driver: Number of</u>	
Cost driver level		14,000	16,000
18,000			
Variable costs	Birr10.5	Birr147,000	Birr168,000
189,000			Birr
Fixed costs	Birr 13,000	<u>13,000</u>	<u>13,000</u>
<u>13,000</u>			
Total costs of processing activity		Birr160,000	Birr181,000
<u>Birr202,000</u>			

Setup

number setups

		<u>Cost driver:</u>	
Cost driver level		21	24
			27
Variable costs	Birr500	Birr 10,500	Birr 12,000
			Birr 13,500
Fixed costs	Birr 12,000	<u>12,000</u>	<u>12,000</u>
			<u>12,000</u>
Total costs of setup activity		<u>Birr 22,500</u>	<u>Birr 24,000</u>
<u>25,500</u>			<u>Birr</u>

Marketing

<u>number of order</u>		<u>Cost driver:</u>	
Cost driver level		350	400
			450
Variable costs	Birr12	Birr 4,200	Birr4,800
Birr 5, 400			
Fixed costs	Birr 15,000	<u>15,000</u>	<u>15,000</u>
<u>15,000</u>			
Total costs of marketing activity		<u>Birr19,200</u>	<u>Birr19,800</u>
<u>Birr 20,400</u>			
Administration of setup			
<u>number of setups</u>		<u>Cost driver:</u>	
Cost driver level		7,000	8,000
9,000			
Variable costs	Birr0.20	Birr1, 400	Birr1, 600
Birr1, 800			
Fixed costs	Birr18, 000	<u>18,000</u>	<u>18,000</u>
<u>18,000</u>			
Total costs of administration		<u>Birr19,400</u>	<u>Birr19,600</u>
<u>Birr19,800</u>			
Total costs		<u>Birr 221,100</u>	<u>Birr 244,400</u>
<u>267,700</u>			<u>Birr</u>
Operating income		<u>Birr (4,100)</u>	<u>Birr 3,600</u>
<u>11,300</u>			<u>Birr</u>

Fig: 7.3 Activity-based flexible budgets

Compare the traditional flexible budget (fig. 7.2) and activity based flexible budget (fig. 7.3). Note that 8, 000 unit's columns in fig 7.2 and fig 7.3 are the same, but at other volumes the costs diverge. The key difference is that some manufacturing costs that are fixed with respect to the cost driver "setup". That is the fixed manufacturing cost (birr 37,000) in fig 7.2 include setup costs that are largely fixed with respect to

“units produced” but that vary with respect to “number of setups” . An example is the cost supplies used to of production run. Each time a setup is done, supplies are used. Therefore, the cost supplies vary directly with the number of setups. However, no setup supplies are used during production, so there is little change in the cost of supplies over wide range of units produced. The basic difference is why the total budgeted costs differ using the two approaches –activity based flexible budgets provide more accurate measures of cost behavior.

An organization should use activity based flexible budgets, when a significant production of its costs vary with cost drivers other than units of production.

8. Variance

8.1 Evaluation of financial performance using flexible budget

Flexible budget is an important tool in evaluating performance in terms of efficiency. When cost driver activities are not the same as expected and the unit selling price and variable costs and periodic fixed costs are not as expected actual results of operation might differ from the expected result. When evaluating performance, there is a need for distinguishing between effectiveness and efficiency. Evaluating performance in terms of efficiency is better done with the help of flexible budget.

8.1.1 Performance evaluation relationship between master budget and flexible budget

Comparing the flexible budget to actual results accomplishes an important performance evaluation purpose.

There are two reasons why actual results might differ from the master budget;

- (1) Sales and other cost driver activities were not the same as originally forecasted.*
- (2) Revenues or variable costs per units of activity and fixed costs per period were not as expected.*

Though the two reasons indicated above may not be completely independent (for example higher unit sales prices may have caused lower unit sales levels), it is useful to separate these effects because different people may be responsible for each and because different management actions may be indicated.

The intent of using the flexible budget for performance evaluation is isolate unexpected effects on actual results that can be corrected if adverse or enhanced if beneficial.

8.2 Flexible budget variance and activity level variance

Because the flexible budget is prepared at the actual level activity (in our example, sales volume) any variance between the flexible budget and actual results cannot be due to activity levels. They must be due to departure of actual costs or revenues from flexible budget formula amounts because of pricing or cost control.

The variance between the flexible budget and the actual results are called flexible budget variance. Any difference or variance between the master budget and the flexible budget are due to activity levels, not cost control.

The two components of the total master budget variance are flexible budget variance and activity level variance.

Flexible budget variances are the variances between the flexible budget and the actual results.

Activity level variances are the difference between the master budget amounts and the amounts on the flexible budget.

XXX cooperative societies Performance report For the month ended June 30, 1999					
activity	Master	Actual results	Flexible	Flexible budget	Sales-
variance	Budget	at actual	budget	for actual sales	
	Activity level*	variance**	activity***		
(3)-(5)	(5)	(1)	(2) = (1)-(3)	(3)	(4) =
<i>Unit</i>		<u>7,000</u>	-	7,000	2,000 U
9,000					
<i>Sales</i>	Birr217, 000		-	217,000	62,000
279,000					
<i>Variable costs</i>	158,270	5,670U	152,600	43,600F	
196,200					
<i>Contribution margin</i>	58,730	5,670U	64,400	18,400	
82,800					
<i>Fixed costs</i>	<u>70,300</u>	<u>300U</u>	<u>70,000</u>	-	
				<u>70,000</u>	
<i>Operating income</i>	<u>11,570</u>	<u>5,970U</u>	<u>(5,600)</u>	<u>18,400U</u>	
				<u>12,800</u>	
		Total flexible budget	Total sales activity		
		Variance birr 5,970U	Variance, birr 18,400 U		
		Total master budget variance birr 24,370U			

U= unfavorable

F=favorable

Fig: 7.4 Summary of performance

