BUDGETARY PLANNING AND CONTROL: (TYPES OF BUDGET)

Learning outcomes
Learners will be able to

- Identify the usefulness and problems with different types of budget (functional, master and flexible budget)
- Prepare functional budgets, master budget
- Evaluate the difficulties of changing the type of budget used

1.1 Introduction

- Budgeting is a method of communicating the goals of the organization to the appropriate managers in order to facilitate, coordinate and control various sections of the organization so that the desired outcomes are achieved. Budgeting has come to be accepted as an efficient method of short-term planning and control.

- The technique of budgeting is an important application of Performance Management. Probably, the greatest aid to good management that has ever been devised is the use of budgets and budgetary control. It is an important tool and has assisted managers cope with many problems facing their organization such as inflation.

1.2 Definition of Budget

- A budget is a quantitative plan prepared for a specific time period. It is normally expressed in financial terms and prepared for one year.

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1.3 Basic Features of a Budget

An analysis of the above said definitions reveal the following essentials of a budget:

- It is prepared for a definite future period.
- It is a statement prepared prior to a defined period of time.
- The Budget is monetary and or quantitative statement of policy.
- The Budget is a predetermined statement and its purpose is to attain a given objective.

- A budget, therefore, be taken as a document which is closely related to both the managerial as well as accounting functions of an organization.

1.4 Objectives of a Budget

A budget has the following functions/ purpose

- **Planning:** A budgeting process forces a business to look to the future. This is essential for survival since it stops management from relying on ad hoc or poorly coordinated planning.
- **Control:** Actual results are compared against the budget and action is taken as appropriate.

- **Communication:** The budget is a formal communication channel that allows junior and senior managers to converse.
- **Coordination:** The budget allows coordination of all parts of the business towards a common corporate goal
- **Evaluation:** Responsibility accounting divides the organization into budget centres, each of which has a manager who is responsible for its performance. The budget may be used to evaluate the actions of a manager within the business in terms of the costs and revenues over which they have control.
- **Motivation:** The budget may be used as a target for managers to aim for. Reward should be given for operating within or under budgeted levels of expenditure. This acts as a motivator for managers.
- **Authorization:** The budget acts as a formal method of authorization to a manager for expenditure, hiring staff and the pursuit of plans contained within the budget
- **Delegation:** Managers may be involved in setting the budget. Extra responsibility may motivate the managers. Management involvement may also result in more realistic targets.

1.5 Organization for Budgetary Control

In order to introduce budgetary control system, the following are essential to be considered for a sound and efficient organization. The important aspects to be considered are:

- ❑ Organization Structure (Chart)
- ❑ Budget Centre
- ❑ Budget Officer
- ❑ Budget Committee
- ❑ Budget Manual
- ❑ Budget Period
- ❑ Key Factor

1.5.1 Organization Structure (Chart):

It essential for each organization to have definite plan of organization: for the purpose of effective and efficiency budgetary control. This plan of organization is defined in the organization structure (chart). The organization chart describes clearly the position of each manager authority and responsibility of the organization. All the functional heads are entrusted with the responsibility of ensuring proper implementation of their respective departmental budgets. An organization structure for budgetary control is given showing clearly the type of budgets to be prepared by the functional heads.

1.5.2 Budget Centre:

It is a section of the organization of an undertaking defined for the purpose of budgetary control. For effective budgetary control budget centre or departments should be established for each of which budget will be set with the help of the head of the department concerned

1.5.3 Budget Officer:

It is usually some senior member of the accounting staff who controls the budgetary process. Budget officer does not prepare the budget himself, but facilitates and co-ordinates the

budgeting activity. He/she assists the individual departmental heads and the budget committee, and ensures that their decisions are communicated to the appropriate people.

1.5.4 Budget Committee:

It comprises of the chief executive and all functional heads. The main objective of this committee is to agree on all departmental budgets. In small concerns, the Budget Officer may co-ordinate the work for preparation and implementation of budgets. In large-scale concern a budget committee is setup for preparation of budgets and execution of budgetary control.

1.5.5 Budget Manual:

It is a document which set out the responsibilities of persons engaged in the routine of and the forms and records required for budgetary control. It contains all details regarding the plan and procedures for its execution. It also specifies the time table for budget preparation to approval, details about responsibility, cost centers, constitution and organization of budget committee, duties and responsibilities of budget officer.

1.5.6 Budget Period:

A budget is always related to specified time period. The budget period is the length of time for which a budget is prepared and employed. The period may depend upon the type of budget. There is no specific period as such. However, for the sake of convenience, the budget period may be fixed depending upon the following factors:

- Types of Business
- Types of Budget
- Nature of the demand of the product
- Length of trade cycle
- Economic factors
- Availability of accounting period
- Availability of finance
- Control operation

1.5.7 Principal Budget Factor

The principal budget factor is the factor that limits the activities of functional budgets of the organisation. The early identification of this factor is important in the budgetary planning process because it indicates which budget should be prepared first. In general sales volume is the principal budget factor. Sales budget must be prepared first, based on the available sales forecasts. All other budgets should then be linked to this. Other principal budget factor may include factor such as

- Raw materials may be in. short supply.
- Non-availability of skilled labours
- Government restrictions
- Limited sales due to insufficient sales promotion
- Shortage of power

1.6 Types of Budgets

As budgets serve different purposes, different types of budgets have been developed. The following are the different classification of budgets developed on the basis of time, functions, and flexibility or capacity.

1.6.1 Classification on the Basis of Time:

- **Long-Term Budgets**: are budgets prepared for a longer period varies between five to ten years. It is usually developed by the top level management. These budgets summaries the general plan of operations and its expected consequences.

- **Short-Term Budgets**: These budgets are usually prepared for a period of one year. Sometimes they may be prepared for shorter period as for quarterly or half yearly. The scope of budgeting activity may vary considerably among different organization.

- **Current Budgets**: Current budgets are prepared for the current operations of the business. As per ICMA, "Current budget is a budget which is established for use over a short period of time and related to current conditions."

1.6.2 Classification According to Functions:

1.6.2.1 Functional Budget:

The functional budget is one which relates to any of the functions of an organization. The number of functional budgets depends upon the size and nature of business. The following are the commonly used:

- **Sales Budget**

It is one of the important functional budgets. Sales estimate is the commencement of budgeting may be made in quantitative terms. Sales budget is primarily concerned with forecasting of what products will be sold in what quantities and at what prices during the budget period. Sales budget is prepared by marketing department taking into account number of relevant and influencing factors both internal and external

The internal factors include the followings

- Sales trend: The past sale made by the company within a specific period plays a significant role in determining future sales possibilities.
- Production Capacity: The maximum utilization of the plant's manufacturing capacity should be considered for the preparation of the sales budget.
- Product Diversification and Product Development: When the company enters into a new product line to increase its sales volume and profitability, it must prepare the sales budget accordingly to facilitate product development.
- Seasonal Fluctuation: The Company has to figure out the changes in the sales trend during seasonal fluctuations like weekends, the first week of every month, festivals, etc. while determining the sales forecast.

- Selling and Distribution Channel: The selected marketing channel profoundly affects the sales forecast. Like for direct sale of goods, a more accurate sales data can be gathered, and hence a better sales estimate can be prepared.
- Sales Promotion and Advertisement: If the product is well promoted through advertisements, offers, discounts, etc.; it increases the potential sales and thus influences the sales budget too.
- Price Fluctuation: The change in the price of the product creates an impact on its potential sales. Therefore, the price of the product, as well as the price of the competitor's product, must be taken into consideration while deciding the sales budget.
- Market Research: Research is the basis for determining sales possibilities. Sales forecasting is not just prediction but is a practical approach depending on the past market trends.

The external factors include the followings

- Government Policy and Intervention: The government controls the trade practices and the sale of specific products by imposing various laws and policies, thus affecting the sales budget too.
- Competition in the Market: The number of competitors and their market share should be well analyzed by the company at the time of drafting the sales budget to avoid wastage.
- Change in Consumer Preference and Demand: The study of consumers' behaviour towards a particular product and their buying trends helps in close by sales prediction.
- Technological Development: When the technology changes, the risk for downfall rises. Therefore, the company must be updated with such changes to analyze the shift in consumer's preference and market occupancy.
- Economic Condition of the Country: The distribution of wealth within the country and its financial stability regulate the sales and performance of the company. At the time of recession when people's spending capacity decreases, the company tends to set the sales budget accordingly.

- **Production budget**
  - It is usually prepared on the basis of sales budget. But it also takes into account the stock levels desired to be maintained. The estimated output of business firm during a budget period will be forecast in production budget.
  - The production budget determines the level of activity of the produce business and facilities planning of production so as to maximum efficiency.
  - The production budget is prepared by the chief executives of the production department

- **Cost of Production Budget**:
  - After preparation of production budget, this budget is prepared. Production Cost Budgets show the cost of the production determined in the production budget. Cost of Production Budget is grouped in to
  - Material Cost Budget,
  - Labour Cost Budget and
  - Overhead Cost Budget.

- Due to it breaks up the cost of each product into three main elements material, labour and overheads. Overheads may be further subdivided in to fixed and variable cost

- **Cash Budget**:
  - This budget represents the anticipated receipts and payment of cash during the budget period. The cash budget also called as Functional Budget.
  - Cash budget is the most important of the entire functional budget because; cash is required for the purpose to meeting its current cash obligations.
  - If at any time, a concern fails to meet its obligations, it will be technically insolvent.
  - Therefore, this budget is prepared on the basis of detailed cash receipts and cash payments.
  - The estimated Cash Receipts include:
    - Cash Sales
    - Credit Sales
    - Collection from Sundry Debtors
    - Bills Receivable
    - Interest Received
    - Income from Sale of Investment
    - Commission Received
    - Dividend Received
    - Income from Non-Trading Operations etc.
  - The estimated Cash Payments include the following :
    - Cash Purchase
    - Payment to Creditors
    - Payment of Wages
    - Payments relate to Production Expenses
    - Payments relate to Office and Administrative Expenses
    - Payments relate to Selling and Distribution Expenses
    - Any other payments relate to Revenue and Capital Expenditure
    - Income Tax Payable, Dividend Payable etc.

1.6.2.2 Master Budget:

- The master budget represents a comprehensive expression of management's plans for the future and how these plans are to be accomplished.
- The master budget is composed of a number of smaller, specific budgets encompassing sales, production, raw materials, direct labour, manufacturing overhead, selling and administrative expenses, and inventories. It generally culminates in a cash budget, a budgeted profit and loss account, and a budgeted balance sheet
- Hence when the functional budgets have been completed, the budget committee will prepare a Master Budget for the target of the concern.
- A budget which is prepared incorporating the summaries of all functional budgets. It comprises of budgeted profit and loss account, budgeted balance sheet,

1.6.3 Classification on the basis of Capacity:

- **Fixed Budget**:

It is a budget drawn for a particular level of activity is called fixed budget. Fixed budget is a budget which is designed to remain unchanged irrespective of the level of activity actually attained. Fixed budget is usually prepared before the beginning of the financial year. This type of budget is not going to highlight the cost variances due to the difference in the levels of activity. Fixed Budgets are suitable under static conditions.

- **Flexible Budget:**

It is a budget which is designed to change in accordance with the level of activity actually attained. According to the principles that guide the preparation of the flexible budget a series of fixed budgets are drawn for different levels of activity. A flexible budget often shows the budgeted expenses against each item of cost corresponding to the different levels of activity. This budget has come into use for solving the problems caused by the application of the fixed budget

Advantages of Flexible Budget

- In flexible budget, all possible volume of output or level of activity can be covered.
- Overhead costs are analyzed into fixed, variable and semi-variable costs.
- Expenditure can be forecasted at different levels of activity.
- It facilitates at all times related factor can be compared which are essential for intelligent decision making.
- A flexible budget can be prepared with standard costing or without standard costing depending upon What the Company opts for.
- Flexible budget facilitates ascertainment of costs at different levels of activity, price fixation, placing tenders and Quotations.
- It helps in assessing the performance of all departmental heads as the same can be judged by terms of the level of activity attained by the business.

- **Method of Preparing Flexible Budget**
  - **Multi-Activity Method**: This method involves preparing a budget in response to different level of activity. The different level of activity or capacity levels are shown in Horizontal Columns, and the budgeted figures against such levels are placed in the Vertical Columns. The expenses involved in production as per budget are grouped as fixed, variable and semi variable.

  - **Ratio Method**: According to this method, the budget is prepared first showing the expected normal level of activity and the estimated variable cost per unit at the side expected level of activity in addition to the fixed cost as estimated. Therefore, the expenses as per budget, allowed for a particular level of activity attained, will be calculated on the basis of the following formula:
    Budgeted fixed cost + (Variable cost per unit of activity x Actual unit of activity)

1.7 Three Level Budgets

For every value which is subject to uncertainty three estimates are made. The three estimates may be for

1. The worst possible level
2. The most likely level
3. The best possible level

1.8 The Preparation of functional (Operations) budgets

- The functional or operating budget gathers the projected results of the operating decisions made by a company to exploit available business opportunities. In the end analysis, the operating budget presents a projected pro forma income statement that displays how much money the company expects to make.
- This net income demonstrates the degree to which management is able to respond to the market in supplying the right product at an attractive price, with a profit to the company. The operating budget consists of a number of parts that detail the company's plans on how to capture revenues, provide adequate supply, control costs, and organize the labour force.

These parts are:

- Sales Budget,
- Production Budget,
- Direct Materials Budget,
- Direct Labour Budget,
- Factory Overhead Budget,
- Selling and Administrative Expense Budget
- Pro forma Income Statement

The following case illustrates the preparation of functional budget as follows

Illustration case 1

Bongo Co. limited was established in Dar es Salaam in 2010 and currently manufactures two types of soap (medium and large) for East Africa markets. The company uses variable costing to value production and inventory, and prepares its budgets in advance for each quarter. The accountant has provided a range of information for the next quarter to 31 December 2019 as follows:

Projected sales for the next four months:

	October	November	December	January
	Shs	**Shs**	**Shs**	**Shs**
Medium	495,000	369,000	540,000	432,000
Large	525,000	362,500	525,000	437,500

Medium bookcases sell Shs. 90 each and large bookcases sell for Shs.125 each

The standard cost card for each of the bookcases is shown below:

	Medium Shs	**Large** Shs
Direct materials:		
- Material XA (@ Shs 24 per unit)	36.00	48.00
- Material XB (@ Shs 0.10 each)	2.80	3.60
Direct labour (@ shs 16.40 per hour)	20.50	28.70
Variable overheads (@Shs 6 per direct labour hour)	7.50	10.50
Total	**66.80**	**90.80**

The cost of material XA and XB has not changed in the past two years and is not expected to change until March 2020. Additionally, the direct labour and variable overhead rates above are applicable for the period from 1 June 2019 to 30 May 2020.

The company estimates that at 1 October 2019 inventory levels will be:

Medium	1,500
large	1,100
Material XA	2,000
Material XB	5,000

To ensure that it maintains sufficient inventory of each type of soap company policy is to hold 20% of the next month's unit sales in closing inventory.
For the material XA and material XA the company intends to double inventory held at 1 October 2019 and maintain this level of closing inventory each month until 31 March 2019.

REQUIRED:

(a) Prepare a production sales budget (in units and Shs) for the quarter ending 31 December 2019.

(b) Prepare a production budget in units for the quarter ending 31 December 2019.

(c) Prepare a materials purchase budget (in units and Shs) for each material for the quarter ending 31 December 2019.

(d) Prepare a labour cost budget (in hours and Shs) for the quarter ending 31 December 2019.

(e) Prepare a variable production overhead cost budget for the quarter ending 31 December 2019.

(f) Prepare a budgeted income statement for the quarter ending 31 December 2019 based on the results you have obtained in (a) to (e) above.

1.8.1 Preparation of Sales or Revenue Budget

- A sales budget is an important first step in structuring an overall budget for company. An accurate projection of future sales, business can make better decisions, keep expenses in line and protect the company from failing.
- Sales budget is prepared in term of quantities (units) and value

- Once the sales budget has been determined from a range of sales forecasts it is possible to construct the following other budgets

Let use the illustration 1 to answer part (a) to prepare a sales budget in units and Shs for the quarter ending 31 December 2019.

Sales Budget

	October	November	December
Medium soap - units @ Shs90 each	5,500	4,100	6,000
Small soap- sales value	Shs 495,000	Shs 369,000	Shs 540,000
Large Soap - units @ Shs125 each	4,200	2,900	4,200
Large Soap - sales value	Shs 525,000	Shs 362,500	Shs 525,000

1.8.2 Preparation of Production Budget

- The production budget is an estimate of the quantity of goods that must be produced during the budget period. The aim of the production function will presumably be to supply finished goods of a specified quality to meet marketing demands.
- The sum of sales requirements *plus* changes in stock levels of finished goods gives the production requirements for the period being budgeted.
- In order to construct the production budget it needs the level of sales expected and the desired levels of stock of finished goods.
- The production budget is usually expressed in quantity and represents the sales budget adjusted for opening and closing finished stocks and work-in-progress.
- The following formula is used for calculation of units to be produced.

Production = Sales (units) + Closing inventory (FG & WIP) - Opening inventory (FG & WIP)

Let use the illustration 1 to answer part (b) to prepare a production budget in units for the quarter ending 31 December 2019.

(b) Production Budget in units
(W1) Sales in units

	October	November	December	January
Small soap- sales value	Shs 495,000	Shs 369,000	Shs 540,000	Shs 432,000
Medium soap - units @ Shs90 each	5,500	4,100	6,000	4,800
Large Soap - sales value	Shs 525,000	Shs 362,500	Shs 525,000	Shs 437,500
Large Soap - units @ Shs125 each	4,200	2,900	4,200	3,500

Small Soap

	October	November	December
Sales (W1)	5,500	4,100	6,000
Closing Stock	820	1,200	960
	6,320	5,300	6,960
Less opening Stock	1,500	820	1,200
Production required	**4,820**	**4,480**	**5,760**

Large Soap

	October	November	December
Sales (W1)	4,200	2,900	4,200
Closing Stock	580	840	700
	4,780	3,740	4,900
Less opening Stock	1,100	580	840
Production required	**3,680**	**3,160**	**4,060**

1.8.3 Preparation of Direct Materials Budget

- The direct materials budget specifies the budgeted quantities of each raw material required for the budgeted production.
- A company plans a direct-materials budget to determine the adequacy of their storage space, to institute or refine just-in-time inventory control systems, to review the ability of vendors to supply materials in the quantities desired, and to schedule material purchases concomitant with the flow of funds into the company
- The requirement to purchase of direct material can be calculated with the help of the following formula.

Purchases = Direct material Usage + Closing stock (RM) - Opening stock (RM)

Let use the illustration 1 to answer part (c) to prepare a materials purchase budget (in units and Shs) for each material for the quarter ending 31 December 2019.

(b) Materials Purchase Budget

For each type of soap is made from Material XA and XB

Material XA

	October	November	December
Production in units – small soap	4,820	4,480	5,760
Material XA per unit (Shs 36/Shs24 = 1.5 units)	1.5	1.5	1.5
Material XA required – Small soap	7,230	6,720	8,640
Production in units - large soap	3,680	3,160	4,060
Material XA per unit (Shs48/Shs24 = 2 units)	2	2	2
Material XA required - large Soap	7,360	6,320	8,120
Total Material XA required for all Soap	14,590	13,040	16,760
Closing Stock	4,000	4,000	4,000
	18,590	17,040	20,760
Less opening Stock	2,000	4,000	4,000
Total Material XA purchases required	16,590	13,040	16,760
Cost @ Shs 24 per unit	24	24	24
Total Cost (Shs)	398,160	312,960	402,240

Total Material XA purchases for the quarter Shs **1,113,360**

Material XB

	October	November	December
Production in units – small soap	4,820	4,480	5,760
Material XB per unit (Shs2.80/Shs 0.10 = 28)	28	28	28
Material XB required – Small soap	134,960	125,440	161,280
Production in units - large soap	3,680	3,160	4,060
Material XB per unit ((Shs3.60/Shs0.10 = 36))	36	36	36
Material XB required - large Soap	132,480	113,760	146,160
Total Material XB required for all Soap	267,440	239,200	307,440
Closing Stock	10,000	10,000	10,000
	277,440	249,200	317,440
Less opening Stock	5,000	10,000	10,000
Total Material XA purchases required	272,440	239,200	307,440
Cost @ Shs 0.10 per XB	0.1	0.1	0.1
Total Cost (Shs)	27,244	23,920	30,744

Total Material XB purchases for the quarter **Shs 81,908**

1.8.4 Preparation of Direct Labour Budget

- Once a company has determined the number of units of production, it calculates the number of direct-labour hours needed.

- The direct labour budget will be developed for both direct labour hours and direct labour cost. After the labour requirements relating to different grades are finalized, estimated rate per hour and labour cost per unit is arrived at.
- A Direct Labour Hours Needed For Production = (Units to be Produced) x (D.L. Hours Budgeted per Unit)

Let use the illustration 1 to answer part (d) to prepare a labour cost budget (in hours and Shs) for the quarter ending 31 December 2019.

Labour Budget

	October	November	December
Production in units – small soap	4,820	4,480	5,760
Time to produce each unit (Shs20.50/Shs16.40 = 1.25 hrs	1.25	1.25	1.25
Total hours required to produce Small soap	6025	5600	7200
Production in units - large soap	3,680	3,160	4,060
Time to produce each unit (Shs28.70/Shs16.40 = 1.75 hrs)	1.75	1.75	1.75
Total hours required to produce Large soap	6440	5530	7105
Total hours required to produce all type of soap	12,465	11,130	14,305
Labour cost per hour @ Shs16.40	16.4	16.4	16.4
Production labour cost (Shs)	204,426	182,532	234,602

Total production labour cost for the quarter **Shs 621,560**

1.8.5 Preparation of Production Overhead Budget

The factory overhead budget is based on a flexible budget the calculation is as follows:
Budgeted Factory Overhead Costs = Budgeted Fixed Overhead + (Budgeted Variable Overhead Rate)(D.L. Hours needed for Production)

Let use the illustration 1 to answer part (e) to prepare a variable production overhead cost budget for the quarter ending 31 December 2019.

Variable Overhead Budget

	October	November	December
Total labour hours required for production (from (d)	12,465	11,130	14,305
Variable overhead cost per direct labour hour (Shs)	6	6	6
Variable overhead cost (Shs)	74,790	66,780	85,830

Total variable overhead cost for the quarter **Shs 227,400**

1.8.6 Preparation of Income Statement Budget

- Another key test of a budget is the budgeted income statement. The budgeted income statement contains all of the line items found in a normal income statement, except that it is a projection of what the income statement will look like during future budget periods.

- It is compiled from a number of other budgets, which include sales, materials, direct labour, overhead, and S&A. The accuracy of which may vary based on the realism of the inputs to the budget model.
- This budget checks whether all the predictions and assumptions made about sales, materials, direct labor, overhead, and S&A will bear fruit next year to generate net income.
- The budgeted income statement is extremely useful for testing whether the projected financial results of a company appear to be reasonable. When used in combination with the budgeted balance sheet, it also reveals scenarios that are not financially supportable (such as requiring large amounts of debt), which management can remedy by altering the underlying budget assumptions.

Let use the illustration 1 to answer part (f) to prepare a budgeted income statement for the quarter ending 31 December 2019 based on the results you have obtained in (a) to (e) above

Income Statement Budget for the quarter ending 31 December 2019

	Shs	**Shs**
Sales		
Small Soap		1,404,000
Large Soap		1,412,500
Total Sales		2,816,500
Cost of Sales:		
Opening Inventory note 1	248,580	
Production Cost note 2	2,044,228	
	2,292,808	
Less Closing Inventory note 3	224,688	
Cost of sales		2,068,120
Gross Profit Shs		**748,380**

Note 1

Opening Inventory	Quantity	Cost	Value
Small soap	1,500	Shs66.80	Shs 100,200.00
Large Soap	1,100	Shs90.80	Shs 99,880.00
Material XA	2,000	Shs 24.00	Shs 48,000.00
Material XB	5,000	Shs 0.10	Shs 500.00
			Shs **248,580**

Note 2

Production Cost

Material XA (from part (b))	Shs 1,113,360
Material XB (from part (b))	Shs 81,908
Labour (from part (c))	Shs 621,560
Variable overheads (from part (d))	Shs 227,400
	Shs 2,044,228

Note 3

Closing Inventory	Quantity	Cost	Value
Small Soap	960	Shs 66.80	Shs 64,128
Large Soap	700	Shs90.80	Shs 63,560
Material XA	4,000	Shs 24.00	Shs 96,000
Material XB	10,000	Shs 0.10	Shs 1,000
			Shs 224,688

1.8.7 Preparation of Cash Budget (cash flow statement Budget)

- Cash flow budget is a detailed budget of income and cash expenditure incorporating both revenue and capital items. The cash flow budget should be prepared in the same format in which the actual position is to be presented
- In the cash budget a company estimates all expected cash flows for the budget period by: stating the cash available at the beginning of the period, adding cash from sales and other earned income to arrive at the total cash available, and subtracting the projected disbursements for payables, prepayments, interest and notes payable, income tax
- The cash budget shows the cash flows arising from the operational budgets and the profit and assets structure. It shows cash inflows and cash outflows in given period of time.
- Cash budget is composed of four major sections.
    - The receipts section.
    - The disbursements section
    - The cash excess or deficiency section
    - The financing section
- The cash receipts section consists of a listing of all of the cash inflows, except for financing, expected during the budgeting period. Generally, the major source of receipts will be from sales.
- The disbursement section consists of all cash payment that is planned for the budgeted period. These payments will include raw materials purchases, direct labour payments, manufacturing overhead costs, and so on as contained in their respective budgets. In addition, other cash disbursements such as equipment purchase, dividends, and other cash withdrawals by owners are listed.
- Note non-cash movement will not included in cash budget such depreciation

The cash excess or deficiency section is computed as follows**:**

Total receipts	Xxxx
Less total disbursements	Xxxx
Net cash flow	Xxxx
Add Cash balance beginning	Xxxx
Cash balance at end	Xxxx
Less minimum cash balance (if any)	Xxxx
Excess (deficiency) of cash available over disbursements	Xxxx

- If there is a cash deficiency during any period, the company will need to borrow funds. If there is cash excess during any budgeted period, funds borrowed in previous periods can be repaid or the excess funds can be invested

Illustration 2: Cash Budget

Prepare a cash budget for the three months ending 30th June, 2020 from the information given below:

a

Month	*Sales(*(Shs) '000'	*Materials*(Shs) 000'	*Wages*(Shs) '000'	*Overheads*(Shs) 000'
February	14,000	9,600	3,000	1,700
March	15,000	9,000	3,000	1,900
April	16,000	9,200	3,200	2,000
May	17,000	10,000	3,600	2,200
June	18,000	10,400	4,000	2,300

*b. Credit Terms***:**

Sales/ Debtor - 10% sales are on cash, 50% of the credit sales are collected next month and the balance in the following month.

Creditors	Materials	2 months
	Wages	¼ month
	Overheads	½ month

c. Cash and bank balance on l" April, 2020 is expected to be Shs.6, 000,000

d. Other relevant information is:

(i) Plant and Machinery will be installed in February 2020 at a cost of Shs. 96, 000,000. The monthly installments of Shs. 2, 000,000 is payable from April onwards.

(ii) Dividend @ 5% on Preference Share Capital of Shs.200, 000,000 will be paid on 1st June.
(iii) Advance to be received for sale of vehicles Shs .9, 000,000 in June.
(iv) Dividends from investments amounting to Shs.1, 000,000 are expected to be received in June.
(v) Income-tax (advance) to be paid in June is Shs.2, 000.

Working Notes:
Collection from Sales/ Debtors (Shs '000')

Month	***Calculation***	***April***	***May***	***June***
February	(14,000-10% of 14,000) x 50%	6,300	-	-
March	(15,000-10% of 15,000) x 50%	6,750	6,750	-
April	10% of 16,000	1,600	-	-
	(16,000-10% of 16,000) x 50%	-	7,200	7,200
May	10% of 17,000	-	1,700	-
	(17,000-10% of 17,000) x 50%	-	-	7,650
June	10% of 18,000	-	-	1,800
		14,650	**15,650**	**16,650**

Cash budget for the quarter April - June 2020 (Shs '000')

Particulars	*April*	*May*	*June*	*Total*
1. Balance b/f	6,000	3,950	3,000	6,000
2. Receipts				
Sales (Note 1)	14,650	15,650	16,650	46,950
Dividend	-	-	1,000	1,000
Advanced against	-	-	9,000	9,000
Vehicle				
Total	20,650	19,600	29,650	62,950
3. Payment				
Creditors*	9,600	9,000	9,200	27,800
Wages*	3,150	3,500	3,900	10,550
Overhead*	1,950	2,100	2,250	6,300
Capital Expenditure	2,000	2,000	2,000	6,000
Income tax advance	-	-	2,000	2,000
Total	16,700	16,600	29,350	62,650
4. Balance c/f	3,950	3,000	300	300

* Payments for creditors, wages and overhead have been computed on the same pattern.

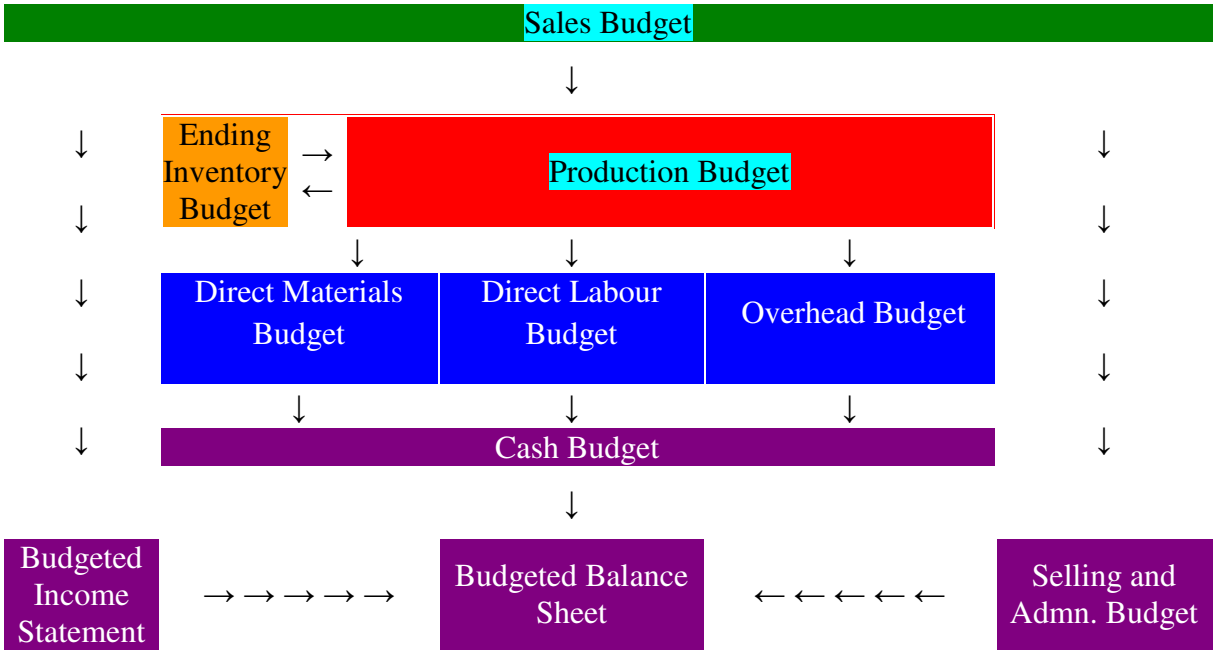
1.8.8 Budgeted Balance Sheet

- The *budgeted balance sheet* contains all of the line items found in a normal balance sheet, except that it is a projection of what the balance sheet will look like during future budget periods.
- It is compiled from a number of supporting calculations, the accuracy of which may vary based on the realism of the inputs to the budget model.
- The budgeted balance sheet is extremely useful for testing whether the projected financial position of the company appears to be reasonable
- It is prepared by adjusting the beginning balances of long-term asset, liability, and stockholders' equity accounts for expected activity during the budgeted period, and identifying balances in current asset and liability accounts at the end of the period.
- Preparing the budgeted balance sheet involves accumulating information from the previous period's balance sheet, the various functional sub-budgets, the cash budget and other accounting records

1.8.9 Preparation of the Master Budget

- Preparation of the master budget is a sequential process that starts with the sales budget.
- The sales budget predicts the number of units a company expects to sell. From this information, a company determines how many units it must produce. Subsequently, it calculates how much it will spend to produce the required number of units. Finally, it uses all this information to estimate its profitability.
- From the level of projected profits, the company decides whether to reinvest the funds in the business or in alternative investments.
- The company outlines the predicted results of its plans in a balance sheet that demonstrates how profits will have affected the company's assets.
- The Basis for Business Decisions notes the five major, sequential steps to preparing a master budget:
  - Preparation of the sales forecast. How many units can be sold? How many units will be sold? How much will it cost to sell these units? How much net revenue will these sales generate?
  - Preparation of the production and operating costs. How much will it cost to produce the units? How can production be more efficient? How much will administrative expenses run?
  - Preparation of a budgeted income statement. What will be the net income? How much will be cash, credit, and no collectible? How much will be available for capital investments? How much will remain as cash for financing daily operations?
  - Preparation of a cash budget. Will cash flow be adequate? Will receipts be evenly or erratically distributed? Will third-party financing be needed? How are excess funds to be invested? How much of the funds will be needed for capital expenditures?
  - Preparation of a budgeted balance sheet. How will the period's performance change the level of assets and liabilities? How will the profit position of the company change? How will the company's wealth be affected?

Figure: 1.1. The Master Budget Interrelationship



1.8.9.1 Advantages of a Master Budget:

- ❑ Master budget is that it can give an idea of where a company wants to go and what it has to do in order to get there.
- ❑ It will also allow the company to realistically project future cash flows which in turn would help in getting certain types of financing.

1.8.9.2 Disadvantages of a Master Budget

- ❑ Master budget include the time involved in producing such a budget. This is primarily the reason a smaller company may not make a master budget if the company has a very small managerial staff

1.8.10 Preparation of Flexible Budget

- ❑ Flexible budget is a budget which recognizing the difference in behaviour between fixed and variable costs in relation to fluctuations in output, turnover, or other variable factors etc. It is designed to change in relation to the level of activity actually attained.
- ❑ A flexible budget is one that takes account of a range of possible volumes It is sometimes referred to as a multi-volume budget. The range of possible outputs may be known as the relevant range.
- ❑ 'Flexing' a budget takes place when the original budget is deliberately amended to take account of change activity levels.

- The flexible budget is based on the fundamental difference in behaviour of fixed costs, variable costs and semi-variable costs.
- Since fixed costs do not vary with short-run fluctuations in activity it can be seen that the flexible budget will really consist of two parts: The first is a fixed budget begin made up of fixed costs and the fixed component of semi-variable costs. The second part is a truly flexible budget that consists solely of variable costs.

Steps in Preparation

The steps involved in preparation of flexible budget are as follows:

- Specify the time period that is used.
- Classify all costs into fixed, variable and semi-variable categories.
- Determine the types of standards that are to be used.
- Analyse cost behaviour patterns in response to past levels of activity.
- Build up the appropriate flexible budget for specified levels of activity.

Illustration 2: of Flexible budget

ABC Ltd. Manufactures a single product for which market demand exists for additional quantity. Present sale of Shs. 60,000 per month utilized only 70% capacity of the plant. Sales Manager assures that with a reduction of 10% in the price he would be in a position to increase the sale by about 25% to 30%

The following data are available:

a) Selling price	Shs. 10 per unit
b) Variable cost	Shs.3 per unit
c) Semi-variable cost	Shs.6,000 fixed plus Shs. 0.50 per unit
d) Fixed cost	Shs.20,000 at present level estimated to be Shs. 24, 000 as 80% output.

You are required to submit the following statements to the Board showing:

(i) The operating profits at 60%, 70% and 80% levels at current selling price and at proposed selling price.

(ii) The percentage increase in the present output which will be required to maintain the present profit margin at the proposed selling price

Statement of Operating Profit at different capacity levels at Current Selling Price

Capacity Levels Product and Sales (units)	*60%* *6,000*	70% 7,000	*80%* *8,000*
Sales (@ Shs. 10) (A)	60,000	70,000	80,000
Costs:			
Variable cost (@ Shs.3)	18,000	21,000	24,000
Semi-variable cost			
Fixed component	6,000	6,000	6,000
Variable component (@ Shs.0.50 per unit)	3,000	3,500	4,000
Fixed cost	20,000	20,000	24,000
Total cost (B)	47,000	50,500	58,000
Profit (A) - (B)	13,000	19,500	22,000

Statement of Operating Profit at different capacity levels at proposed Selling Pric

Capacity Levels	*60%*	*70%*	*80%*
Sales (@ Shs.9)	54,000	63,000	72,000
Less: Total cost	47,000	50,500	58,000
Profit	7,000	12,500	14,000

Calculation of Percentage Increase in present output for desired profit

(Shs. per unit)

Proposed selling price	9.00
Less: Variable cost (Shs.3.00 + Shs.0.50)	3.50
Contribution per unit	5.50

(Shs)

Present Profit		13,000
Add: Fixed cost	(Shs.20,000 + Shs.6,000)	26,000
Desired Contribution		39,000

Required Output

$$= \frac{\text{Desired Contribution}}{\text{Contribution per unit}}$$

$$= \frac{\text{Shs.39,000}}{\textit{Shs.5.50}} = 7{,}091 \textit{ units}$$

Increase in Production required

= 7,091 units - 6,000 units = 1,091 units

Percentage increase over present Output

$$= \frac{1{,}091}{6{,}000} \times 100 = 18.18\%$$

1.8.11 Difficulties of Setting Budget Level

Budgetary targets will assist motivation and appraisal if they are at the right level.

- An **expectations** budget is a budget set at current achievable levels. This is unlikely to motivate managers to improve but may give more accurate forecasts for resource planning, control and performance evaluation.
- An **aspirations** budget is a budget set at a level which exceeds the level currently achieved. This may motivate managers to improve if it is seen as attainable but may also result in an adverse variance if it is too difficult to achieve. This must be managed carefully.

REVIEW QUESTIONS

QUESTION 1

A budgetary planning and control system may include many individual budgets which are integrated into a 'master budget'.

REQUIRED

You are required to evaluate and briefly discuss with reasons the steps which should normally be taken in the preparation of master budgets in a manufacturing company, indicating the main budgets which you think should normally be prepared

QUESTION 2

The preparation of budgets is a lengthy process which requires great care if the ultimate master budget is to be useful for the purposes of management control within an organization.

REQUIRED

(a) To identify and to evaluate briefly the stages involved in the preparation of budgets identifying separately the roles of managers and the budget committee;

(b) To report how the use of spreadsheets may improve the efficiency of the budget preparation process

QUESTION 3

BM Company's master budget, tailored to a level of 1,000 units is shown below

Volume of activity	1,000	
	Shs '000	Shs '000
Sales		70,000
Cost of goods manufactured and sold		
Direct materials	15,000	
Direct labour	10,000	
Variable production overhead	2,500	
Fixed production overhead	5,000	(32,500)
Gross Margin		37,500
General expenses		
Fixed marketing cost	12,550	
Fixed administration cost	13,000	(25,550)
Operating profit		11,950

Actual operating data for 1,200 units were as follows

	Shs '000	Shs '000
Sales		70,000
Cost of goods manufactured and sold		
Direct materials	19,200	
Direct labour	11,400	
Variable production overhead	3,120	
Fixed production overhead	4,500	(38,220)
Gross Margin		31,780
General expenses		
Fixed marketing cost	12,000	
Fixed administration cost	14,000	(26,000)
Operating profit		5,780

REQUIRED

a) Prepare a budgetary control report comparing the planned operating budget with the actual results
b) Prepare a flexible budget
c) Prepare a budgetary control report for performance evaluation

QUESTION 4

BM is a company incorporated in Tanzania and principal business is that of producing and exporting flowers into European countries. The company's products were perceived as the best value in Europe and many orders were expected for the quarter beginning January 2016. However due to economic crisis facing European countries recently threatens the achievement of the anticipated growth in sales.

The company foresees the possibility that the price and demand for the flowers may be negatively impacted by 25% and 10% respectively. These parameters may however, work to the advantage of the product to the same tune if the efforts to improve the economy will be successfully.

Based on the recent market research the management foresees that, there is a need to invest Shs 15,000,000 into a new machine that will exclusively be used to decorate the flowers prior to packaging into boxes ready for export. Consequently, the company has just signed an employment contract with and expert who will be hired at a salary of shs 1,500,000 per month specifically to train the staff on the use of new machine. Termination of the employment contract requires the company to give the employees a three months notice or month's salary in lieu of notice. The following preliminary additional data had been collected in relation to the next budget period. This was prior to economic crisis

Data for the current quarter are given below:

Flowers sold (units)	15,000
Selling price (per unit)	Shs. 25,000
Variable costs (per unit)	(low shs 7,500): (High Shs. 8,000)
Fixed costs	(low shs. 150,000,000): (High shs 200,000,000)

REQUIRED

Using the data above, prepare the worst possible and best possible budget for the company for the first quarter for the year 2016

QUESTION 5

BM wishes to calculate an operating budget for the forthcoming period. Information regarding products, costs and sales level is as follows:

Product	A	B
Materials required		
X (kg)	2	3
Y (litres)	1	4
Labour hours required		
Skilled (hours)	4	2
Semi skilled (hours)	2	5
Sales level (units)	2,000	1,500
Operating inventories (units)	100	200

Ending inventories of materials and finished goods will be sufficient to meet 10% of demand. Beginning inventories of material X was 300 kg and for material Y was 1,000 litres. Material prices are Shs10 per kg for material X and Shs7 per litre for material Y. labour costs are Shs12 per hour for the skilled workers and Shs8 per hour for the semi skilled workers

REQUIRED

Produce the following budgets

(a) Production (units)
(b) Material usage (kg and litres)
(c) Material purchases (kg, litre and Shs) and
(d) Labour (hours and Shs)

QUESTION 6

A division of ABC plc is engaged in the manual assembly finished products BT and BX from bought in components. These products are sold to external customers. The budgeted sales volume and prices for Month 9 are as follows:

Product	Units	Price
BT	34,000	Shs 50.00
BX	58,000	Shs 30.00

Finished goods stockholding budgeted for the end of Month 9, is 1,000 units of BT and 2,000 units of BX, with no inventories at the beginning that month. The purchased components XA and XB are used in the finished products in the quantities shown below. The unit price is for just in time delivery of the components; the company holds no component stocks.

	Component	
Product	XA	XB
BT (per unit)	8 units	4 units
BX (per unit)	4 units	3 units
Price (each)	Shs 1.25	Shs 1.80

The standard direct labour times and labour rates and the budgeted monthly manufacturing overhead costs for the assembly and finishing departments for month 9 are given below:

Product	Assembly	Finishing
BT (per unit)	30 minutes	12 minutes
BX (per unit)	15 minutes	10 minutes
Labour rate (per hour)	Shs 5.00	Shs 6.00
Manufacturing overhead		
Cost for the month	Shs 617,000	Shs 204,000

Every month a predetermined direct labour hour recovery rate is computed in each department for manufacturing overhead and applied to items produced in that month.
The selling overhead of Shs 344,000 per month is applied to products based on a predetermined percentage of the budgeted sales value in each month.

REQUIRED:
(a) Prepare summaries of the following budgets for Month 9:
- (i) Components purchase and usage (units and value)
- (ii) Direct labour (hours and value)
- (i) Departmental manufacturing overhead recovery rates
- (ii) Selling overhead recovery rate
- (iii) Stock value at the month-end

(b) Tabulate the standard unit cost and profit for each BT and BX in Month 9

(c) Prepare a budgeted profit and loss account for Month which clearly incorporates the budgeted values obtained in (a) above
(d) Explain clearly the implications of the company's treatment of manufacturing overheads, i.e. computing a monthly overhead rate, compared to a predetermined overhead rate prepared annually.

QUESTION 7

(a) What is cash budget?

(b) One of the first that have been assigned to you as a new employee of Mwananchi Construction Company is to prepare a cash budget for the period from 1st June 2007 to 30th November 2007

(i) 90% of all sales are credit sales: 80% of the credit sales are collected in the following month, 15% and 4% of credit sales are collected 60 days and 90 days after sale respectively, 1% of the credit sales become bad debts and are never collected.

(ii) Purchase during the month equal to 60% of the following month's estimated sales. Payment for purchases is made in the month following purchase.

(iii) The cash balance as at 1st June 2007 is shs. 1,420,000

(iv) The firm anticipates a delivery of new equipment in September 2007 shs 1,000,000 will be paid upon the delivery

(v) Depreciation expenses averages shs. 150,000 monthly

(vi) Labour costs paid monthly average 10% of the following month's sales

(vii) Rent is shs 100,000 per month. Other cash expenses average 3% of the current month's sales

(i) A quarterly tax payment of shs 500,000 is anticipated in September and December 2007

(ii) The Board of Directors desires to maintain the firm's current dividend policy. A dividend payment of shs. 3,000,000 is scheduled for October 2007

(iii) The company experience sales of shs 3,000,000 in March 2007 and sales of shs 2,000,000 during each of the next two months of 2007.

(iv) The projected sales schedule for the seven month of 2007 are given below

Sales projections for June – December of 2007

June	Shs 3,000,000
July	Shs 5,000,000
August	Shs 5,000,000
September	Shs 6,000,000
October	Shs 3,000,000
November	Shs 2,000,000
December	Shs 2,000,000

REQUIRED

Use the above data to prepare a cash budget

QUESTION 8

(a) Discuss the term Principal budget factor, Say why the principal factor is important in the planning process.

(b) What are the differences between a fixed budget and a flexible budget? In what way are fixed budget and flexible budget useful for planning and control?

QUESTION 9

a) Explain what is a labour budget and also indicate the purpose of preparing this budget

b) Makunganya Company produces three products A, B, and C. In its factory premises at Kiwalani. Each product involves more than one labour operation. The direct labour hour requirement of the three products, are estimated as follows.

Direct labour hours per unit (in minutes)

Operations	Products		
	A	B	C
1	18	42	30
2	-	12	24
3	9	6	-

The factory works 8 hours per day in a week the budget quarter is taken as 13 weeks and during a quarter lost hours due to leave and holidays and other causes is estimated to 124 hours per worker, assuming that there is 6 days in a week.

The budgeted hourly rates for workers manning the operations 1, 2, and 3 are Shs 200/=, Shs 250/= and Shs 300/= respectively.

The budgeted sales of the products during the market July – September 2003 is as follows

Product A 9000 units
B 15,000 units
C 12,000 units

There is a carryover of 5,000 units of product B and 4000 units of product C. it is also proposed to build up a stock at the end of the budget quarter as follows

Product A 1,000 units
C 2,000 units

REQUIRED

Prepare a manpower budget for the company for the quarter July-September 2003 showing for each operation;

a) Direct labour hours
b) Direct labour costs
c) The number of workers needed.

QUESTION 10

The following details have been taken from the books of ABC Company Limited for the year ended 30th June 2020.

	Shs	Shs
Sales		136,080,000
Direct materials	40,000,000	
Direct wages	28,000,000	
Direct expenses	2,000,000	
Factory overheads	14,000,000	
Administration overheads	16,800,000	
Selling overheads	12,600,000	113,400,000
Profit		22,680,000

50% of factory overhead and 60% of selling overheads are analyses as variable. The forecast for the next year ending 30th June 2020 is as follows:-

(i) Sales value will increase by 30% but the selling price will be reduced by 5%

(ii) The prices of raw materials will remain unchanged but because of increased purchases, a quantity discount of 5% will be obtained.

(iii) Variable overheads (selling and factory), direct wages and expenses will increase in proportion of sales volume.

6. Labour costs will be paid in the month in which they are incurred. All other expenses will be paid in the following that in which they are incurred.
7. Fixed expenses are Shs 20,000 per m nth and include Shs 1,800 for depreciation
8. The bank balance at 1st July is Shs 39,000 favourable to the business.

REQUIRED:

(a) A cash budget for KGM for the three month period ending 30th the September showing the balance of cash at the end of each month.

(b) List and explain way in which the preparation of a cash flow budget could be of advantage to the management of KGM limited