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# **UNIT 8     BUDGETING AND REPORTING**

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## **Objectives**

The objectives of this unit is to familiarise you with

- The significance of budgeting as a tool of management control
- Different types of budgets
- Budget setting process
- Operating an effective budgetary control system
- Variance reporting & corrective actions
- Behavioural dimension of budgetary control

## **Structure**

- 8.1 Introduction
- 8.2 Classifications of Budgets for different purposes
- 8.3 Building Blocks of Budgets/Budget Setting Process
  - 8.3.1 Important Considerations
  - 8.3.2 Budget as a Part of Overall Business Plan
  - 8.3.3 Functional Budgets and their Inter-relationships
  - 8.3.4 Master Budgets
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  - 8.5.3 Administration of Budgetary Control System
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  - 8.7.3 Budget Slacks
  - 8.7.4 Problems of Motivation
  - 8.7.5 Behavioural Aspects in Performance Improvement
- 8.8 Summary
- 8.9 Self-Assessment Questions
- 8.10 Further Readings



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## 8.1 INTRODUCTION

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Budgeting and Budgetary control are perhaps the oldest and most popular instruments used in planning as well as monitoring the operations of an enterprise over a short and medium term time-frame. Budgeting and Budgetary Control seek to direct the activities of the enterprise in a certain logical sequence and addresses some basic issues which are essential to the planning and control process:

Objective	:	Where do we want to go?
Diagnosis	:	Where are we?
Prognosis	:	Where are we heading?
Strategies	:	How do we go?
Tactics	:	How do we implement the strategies? How do we make mid-course corrections?
Control	:	How do we monitor our course?

When the same issues are addressed over a long term time-frame, the exercise is called corporate planning or strategic planning.

According to Chartered Institute of Management Accountants, UK (CIMA) Budget is "A plan expressed in money. It is prepared and approved prior to the budget period and may show income, expenditure, and the capital to be employed..."

Plan is the end result of the planning process. A detailed and well-knit plan has two axes: (a) physical and (b) financial. Translation of planned activities for a definite period of time

- i) into physical terms results in programming
- ii) into financial terms results in budgets

However, a good budgeting should subsume programming (i.e. physical dimension) also, even while the focus in budgets is the financial aspect.

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## 8.2 CLASSIFICATION OF BUDGETS FOR DIFFERENT PURPOSES

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Budgets may be classified into different types and looked at from different viewpoints:

- a) Functional or sectional:
  - i) Sales budget
  - ii) selling and distribution cost budget
  - iii) Production budget
  - iv) production cost budget
  - v) purchase budget
  - vi) plant utilisation budget
  - vii) administration cost budget
  - viii) research and development cost budget
  - ix) personnel budget
- b) Consolidated :
  - i) cash budget (to include capital items also)
  - ii) summary budgets



- iii) master budget (containing, inter alia, the budgeted revenue statement and balance sheet)
- c) Expense-behaviour wise :
  - i) fixed budget
  - ii) flexible or multiple budgets
- d) Periodicity :
  - i) basic budget or long term
  - ii) budget current annual budget or annual business plan
  - iii) shorter period budgets (annual budget broken down into quarters or months).
- e) Responsibility-wise :
  - i) Cost Centre Budgets
  - ii) Profit Centre Budgets
  - iii) Revenue Centre Budgets
- f) Emphasis or Approach :
  - i) production-oriented budgets (under sellers' market situation)
  - ii) market-oriented budgets (under buyers' market situation)
- g) Building Block :
  - i) principal budgets (primarily financial and partly quantitative)
  - ii) subsidiary or support budgets (primarily quantitative and partly financial)
- h) Management Style or level of participation : (This classification is of course not very relevant in actual practice)
  - i) authoritative
  - ii) Participative

Very often a judicious blend of many of the above classifications is attempted to obtain the desired results.

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## 8.3 BUILDING BLOCKS OF BUDGETS / BUDGET SETTING PROCESS

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### 8.3.1 Important Considerations

There are certain important issues that need to be examined and sorted out before starting the detailed budget setting exercise. These are briefly discussed below:

- i) **Corporate Objectives:** Companies having systematic and organised long range planning (LRP) process will always have before them such long-term objectives, spelt out clearly and quantified. The companies which do not have a LRP system should also develop a broad outline about its objectives on a long-term basis, at least for two or three years. The objectives should be specially in two respects, growth and profitability. Preferably these should be broken up into present products and lines of activities on the one hand, and proposed new products and new lines of activities on the other.
- ii) **Corporate Profit Planning:** Profit planning and budgeting are not two different things. They are rather interdependent and, more precisely, complementary to each



other; Profit planning should precede the detailed budgeting exercise. Basically, profit planning provides a general blue print of the expected profits and the broad elements through which these can be achieved during a particular budget period. By its very nature it is a summary plan, not backed up by a detailed action plan. From a practical point of view it is always convenient to develop a broad profit plan and get it approved by the top management before a detailed budgeting exercise is taken up. This will obviate confusion and back and forth referrals that are common in a budgeting exercise

iii) **Nature of Markets:** By nature of markets we mean the buyers' market and sellers' market. Rarely it is found that a company is operating exclusively in the buyers' market or sellers' market. If that be so, then the budgeting exercise would be relatively a simple one. More often than not, a company will be found to operate under a combination of these two types of markets - some of its products being in the buyers' market and some others enjoying the privilege of being in the sellers' market. This combination has to be broadly determined since it has a bearing on the marketing budgets.

iv) **Principal Budget Factor:** CIMA defines this as "A factor which will limit the activities of an undertaking and which is taken into account in preparing budgets". This is also called key factor, limiting factor, critical factor or governing factor. It is actually the factor, the extent of whose influence must first be assessed to ensure that the functional budgets are reasonably capable of fulfillment. Limiting factors may be in any of the operational areas, namely sales activity (demand, sales efficiency, warehouse space); plant capacity (machine hour, space, bottlenecks in key process); raw materials (shortage, import restrictions); labour (general shortage, shortage of skilled labour); management (technical know how, efficient and effective executives) and capital (fixed capital, working capital).

Limiting factor may be of an enduring nature or of a purely temporary nature (that is those which may be overcome by suitable management actions). But an adequate consideration of the magnitude or impact of such factors in existence during the budget year is a must in realistic budget-setting.

v) **Sales Forecasting:** Since more often than not sales is the limiting factor, preparation of sales budget is generally the starting point in the budgeting exercise. Sales estimate or sales forecast, is the basis of sales budget. Here is a list of the various factors to be considered in arriving at sales estimate or sales forecast:

**Table 8.1: Sales Estimation Factors**

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1)	Analysis of the past sales to understand the trends of sales and also forecast the future trends.
2)	Demand analysis and market analysis to ascertain market potential, market growth, the company's share of the market, emergence of competition, competitors' strategy, product design, pricing trends, customers habits and preferences, etc.
3)	Analysis of reports by salesman as to expected sales - first hand and fresh from the field reports,
4)	Examination of general business conditions.
5)	Production capacity study (or availability study, in case of a pure trading concern).
6)	Profitability analysis through sales mix planning to ensure that profit objective is fulfilled by the proposed sales forecast.

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Another recent development is Budgeting under Activity Based Costing (ABC). ABC system recommends a more rational method of allocating overheads (based on activity) in contrast to the conventional method of volume-based allocation of overheads. The benefits and advantages of ABC system have been well appreciated in manufacturing as well as other areas. There may be some distinct advantages arising out of the application of ABC principles in budgeting overhead expenses. The procedure involves designing an Activity Matrix in which the resources are listed vertically and the major functions (activities) horizontally. The matrix will show cost per unit of activity which is more realistic than traditional method of overhead allocation and budgeting.

Next is Rolling Budget (continuous budget). In a situation where forecasting economic trend, market conditions etc is extremely difficult, Rolling Budget may be a useful approach. A rolling budget is defined by CIMA as "A budget continuously updated by adding a further period, say a month or quarter and deducting the earliest period". This would be "beneficial where future cost and/or activities cannot be forecast reliably". The inherent advantage of rolling budget is the reduction of element of uncertainty in budgeting under fluctuating economic conditions.

**Zero Base Budgeting (ZBB)** is yet another new development, Peter A Pyhrr, who introduced ZBB in Texas Instruments, defines it as : 'An operating and budgeting process which requires each manager to justify his entire budget request in detail from scratch (hence zero-base) and shifts the burden of proof to each manger to justify why he should spend any money at all. This approach requiresi that all activities be identified in decision packages which will be evaluated by systematic analysis and ranked in order of importance'.

ZBB therefore starts with a basic premise that the budget for the next period is zero and puts the onus on each manager to justify why the money should be spent at all and what would happen if the proposed activity is not carried out and no money is spent. ZBB presupposes that each manager has to undertake a cost benefit analysis for each of the activities under his jurisdiction that are proposed to be taken up in the budget year.

Under conventional budgeting system, budgets are generally arrived at after adding some factors or percentages to the immediate past year's corresponding actual figures of costs and revenues. Sometimes for revenues a little more detailed exercise is carried out but as regards costs, extrapolation of the past figures tends to be the most commonly adopted method. Thus there is a lack of objectivity and perhaps a scope for perpetuating inefficiencies in matters of incurrence of costs that might already have been there in the past. It is in this context that ZBB is a marked departure from the conventional budgeting technique.

ZBB is of course not an altogether new budgeting system. The approach is, by and large, adopted when an enterprise formulates its first budget or a set of budget immediately after a thorough reorganisation and regrouping of its activities. However, barring such experiences for brief periods only, most of the firms continue to frame their budgets on the conventional incremental budgeting method and ZBB cap provide some new insight to them.

### Activity 2

List out the differences between Zero Base Budgeting and Conventional Budgeting.

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Next important area is "**Budgeting Under Uncertainty**". Budgets are prepared in advance in anticipation of market expectations and assumed economic environment that is likely to prevail in the budget period. The budget setting process will recognise the fact that future is uncertain. As such attempts should be made to measure the extent of uncertainty so as to take appropriate precaution to minimise the risks likely to emanate from uncertainty. The methods of analysing uncertainty are :

- a) Rolling budget
- b) Optimistic/pessimistic approach
- c) Sensitivity analysis
- d) Probability analysis

Rolling budget has already been discussed above, Under optimistic/pessimistic approach budget is prepared in three different levels viz :

- Best possible
- Most likely
- Worst possible

These three levels of budgets will enable the management to formulate appropriate strategy for achieving the expected level of performance in terms of turnover, profitability, etc.

**Sensitivity Analysis:** This method measure the responsiveness of profitability to changes of the variables in the budgets. The sensitivity analysis attempts to answer "what if" question by changing the key variables, mostly by using computer,

**Probability Analysis:** Probabilistic budget model is desirable when there are a large number of variables which are subject to uncertainties of varying degrees. By applying the probability factors the outcome of each of these variables can be assessed and decision can be taken accordingly.

**Budgeting with more than one limiting factor:** The starting point of budget formulation is the identification of key factor (limiting factor) and coordination of functional budgets based on this key factor. In case there is one limiting factor the contribution maximisation is possible by making the most profitable use of this key factor (say scarce materials) subject to market constraint. When more than one limiting factor exists the technique of linear programming is used for maximising contribution. Contribution (profit) maximisation, however, is not the only budget preparation criterion. Budget should be realistic, acceptable far the operating managers, and ensure satisfactory profit in relation to the resources used.

### 8.3.2 Budget as a Part of Overall Business Plan

"Budgets are designed to carry out a variety of functions: planning, evaluating performances, coordinating activities, implementing plan, communicating, motivating and authorising actions, The last named role seems to predominate in government budgeting and not for profit budgeting, where budget appropriations serve as authorisations and ceilings for Management actions" (Horngren: Cost Accounting-A Managerial Emphasis).

Many progressive organisations have introduced a Corporate Long Range Planning (CLRP) system with generally a time-horizon of five years. As a part of the system the CLRP document is revised and updated regularly by incorporating necessary changes from time to time. In this context the rolling plan concept has been found to be well-suited to CLRP's. By a suitable system the CLRP exercise, usually preceding the budgeting exercise, may be linked up with the annual budget.



Usually the forecasts under CLRP in the Plan Year I would broadly serve the purpose of the annual budget. There may be even changes between the Plan Year 1 forecasts and the budget estimates. But the reasons for all such changes should be adequately explained, quantified and included in the budget narratives. This will ensure that implementation and monitoring of CLRP is not lost sight of. More precisely this will create a situation whereby a Long Range Corporate Plan gets broken down into Short Range Operational Plans or Business Plans or Budgets, for effective implementation progressively.

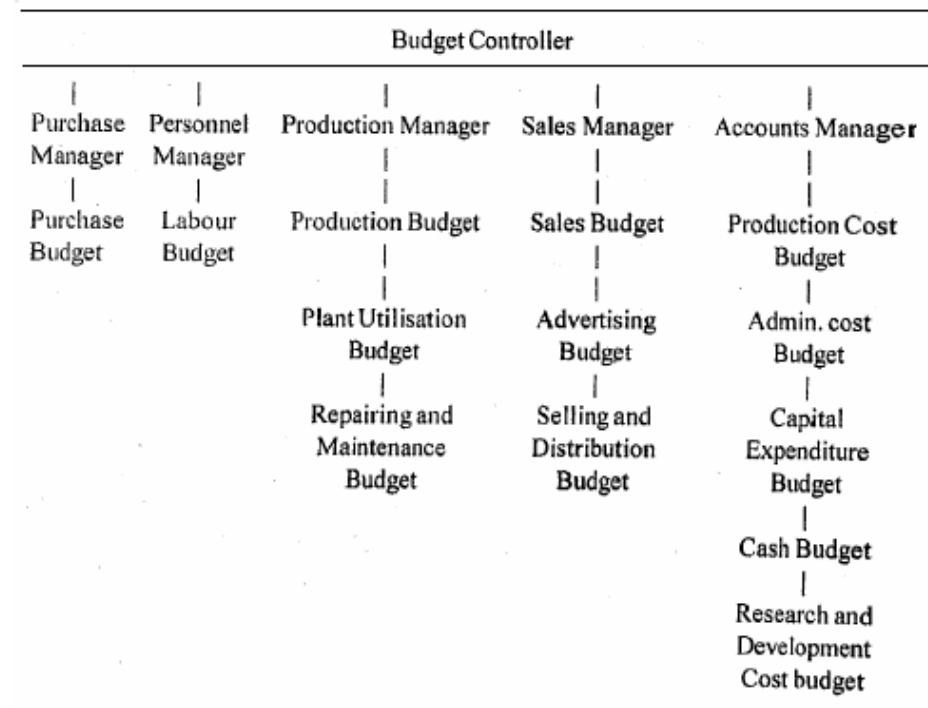
A systematic budgeting process makes the management forward looking. This forward looking approach results in planning as well as setting targets and gives the organisation purpose and direction. Budgeting technique is of immense help in formulating strategies, both long and short term, and action plans for implementing the same.

Budget formulates expected performance (targets) for key personnel to achieve the corporate objectives. The setting of such targets compels the managers to think ahead in the changing environment. This forced thinking is the most important contribution of budgeting to the enterprise performance.

### 8.3.3 Functional Budgets and their Inter-relationship

Functional Budgets are budgets prepared independently by the functional heads. There are several types of functional budgets depending on the size, nature and policy of the concern. Classification of Functional Budgets of a typical concern vis-a-vis the managers responsible for preparing the same will be as under :

**Table 8.2: Functional Budgets and their Inter-relationship**



The relationship indicated above (Budget Controller vis-a-vis all others) are only functional in nature, not of administrative authority.



**Activity 3**



Discuss the role of assumptions and predictions in budgeting.

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A brief discussion on the important functional budgets follows :

**Sales Budget**

The Sales Budget is a forecast of total sales expressed in monetary and quantitative terms. The preparation of this budget is generally the starting point in the operation of the Budgetary Control System. A sales budget may be prepared under the following classification:

- a) Product Groups and/or Products Areas, territories or zones
- b) Areas , territories or zones
- c) Salesmen or agents
- d) Types of customers
  - National Government
  - State Government
  - Export
  - Wholesalers
  - Retailers
- e) Periods - week, month, quarters, etc.

Sales budgets are influenced by a large number of factors, both internal and external, as given below :

**External Factors**

- a) Change in population and in its sex and age group, (demographic factors)
- b) Government Policy and Regulations.
- c) Income distribution of the prospective buyers.
- d) Economic trends.
- e) National and international events.
- f) Extent and severity of competition.
- g) Seasonal and cyclical fluctuations.

**Internal Factors**

- a) Analysis of past sales vis-à-vis- trend analysis.
- b) Demand analysis backed by market research.
- c) Analysis of reports by salesman.
- d) Review of general business condition.
- e) Production capacity - scope for improvement in short/long term.
- f) Profitability analysis through sales mix planning.
- g) Use of promotional aids.



## **Methods of Sales Forecasting**

Basically forecasting the sales of a product depends on its total demand forecasting on the one hand and the present as well projected market share on the other. This exercise needs to be carried out for all major product offerings of the company.

There is a plethora of methods and tools used for demand forecasting. These are summarised below, under logical groupings

### **Financial and Semi-Financial Tools**

- i) Historical analogy method -e.g. demand for steel in India now may be related with that in USA in the 70's
- ii) Corresponding period comparison -e.g. demand for textiles in Oct/Nov' 2001 may be equal to demand for the same in Oct/Nov' 2000 plus a suitable percentage or growth factor

End-users'/buyers' expectation method-e.g. demand for water filtration chemicals in metro cities, particularly during the rainy seasons.

### **Quantitative and Statistical Tools**

- i) Time series analysis including adjustments for seasonal and cyclical variations.
- ii) Trend extension or regression analysis - i.e. trend line fitted into the date for a number of periods in the past.
- iii) Multi-variate analysis
- iv) Exponential Smoothing
- v) Probabilistic models
- vi) Input-Output tables
- vii) Functional models - i.e. establishing a relationship between one dependent variable with one or more independent variable(s)
- viii) Linking factor-e.g. demand for spare parts may be linked with the population of the equipment, using an estimated "factor" or percentage.
- ix) Establishing lead-lag relationship-e.g. heavy order bookings of capital goods is an advance indicator of economic prosperity
- x) Technology Forecasting (TF) - particularly for products highly susceptible to technological obsolescence.

### **Qualitative Method**

- i) Opinions from experts
- ii) Brain-storming
- iii) Delphi Technique
- iv) Scenarios building

Field Survey (primary data)

- i) Questionnaire-based survey of representative samples, established preferably by Stratified Random Sampling Technique
- ii) Bridging factor used in (i) above for estimating universe/population from samples
- iii) Test Marketing.

**Literature Survey** (secondary sourced) :

Through a judicious blend of some of the above-mentioned techniques sales forecasting exercise is to be completed first. Thereafter by applying the projected market share ratio the company's forecasted sales figures should be determined separately for each product or product-group.

**Selling and Distribution Budget**

This budget which is closely related to the Sales budget is the forecast of selling and distribution cost in the budget period.

**Advertising Cost Budget**

This budget is also dependent on the Sales Budget in as much as this has to take into account the likely increase in demand as a result of advertising or the advertising (promotional) cost needed for sustaining the budgeted sales.

**Production Budget**

The production budget is a forecast of production in the budget period analysed into production volume budget and in physical units and the production cost budget. Broad factors usually considered are :

- a) Production planning
- b) Capacity consideration
- c) Sales budget
- d) Inventory policy i.e. the extent to which inventory of finished goods is to be carried.

**Plant Utilisation Budget**

The budget covers the estimating plant facilities required to meet the budgeted production as set out in the production budget. The budget shows:

- a) budgeted machine load
- b) Bottleneck machinery
- c) Need for overtime work, sub-contracting and shift working in short term and addition of facilities in the long run.

**Repairs and Maintenance Budget**

Maintenance cost budget which is closely related to Plant Utilisation budget is prepared in three parts :

- a) Preventive maintenance
- b) Corrective maintenance
- c) Major overhauling

**Personnel Budget**

This budget shows in financial as well as in physical terms the type of labour required - skilled, semi-skilled, highly skilled, etc. to meet the programme set out in the production budget. Impact of Learning Curve should be given due weightage in formulating this budget.



### Purchase Budget

The budget represents the purchases including capital items to be made during the budget period. The budget is usually based upon:

- a) Production budget
- b) Capital expenditure budget
- c) Research and development budget
- d) Policy of sub-contracting
- e) Stock levels in respect of "A" class items
- f) Finance available
- g) Storage space available Production Cost Budget

### Production Cost Budget

This budget is analysed into three subsidiary budgets viz :

- a) Material cost budget
- b) Labour cost budget
- c) Factory overhead budget

### Administration Cost Budget

This budget will show the total estimated cost of formulating the policy, directing and controlling the operations of the undertaking. The budget is almost of a fixed nature.

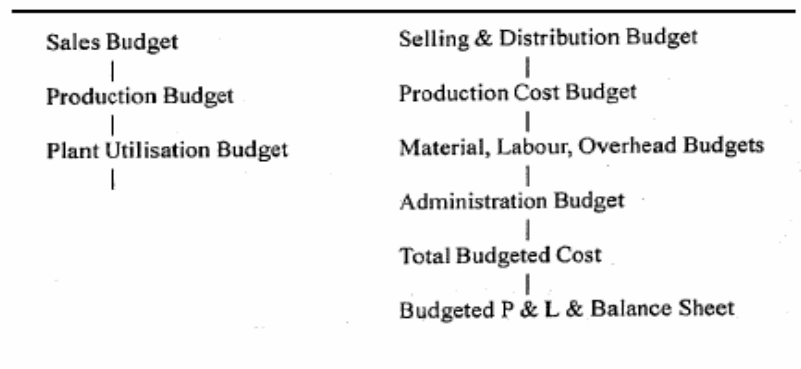
### Research and Development Cost Budget

This budget is considered from both the long and short term view-points and provides an effective tool for planning and balancing the research and development programme. This budget is dependent on the R&D policy, Product Life Cycle and of course the permissible financial resources.

### Inter-relationship of Functional Budgets:

Since the functional budgets are inter-related, change in any of the functional budgets will generate chain reaction as evident from the following diagram :

**Table 8.3: Inter-relationship of Functional Budgets**



Of course Cash Budget will be affected by a change in any functional budget.

**Activity 4**



- a) Describe a typical organization's process of budget preparation.

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- b) Explain the concept of activity based budgeting and the benefits it brings to the budgeting process:

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**Illustration 1 : Functional Budgets**

Balance Sheet			
as on 31st December, 19X2			
Liabilities	Rs.	Assets	Rs.
Share capital	2, 00,000	Fixed assets (written down)	2, 00,000
Reserves & surplus	19,000	Stock of materials	20,000
Sundry creditors	20,000	Sundry debtors	29,000
Provisions:		Cash	25,000
Tax	23,000		
Dividend	12,000		
	Rs. 2, 74,000		Rs. 2, 74,000

With the help of the following additional information, you are required to prepare a Forecast Profit and Loss Account for the year 19X3 and a Forecast Balance Sheet as on 31st December 19X3.

	Present (19X2)	Future (19X3)
i) Capacity utilised	60%	80%
Units produced	60,000	
Sales price per unit	Rs. 2.10	Rs. 2.30
Material	36,000	Price increase of 25% expected
Wages	12,000	10% increase in rates expected
Manufacturing overheads (Variable + Fixed)	4,200 + 3,000	10% increase in costs expected
Administration overheads	4,000	5% increase in costs expected
Selling & distribution overheads (Variable + Fixed)	6,000 + 2,000	10% increase in costs expected
Capital expenditure		Rs. 60,000
Depreciation		Rs. 3,000 per year
Income Tax		Rs. 50,000
Dividend		Rs. 20,000



- ii) Period allowed : To debtors - one month  
By creditors - two months

Stock of raw materials maintained - 3 months' requirement

Time lag in payment of wages and expenses being insignificant may be ignored.

- iii) There, is not stock of finished goods at the year end.

**Solution**

Sales budget:

Units =  $80/60 \times 60,000 = 80,000$  at Rs.2.30

Sale value = Rs. 1, 84,000

Purchase budget (Materials) :	Rs.
Consumption during 19X2	36,000
Add $33\frac{1}{3}$ % for increase in capacity	<u>12,000</u>
	48,000
Add 3 months stock to be held	<u>12,000</u>
	60,000
Less Opening Stock	<u>20,000</u>
	40,000
Price increase of 25%	<u>10,000</u>
Total requirement	Rs. <u>50,000</u>

Consumption during 19X3:

Opening stock	20,000
Add Purchase	50,000
Less closing stock	<u>15,000</u>
	Rs. <u>55,000</u>

$$\left( 12,000 \times \frac{125}{100} \right)$$

Wages budget:	Rs
Wages paid in 19X2	12,000
Add $33\frac{1}{3}$ % for capacity increase	<u>4,000</u>
	16,000
Add 10% for rate increase	<u>1,600</u>
	<u>17,600</u>

Overhead budget:

Manufacturing Overheads:

<u>Variable expenses</u>	4,200
Add $33\frac{1}{3}$ % for volume increase	<u>1,400</u>
	5,600



Add 10% for the cost increase	<u>560</u>
	<u>6,160</u>
<u>Fixed expenses</u>	3,000
Add 10% for cost increase	<u>300</u>
	<u>3300</u>
Depreciation	3,000
Administration Overheads:	
Expenditure during 19X2	4,000
Add 5% for cost increase	200
	4,200
Selling and Distribution Overheads:	
Variable expenses	6,000
Add 33) % for volume increase	2,000
	8,000
Add 10% for cost increase	800
	Rs. 8,800
Fixed expenses .	2,000
Add 10% for cost increase	200
	Rs. 2,200

<b>Cash Budget:</b>		<b>Rs.</b>
<b>Receipts:</b>		
Opening Balance		25,000
Debtors (Sales)		
Opening Balance	29,000	
Sales	1,84,000	
Less Closing Balance	<u>15,333</u>	<u>1,97,667</u>
$\left(\frac{1}{12} \times 1,84,000\right)$		Rs. <u>2,22,667</u>
<b>Less Payments:</b>		
Creditors (Purchases)		
Opening balance	20,000	
Purchases	50,000	
Less Closing balance	<u>8,333</u>	61,667
$\left(\frac{2}{12} \times 50,000\right)$		
Wages		17,600
Overheads:		
Manufacturing		9,460
Administration		4,200
Selling and distribution		11,000
Income Tax		23,000
Dividend		12,000
Capital expenditure		<u>60,000</u>
		Rs. 1,98,927
Closing Balance		23,740



**FORECAST PROFIT AND LOSS ACCOUNT**  
**FOR THE YEAR ENDING 31ST DECEMBER, 19X3**

Dr.	Rs.	Cr.	Rs.
To Materials consumed	55,000	By Sales	1,84,000
To Wages	17,600		
To Manufacturing overheads			
Variable expenses	6,160		
Fixed expenses	3,300		
Depreciation	3,000		
To Administration overheads	4,200		
To Selling & Distribution overheads:			
Variable expenses	8,800		
Fixed expenses	2,200		
To Net Profit	83,740		
	1,84,000		1,84,000
To Income Tax	50,000	By Net Profit	83,740
To Dividend	20,000		
To Balance c/d	13,740		
	83,740		83,740

**FORECAST BALANCE SHEET**  
**AS ON 31ST DECEMBER, 19X3**

Liabilities		Assets	
	Rs		Rs
Share Capital	2,00,000	Fixed Assets	
Reserves and Surplus		Opening value	2,00,000
Balance	19,000	less depreciation	3,000
Profit this year	<u>13,740</u>	Addition	6,000
Sundry Creditors	8,333	Closing Stock (mat.)	15,000
Provisions:		Sundry Debtor	15,333
Tax	50,000	Cash	23,740
Dividend	20,000		
	3,11,073		3,11,073





The following data relate to Product P

**Budgeted Data**

	1st October to 31st December 19X1			1st January to 31st March 19X2		
	1	2	3	1	2	3
Sales division						
Sales of P Rs.	54,000	3,42,000	2,28,000	60,000	3,60,000	2,40,000
Stocks of P:						
Opening Unit	90	320	260	100	350	250
Maximum units	150	500	350	150	500	350

Sales and production occur evenly each months during each budget quarter. Debtors pay for sales in the month following that when sales occur. Creditors are paid for materials in the second month following that when purchases occur.

On an average, overhead incurred is paid for within the month following that in which incurred.

Wages are paid in the same month as earned.

Cash balance on 31st December, 19X1 Rs. (18,000).

Corporation tax of Rs. 50,000 is payable in January 19X2.

Special advertising campaign expenditure of Rs. 60,000 is due in March 19X2.

**Standard Cost Data**

Direct Materials	DM1	10 kgs @ Rs. 3 per kg.
	DM2	5 kgs @ Rs. 2 per kg.
Direct Wages	DW1	5 hours @ Rs. 4 per hour
	DW2	2 hours @ Rs. 5 per hour

Production overhead is absorbed as a labour hour rate i.e. Rs. 12 in respect of DW1 and Rs. 10 in respect of DW2.

Administration and selling overhead is recovered at 20% of production cost.

Profit is calculated at 10% of selling price.

**Direct Material Data**

	Materials	
	DM1	DM2
Maximum consumption per week (kg)	3,600	1,800
Minimum consumption per week (kg)	2,400	1,200
Reorder quantity (kg)	20,000	12,000
Stock at 30th September, 19X1 (kg)	24,500	13,650
Stock at 31st December, 19X1 (kg)	23,000	14,400
Lead time from suppliers (weeks):	6	5
Maximum		
Minimum	4	3

A major sales campaign is planned in the budget period beginning 1st April, 19X2. In





For DM1 =  $3600 \times 6$  = 21,600

For DM2 =  $1800 \times 5$  = 9,000

Minimum usage in reorder period is :

For DM1 =  $2400 \times 4$  = 9,600

For DM2 =  $1200 \times 3$  = 3,600

Therefore, Maximum level based on the formula given above

DMI 21,600 + 20,000 - 9,600 = 32,000

DM2 9,000 + 12,000 - 3,600 = 17,400

		DM1	DM2
Desired stock		32,000	17,400
Production	$3,600 \times 10$	36,000	$3600 \times 5$ 18000
		68,000	35,400,
Less : Opening stock		23,000	14,400
		45,000 kg.	21,000 kg.,
Price per kg		Rs. 3	Rs. 2
		1,35,000	42,000
Total Purchase Budget		Rs. 1,77,000	

### c) Production cost for 3,600 units

Material	Rs.	Rs.
DM1 $3,600 \times \text{Rs.}30$	1,08,000	
DM2 $3,600 \times \text{Rs.}10$	<u>36,000</u>	1,44,000
Labour	72,000	
DWI $3,600 \times \text{Rs.}20$	<u>36,000</u>	1,08,000
DWI $3,600 \times \text{Rs.}10$	2,16,000	
Overhead	<u>72,000</u>	
POI $3,600 \times 60$		2,88,000
P02 $3,600 \times 20$		5,40,000

	Cash for each of three months		
	Jan.	Feb.	Mar.
Opening Balance	(18,000)	(21,000)	(26,000)
Received from Sales:			
1/3rd of Rs. 6,24,000	2,08,000		
1/3rd of Rs. 6,60,000		2,20,000	
1/3rd of Rs. 6,60,000			2,20,000
	<u>1,90,000</u>	<u>1,99,000</u>	2,46,000
Payments:			
Direct Material			
(Refer to Note 1)	41,000	41,000	59,000
U.			
Direct wages	36,000	36,000	36,000
$1/3(3,600 \times 30)$			
Production overhead	84,000	96,000	96,000



(Note 2)			
Corporate tax	50,000	-	-
Special advertising	-	-	<u>60,000</u>
	<u>2,11,000</u>	<u>1,73,000</u>	<u>2,51,000</u>
Balance carried forward	(21,000)	(26,000)	(5,000)

Note 1. Production in Dec. quarter

Sales in Division 1	54,000		
Sales in Division 2	3,42,000		
Sales in Division 3	2,28,000		
	6,24,000/200		
	= 3,120 Units		
Sales		3,120 Units	
Add: Closing Stock(100+350+250)	<u>700</u>		
	3,820		

	3820		
Less: opening stock			
(90+320+260)	670		
Production	3,150		
3,150 units*10	31,500	3150*5	15,750
+closing stock	23,000		14,400
-opening stock	(24,500)		(13,650)
	30,000		16,500
	*Rs 3		*Rs2
	Rs.90,000		Rs.33,000

Rs :1,23,000 for quarter / 3 = Rs. 41,000 for Jan. and Feb.

Purchase Budget for March quarter = Rs. 1,77,000 / 3 = Rs. 59,000 March

Note 2

Production Overhead

For first quarter ... 3,150 units x Rs. 80

Rs. 2,52,000 / 3 = Rs. 84,000 for Jan.

Production overhead for second quarter

= 3,600 X Rs. 80 = Rs. 2,88,000 / 3 = Rs. 96,000 for Feb. and March

**Illustration 3 : Functional Budgets**

XYZ Ltd. manufactures two products B and T. It is going to prepare its budget for the year ending 31st December 19XX. Expectations for 19XX include the following :

a)	Opening Balances	Rs.	Rs.
	Land	20,000	
	Buildings and plant	1,50,000	
	Cumulative depreciation	(60,000)	
	Current Assets :		1,10,000
	Stocks : Raw Materials	3,000..	
	Finished Goods : B	3,400	
	T	7,200	
		13,600	
	Debtors	45,000	
	Cash/Bank	10,000	
		68,600	
Less : Current Liabilities			
	Creditors	29,000	
	Taxation	28,000	
		57,000	11,600
			1,21,600
	Liabilities: Represented by Share Capital	71,600	
	Retentions	50,000	1,21,600
b).	Finished Products	B	T
	Budgeted Sales (units)	5,000	1,000
	Budgeted selling price (per unit)	Rs. 30	Rs. 50
	Opening Stock of finished goods (in units)	200	300
	Budgeted closing stock (in units)	1,200	200
i)	Direct Materials	P	Q
	Raw Material per unit of production		
	B	5 kg.	3 kg.
	T	2. kg.	4 kg.
	Opening stock of Raw materials	2000 kg.	2000 kg.
	Budgeted closing stocks ,	2500 kg.	1500 kg.
	Cost per kg. of material purchased	Rs. 0.50	Rs.1.00

## ii) Direct Labour:

Labour is paid at the rate of Rs. 2 per hour. 3 direct, IO, bour hours are required to product one unit of 3 and 5 Tabour hours are required for one unit of T.

## iii) Factory Overheads:

It has been estimated that factory overheads will be Rs. 33,750 including, Rs. 11,750 for depreciation. Factory overheads are absorbed on a direct labour hour basis.

## iv) Work in progress:

This is negligible and can be ignored (i.e. no opening or closing stocks)



- c) Administration Overheads  
These are estimated to be Rs. 11,625. They are charged to goods leaving work in progress and entering finished goods stocks and are absorbed as a percentage of factory cost.
- d) Selling and Distribution Overheads.  
These are estimated to be Rs. 20,000. They are charged to the cost of sales on the basis of a percentage of the selling price.
- e) Stock Pricing  
Goods are priced on a FIFO basis. Opening stock of raw materials are 2000 kg. of P at Rs. 0.50 (Rs. 1,000) and 2,000 kg. of Q at Rs. 1 (Rs. 2,000).
- f) Taxation in 19XX is estimated at Rs. 30,000. Overdraft Interest in 19XX is expected to be Rs. 595, Rs. 500 of which will be paid during the third quarter of the year.
- You are required to prepare the following budgets for 19XX for XYZ Ltd. using absorption costing methods.
- i) Sales budget;
  - ii) Production budget (quantities only);
  - iii) Direct Materials budget (usage and purchases);
  - iv) Direct Labour budget;
  - v) Overhead absorption rate;
  - vi) Closing stock budget;
  - vii) Cost of goods sold budget;
  - viii) Budgeted Profit and Loss Account.

**Solution**

a) Products	Budgeted Sales Quantity	Selling price	Sales
B	5,000	Rs. 30	Rs. 1,50,000
T	1,000	Rs. 50	Rs. 50,000
			Rs. 2,00,000
b)	Production (Quantities)	B	T
	Sales (in Unit)	5,000	1,000
	Add: Closing Stock	1,200	200
		6,200	1,200
	Less: Opening Stock	200	300
	Production required	6,000	900
c)	Direct Materials Budget	P	Q
i)	Quantity required for Units produced		
	(6,000 x 5 kg.)	30,000	
	(900 x 2 kg.)	1,800	
	(6,000 x 3 kg.)		18,000
	(900 x 4 kg.)		3,600
		31,800	21,600



Add: Closing Stock	<u>2500</u>	<u>1500</u>
	34,300	23,100
Less: Opening Stock	<u>2,000</u>	<u>2,000</u>
Materials required (in kg.)	<u>32,300</u>	<u>21,100</u>
Cost per kg.	Rs. 0.50	Rs. 1.00
Total	Rs. 16,150	Rs. 21,100



Total Material Cost as per Budget = Rs. 37,250

(Rs. 16,150 + Rs. 21,100)

d) Direct Labour Budget

Product	Production	L. Hrs	Total hrs.	Rate	Labour
	in units	reqd.	reqd.		cost
B	6,000	3	18,000	Rs. 2	Rs. 36,000
T	900	5	<u>4,500</u>	Rs. 2	<u>Rs. 9,000</u>
			<u>22,500</u>		<u>45,000</u>

e) i) Overhead Absorption Rate

Budgeted Factory O.H. Rs. 33,750

Budgeted Hours 22,500

Budgeted Factory O. Rate = Rs. 1.5 per labour hour

ii) Factory Cost of goods produced

Direct Material	B		T
P(6,000 x 5 kg. x 0.50)	Rs. 15,000	(900 x 2 x 0.50)	Rs.900
Q (6,000 x 3 kg. x 1.00)	Rs. <u>18,000</u>	Rs. (900 x 4 x 1.00)	Rs. <u>3600</u>
Direct Material	33,000		4,500
Direct Labour	36,000		9,000
Factory O.H. 18,000 x 1.5	<u>27,000</u>	4,500 x 1.5	<u>6,750</u>
Factory cost of goods sold	Rs. 96,000		Rs. 20,250

iii) Administration Overhead

Estimated Factory Cost

(Rs. 96,000 + Rs. 20,250)

Therefore, Adm. O.H. is 10% of factory cost

Adm. O.H. for Product T(10% of Rs. 96,000) = Rs. 9,600

Adm. O.H. for Product T(10% of Rs. 20,250) =Rs. 2,025

Rs. 11,625

iv) Selling and Distribution Overhead



Opening Stock (2,000 kg. x 0.50) = Rs. 1,000	(2,000 kg. x 1.00)	= Rs. 2,000
Purchases	$(32,3000 \times 0.50)$ = Rs. 16,150	$(21,100 \times 1.00)$ = Rs. 21,100
	34,300 kg.	17,150 23,100 23,100
Less : Consumption		
	$(31,800 \times 0.50)$	15,900 $(21,600 \times 1.00)$ = 21,600
	<u>2,500 kg.</u>	<u>1,250</u> <u>1,500 kg.</u> <u>1,500</u>

ii)	Finished Goods	B	T
	Factory cost of production	Rs. 96,000	Rs. 20,250
	Add: Adm. overhead	Rs. 9,600	Rs. 2,025
		1,05,600	22,275
	Units Finished	6,000	900
	Cost per unit	Rs. 17.60	Rs. 24.75

Statement showing Cost of Closing Stock of Finished Goods

	Products		
	Units	Amount	Amount
Opening Stock	200	Rs. 3,400	Rs. 7,200
Addition	6,000	1,05,600	22,275
	6,200	1,09,000	29,475
Less Cost of finished goods sold,			
From Opening Stock	(200)	(3,400)	7,200)
Fresh units introduced & completed (4,800)*			
4,800 x Rs. 24.75			
Closing Stock	1,200	21,120	4,950

\* Units Completed during the year - Opening stock (FIFO method is used)

B

	Units	Amount	Units	Amount
From Opening Stock	200	Rs. 3,400	300	Rs. 7,200
Units introduced	4,800	84,480	700	17,328
finished & sold	-	-	-	-
Cost of finishing the goods sold 5,000		87,800	1000	24,525
Selling & Dist. Overhead		15,000		5,000
Cost of Goods sold		1,02,880		29,525

(i) Budgeted P and L A/c

	B	T	Total
Sales	Rs. 1,50,000	Rs. 50,000	Rs. 2,00,000
Less: Cost of sales	1,02,880	29,525	1,21,405
Profit before tax and interest			67,595
Less: Interest			595
Profit before tax			67,000
Tax			30,000
Profit after Tax (PAT)			37,000





### 8.3.4 Master Budgets

#### Introduction

Once the functional budgets are prepared and as such budgets are available, the Budget Controller's office will have to engage itself in the next very important task which is preparation of the Master Budget. This comprises summarisation and consolidation of all functional budgets, preparation of the cash budget and developing the profit and loss budget and the budgeted balance sheet. The summary budgets thus prepared are again reviewed, reconsidered and readjusted until an overall satisfactory budget is drafted.

This budget is then submitted to the top management for acceptance. Only after such acceptance this set of budgets will be called Master Budget. Master Budget essentially means a finally approved comprehensive set of documents covering all budgeting activities with respect to the budget year.

The said document is also termed 'Budget Package'. It is in the fitness of things to obtain a good number of the Budget Package printed and circulate the same among all concerned departmental heads and other senior executives before the budget year starts. This will also serve the purpose of communication which is an essential requirement in the planning process.

#### Cash Budget

A cash budget is a forecast of cash position over a period of time, to reflect changes in the position within the same period. Conventionally, cash budget is considered to be an integral part of the total budgeting process and it is prepared only after all sectional or functional budgets are available. However, to install better control on cash flow, the scope of operation of cash budgets can be expanded to cover each function or sub-unit separately and to develop a rolling cash flow plan for each sub-unit as well as the company as a unit. A format for such rolling plan is included, vide Illustration 4. If a company adopts, say, a 12 month rolling plan, every month the figures in the format will be up-dated to cover the subsequent twelve months. For the purpose of effective control, budget-actual comparison pertaining to the immediate previous month has also been shown in the format.

#### Illustration 4 : Cash Budget (Format)

##### CASH BUDGET (FORMAT)

##### (Under Rolling Period Basis)

Period .....

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Budget Actual Comparison

Month - 1

Budget	Actual	Item	Month 1	Month 2	Month 3
--------	--------	------	------------	------------	------------

A. Sales Receipts:

- 1) Cash sales and advances
- 2) Sundry debtors collected
- 3) Cash subsidies, rebates, etc.

---

**Total of A**

---

B. Operating Disbursements :



- 1) Cash purchases and advances
- 2) Sundry creditors paid
- 3) Wages, salaries, PF, bonus etc.
- 4) Rents, electricity, rates, insurance etc.
- 5) Selling expenses<sup>0</sup>
- 6) Administration expenses
- 7) Income tax

---

**Total of B**

---

- C. Cash flow through operations  
(difference between A & B)
- D. Miscellaneous receipts (rents,  
dividends, royalties, etc.)

---

**Total of C&D**

---

- E. Capital Receipts
- 1) Debenture issue
  - 2) Terms loans
  - 3) Issue of share capital
  - 4) Sale of assets

---

**Total of E**

---

- F. Non-operating Disbursements
- 1) Interest & Financial costs
  - 2) Donations
  - 3) Dividends
  - 4) Capital expenditure
  - 5) Debt Redemption

---

**Total of F**

---

- G. Net Cash flow (C+D+E+F)
- H. Add. Cash balance:  
beginning of month
- I. Cash position
- J. Less: Minimum cash balance required
- K. Bank loan position  
(increase / decrease)
- L. Cumulative bank loan position  
Drawing power

The above method is known as Receipts & Payments method of Cash Budgeting.



There are two other methods of preparing Cash Budget viz.

- a) Adjusted P/L Method
- b) Balance Sheet Method

**a) Adjusted Profit and Loss Method**

Under the Receipts and Payments Method (as given in Illustration 6.) all the transactions relating to receipts and payments of cash are taken into consideration, while this method is based mainly on non-cash transactions. The theory has an underlying assumption that profit will be equivalent to cash, or, in other words, the earning of profit brings equal amount of cash into the business, This also leads to another assumption that the business will remain static. That is, there will not be wearing out or expansion of assets: debtors, stock etc. balances will remain unchanged, so that total cash available for distribution would be equal to the profit earned. But, in practice, business does not remain stationary so that an adjustment will have to be made in respect of many items like fluctuations of stock, appropriation of profit, provisions, accruals, etc. Illustration 3 may now be referred to.

**b) Balance Sheet Method**

Under this method, a budgeted Balance Sheet for the budget period showing all items excluding cash is prepared. The balancing figure in the Balance Sheet is represented by cash. Therefore, if the liabilities side is larger than the asset side, this would represent a balance at the bank and if the asset side is larger than the liabilities side, this would mean that cash will be overdrawn or adjustments will have to be made before the Cash Budget is finalised. This has been shown in Illustration no. 5.

**Illustration 5 : Format of Cash Flow Analysis**

The mode of preparation of cash budgets under this method will be evident from the standard format given here :

CASH FLOW STATEMENT (FORMAT)

Period.....	Rs.	Rs.
Opening Cash Balance		
Add ('Generation' of cash)		
i) Adjusted net Profit:		
Net Profit for the period		
Add (less)		
• Depreciation written off		
• Provisions		
• Accrued expenses (accrued income),		
• Write-offs		
ii) Decrease in current assets		
iii) Increase in current liabilities		
(including bank borrowings)		
iv) Receipts from other sources		
• Issue of share capital		
• Issue of debentures		
• Term Loans		
• Sale of Plant & Machinery		
• Investment		
Total of Cash (A)		



Deduct (Consumption' of cash):

- i) Increase in current assets
- ii) Decrease in current liabilities
- iii) Prepayments
- iv) Other payments
  - Capital expenditures Repayment of loans
  - Payment of taxes
  - Payment of dividends

Total Deduction \_\_\_\_\_

CLOSING CASH BALANCE (A-B) \_\_\_\_\_

**Illustration 6 ;** Cash Budget (Receipts & Payments Method)

Required from the following Information a monthly cash budget for the fourth quarter ending 31st December:

1) Extracts from Sectional Budgets (Figures in Rs. million)

Month	Sales	Materials	Wages	*Production overheads	Admn. & Selling overheads
	Rs.	Rs.	Rs,	Rs.	Rs.
June	60	36	13	4.5	3.2
July	65	40	15	4.5	3.2
August	70	48	15	5.0	3.6
September	75	45	15	6.0	3.5
October	80	46	16	6.0	4.0
November	85	50	18	7.0	4.0
December	90	52	20	7.0	4.5

2) Credit terms:

Sales - three months to debtors; 10 per cent of sales are on cash. On an average 50 per cent of credit sales are paid on due dates and the balances in the following month Creditors (Materials) - two months

3) Lag in payment:

Wages quarter month, Overheads - half month

4) Cash and bank balance on 1st October is estimated to be Rs. 30 million.

5) Other Information:

- i) Plant and machinery to be installed in August at a cost of Rs. 480 million will be paid for by monthly installments of Rs. '10 million from 1st October.
- ii) Preference dividend @ 5 per cent on capital of Rs.' 100 million payable in December:
- iii) Call on 50,000 equity shares @ Rs. 20 each receivable in November.
- iv) Dividends (from investments) of Rs. 5 million receivable in December.
- v) Income-tax (advance) payable in December, Rs. 10 million.

**Solution:****CASH BUDGET**

Period ending 31st December

(Rs. in million)

Details	October	November	December
Balance b/d	30.00	10.75	7.0
Receipts			
Sales	64.25	69.25	74.25
Call on shares	-	10.00	-
Dividends	-	-	5.00
Total (X)	94.25	90.00	86.25
Payments:			
Creditors (materials)	48.00	45.00	46.00
Wages	15.75	17.50	19.50
Overhead production	6.00	6.50	7.00
Overhead - admin. and selling	3.75	4.00	4.25
Preference dividend	-	-	5.00
Income tax	-	-	10.00
Plant and machinery	10.00	10.00	10.00
Total (Y)	83.50	83.00	101.75
Balance c/d (X-Y)	10.75	7.00	(15.50)

## Notes:

- i) The balance of Rs. 15.50 million at end-December indicates overdraft.
- ii) Closing balance of October becomes the opening balance of November, and so on.
- iii) Wages for October would be one-fourth of September wages plus three-fourths of October wages. Similar would be the treatment for November and December.
- iv) Overheads for October would be half of September overheads plus half of October overheads. Similar would be the treatment for November and December.
- v) Receipts from sales are found out as under:

**COLLECTIONS**

(Rs. in million)

Month	Sales	October	November	December
June	60	27.00		
July	65	29.25	29.25	
August	70		31.50	31.50
September	75			33.75
October	80	8.00		
November.	85		8.50	
December	90			9.00
Total		64.25	69.25	74.25



## Summary Budgets

The Master Budget has been defined as the Summary Budget which incorporates its component functional budgets and which is finally approved and adopted. A Summary Budget has been defined as a budget which is prepared from and summarises all the functional budgets. In short, when all the functional budgets are prepared, they can be summarised to produce:

- i) Budgeted Revenue Statement or Profit and Loss Account
- ii) Budgeted Balanced Sheet.

A master budget is thus an overall business plan and is akin to familiar financial statements. The major technical difference is that here one is dealing with expected future data rather than with historical data.

### **Budgeted Revenue Statement or Profit and Loss Account:**

The Profit and Loss Account is built up from the other budgets already set, and no fresh estimates are necessary. The budgeted cost of production is deducted from the budgeted sales revenue in order to arrive at the budgeted gross profit, The operating profit is obtained by deducting from the budgeted gross profit all budgeted non-production overheads that is, Administrative, Selling and Distribution overheads, Addition and subtraction of other budgeted non-operational income and expenditure items give the budgeted net profit:

The advantages of a Budget Profit and Loss Account are as follows :

- a) It presents a projected profit position - overall as well as stagewise - of the concern.
- b) It enables the planning and control of the profits of the unit,
- c) It facilitates investigation into the causes for variances in profit.
- d) It ensures and cross checks the consistency and matching between all the functional budgets.

### **Budgeted Balance Sheet**

The preparation of Budgeted Balance Sheet also is simple. This is prepared on the basis of the last Balance Sheet, wherein all forecast changes of assets and liabilities are included. The advantages of the Budgeted Balance Sheet are as follows :

- i) It reveals the overall financial position of the concern so that management may take appropriate action in advance. The various ratios based on budgeted Balance Sheet would be of assistance to the management in assessing the financial position of the unit.
- ii) It provides a mechanism of checks and balances with respect to other budgets.
- iii) The budgeted return on capital employed may be determined. Necessary changes may be made if the return is not considered to be adequate.

### **Revision of Budget Package**

The budgets are framed based on a series of assumptions likely to prevail in the budget period usually one year. The period being short it is unlikely that the variation between budget and actuals should exceed the permissible limit provided there is no unusual lapses in the budget preparation. Nevertheless, the change in external environment as well as unforeseen changes cannot be ruled out necessitating changes in the budget.



It is very often observed that budget revision is undertaken only to reduce budget-actual difference. This should not be the case since a budget will lose its value as a yardstick. Sometimes, however, a budget revision may be necessary due to the following reasons, provided that these will otherwise have significant impact on the operating performances during the budget period:

- i) Correction of major errors which might have crept in while preparing the budget.
- ii) Giving effect to extraordinary situations, not envisaged or considered at the time of budget formulations. (Examples of such situations are: price-cuts and/or profit limits imposed by the government, important raw material becoming non-available, an important material being declared a banned item, strained political relations with a country affecting imports of materials and/or export of finished goods, rapid change in technology leading to changed method of production, etc.)

Since the budget package is based on the details provided in the functional budgets, any significant change in the functional budgets requires revision of the entire budget package, on the same principles and routine followed in budget setting. However, this does not imply that the original budget is to be discarded; but in addition to normal variation there should be a revision variance which acts as a corrective factor for future reference. Where rolling budget is in operation the signals of change become apparent and revision process is simplified.

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## 8.4 FLEXIBLE BUDGETING

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### 8.4.1 Fixed and Flexible Budgets

Basically the concept of flexible budget is that some sort of budgetary cost adjustments will have to be made for varying levels of output. The underlying principle of flexible budget is to flex the fixed budgets to correspond with the actual level of activity.

The CIMA defines flexible budget as "a budget which is designed to change in accordance with the level of activity attained", as against a fixed budget, being defined as "a budget which is designed to remain unchanged irrespective of level of activity actually attained".

The fixed budget though rigid in character is subject to revision when there is a significant change in the basic assumptions underlying the fixed budget. A fixed budget has only a limited application, e.g. budgeting of fixed expenses but is ineffective as a control medium, particularly when wide fluctuations in the level of activity could take place due to external factors like market conditions, raw materials availability, etc.

As a sharp contrast to fixed budget, flexible budgetary system attempts to develop a series of budgets for different levels of activity under varying sets of assumptions. This is why flexible budgets are also known as multiple budgets. The need for flexible ' budgets arises when due to uncertainties or changes in the environment it becomes extremely difficult to prepare even a reasonably good sales forecast. An attempt is, therefore, made to develop several alternative sales forecasts necessarily leading to the corresponding alternative levels of production, capacity utilisation and therefore, development of multiple budgets accordingly. Sales forecast may at times be difficult due to some situations that might arise in the companies:

- i) Which are subject to weather condition, e.g. soft drinks industry;
- ii) Which frequent, change their product range or introduce new products;
- iii) Which are affected by change in design e.g. ladies fashion garments;
- iv) Where production is on made to order basis.



Flexible budgets are of use in bringing the adjusted budget to prevailing working condition arising out of seasonal or calendar variations.

A distinction may be made between a flexible budget and a flexed budget. While flexible budgets are prepared at the beginning of the budget period, a flexed budget is defined as a budget prepared at the end of the budget period; and an attempt is made to adjust the original budgeted amounts with respect to the actual output or sales achieved.

#### **8.4.2 Developments of Flexible Budgets**

It is necessary to establish the budget centres based on the principle of cost centre. Considering the behavioural character of costs the expenses relating to budget centres are to be segregated into fixed, variable and mixed costs.

The total amount of cost which a budget centre is expected to incur in relation to the budgeted activity of the centre is estimated in the form of "Budget Allowance". The budget allowance is set in respect of each cost centre as the incidence of costs is not the same and the fluctuations in variable costs vary from item to item due to activity variations. In certain cases costs are related to output and in others the costs are related to input e.g. direct labour hours, machine hours, etc. Training and management development costs are on the other hand related to number of new employees (and not output). Material handling cost fluctuates with the volume of materials handled. Even at the cost of repetition it is stressed that while fixing the budget allowance, the behaviour characteristics of each item of cost should be carefully analysed. Fixed cost (including labour cost) is 'relatively' fixed and hence, proper allowance should be given for fluctuations in activity.

Determination of capacity utilisation is invariably associated with the flexible budgeting technique. The capacity size is the natural outcome of capital budgeting decision. The other relevant factors influencing capacity utilisation are, demand pattern (including seasonal and cyclical fluctuations), the cost of carrying inventory and inventory stock out, existence of bottleneck machine in production departments, sub-contracting policy, etc. Apart from machine capacity, the concept of capacity is equally applicable in other factors of production e.g. material, labour, etc.

Illustrations 7, 8 and 9 exhibit the methods of developing Flexible Budgets under different situations.

#### **8.4.3 Flexible Budget in Marketing**

While fixed budgets portray a more or less rigid plan based on one set of conditions and one level of activity, flexible budgeting system attempts to develop a series of budgets for various levels of activity and under varying sets of assumptions. Conventionally flexible' budgeting system is associated with production budgets. But there is no reason why this concept should not apply to the marketing budgets also. In fact, marketing budgets could be framed on a more realistic basis and their control made more meaningful and effective with the help of this concept.

The expense behaviour analysis suggested earlier should form the bed-rock of flexible budgeting in marketing, specially for marketing expenses budgets. We have give a summary of the marketing expenses broken down into four functions and indicating the behaviour of expenses in illustration No. 9. This also illustrates how the flexible budgeting concept can be applied with advantage in marketing operations.

It may be noted in the said illustration no. 9 that during the first quarter the adverse expense variance is only Rs. 1 million under the fixed budgeting method. it will be easy for the marketing department to justify this increase on the ground of sales being higher







**Illustration 7 : Developing a Flexible Budget**

The following particulars are relating to X Co.

Period

Normal: Capacity 80%

Capacity	60%	80%	100%
Units	<u>3,000</u>	<u>4000</u>	<u>5000</u>
	Rs.	Rs.	Rs.
Marginal cost @ Rs. 4 per units	12,000	16,000	20,000
Fixed costs	<u>8,000</u>	<u>8,000</u>	<u>8,000</u>
Total	20,000	24,000	28,000

Now, if the number of units actually produced in a period is 4,500 units, then comparison of actual costs will have to be made with the flexible budget at this level of activity. Thus

	Rs.
Marginal cost (4,500 units @ Rs, 4)	18,000
Fixed costs	<u>8000</u>
Total	26,000(amount allowed)

The difference between the amount incurred and that allowed would be reflected as a variance which requires further explanation.

**Illustration 8 : Developing Flexible Budgets**

A single-product manufacturing company is currently producing 12,000 units (at 60 percent capacity). The following particulars relating to its cost structure are available.

	Per unit
	Rs.
Direct materials	5
Direct labour (variable)	2
Manufacturing overheads (60% fixed)	5
Administrative overheads (fixed)	2
Selling & distribution overheads (40% variable)	<u>3</u>
Cost of sales	17
Profit	<u>3</u>
Selling Price	<u>20</u>

We have to prepare a flexible budget for 60 per cent, 80 per cent and 100 per cent activity levels taking into account the following further information:

- a) If activity exceeds 60 per cent, a 5 per cent quantity discount on raw materials on account of increase in the total quantity will be received.
- b) The present fixed cost structure will remain constant up to 90 per cent capacity, beyond which a 20 per cent increase in cost is expected.
- c) The present unit selling price will remain constant up to 75 per cent activity level, beyond which a 2% per cent reduction in original price for increase in activity by every 5 per cent is contemplated.



Particulars	Activity level	60%	80%	100%
		(12,000 units)	(16,000 units)	(20,000 units)
		Rs.	Rs.	Rs.
a) Prime cost:				
Direct materials		60,000	76,000	95,000
Direct labour @ Rs.2		24,000	32,000	40,000
		84,000	1,08,000	1,35,000
b) Variable overheads:				
Manufacturing @ Rs. 2		24,000	32,000	40,000
Selling & Distribution @ Rs. 1.20		14,400	19,200	24,000
		38,400	51,200	64,000
c) Fixed overheads:				
Manufacturing		36,000	36,000	43,200
Administrative		24,000	24,000	28,800
Selling & Distribution		21,600	21,600	25,920
		81,600	81,600	97,920
d) Cost of sales (a+b+c)		2,04,000	2,49,800	2,96,920
e) Sales		2,40,060	3,12,000	3,50,600
f) Profit (5-4)		36,000	71,200	53,800

At 80 per cent, profit is the highest. Hence, of the three activity levels, 80 per cent is the most profitable one.

Workings:

a) Direct material cost:

At 80%: 16,000 @ Rs. 5 less 5% - Rs. 76,000

At 100%: 20,000 @ Rs. 5 less 5% - Rs. 95,000

b) Fixed Costs:

Manufacturing: Rs. 3 (60% of Rs. 5) arrived at the activity level of 12,000 units. Therefore, total fixed cost: 12,000 @ Rs. 3 = Rs. 36,000. Similarly, for administration and selling and distribution items. At 100% fixed cost increases by 20%.

c) Sales:

At 80%: 16,000 @ Rs. 20 less 24% = Rs. 3,12,000

At 100%: 20,000 @ Rs. 20 less 12% = Rs. 3,50,000

(Price reduction @ 2 1/2% for every 5% in activity level)



**Illustration 9:** A case study on Flexible Budgeting

The marketing expenses of P Ltd. have been budgeted at Rs. 100 millions for the current year and their functional allocation is shown below:

Functional Allocation of Budgeted Expenses:

	(Rs. in millions)		
	Fixed	Variable	Total
Direct selling	10	30	40
Distribution	15	20	35
Promotion	5	10	15
Other marketing	10	-	10
	40	60	100

The sales were budgeted at R. 1000 million and the quarterly breakup of the budgeted sales is,

Quarter I	Rs. 160 million
Quarter II	Rs. 240 million
Quarter III	Rs. 280 million
Quarter IV	Rs. 320 million

The actual sales during the 1 and 11 quarters were Rs. 200 million and Rs. 180 million respectively and the actual marketing expenses were Quarter I - Rs. 26 million and quarter II - Rs. 23.5 million.

A. Fixed Budgeting

Under fixed budgeting no distinction will be made between fixed and variable marketing costs and the total budgeted marketing costs of Rs. 100 million would be assumed to be incurred uniformly throughout the year. So quarterly budgets for marketing costs would be Rs. 25 million for each quarter. The report on sales and marketing costs would be as given below:

	QUARTER I			QUARTER II		
	Budget	Actual	Variance	Budget	Actual	Variance
Sales	160	200	40(F)	240	180	60(A)
Marketing expenses	25	26	1(A)	25	23.5	1.5(F)

(F) Favorable and (A) Adverse

B) Flexible Budgeting

If a flexible budgeting were followed the fixed marketing costs of Rs. 40 million would be; assumed to be incurred uniformly throughout the year. The variable marketing costs would vary with the sales value in each quarter. Since Rs. 60 million of variable costs represent 6% of budgeted sales the budgeted marketing costs would be as follows:

	(Rs. in million)				
	Total	Qtr. I	Qtr. II	Qtr. III	Qtr. IV
Fixed expenses	40.00	10.00	10.00	10.00	10.00
Variable expenses	60.0	9.60	14.40	16.80	19.20
	100.00	19.60	24.40	26.80	29.20



When actual expenses are to be compared with the budget, the budgeted variable expenses will have to be flexed for the actual sales volume achieved to work out the variances.

#### Marketing Expenses Allowed for Sales Achieved

(Rs. in million)

	Quarter I	Quarter II
Fixed expenses	10	10
Variable expenses	12	10.8
<i>(6% of actual sales)</i>		
Total	22	20.8

The control report under flexible budgeting would be as follows :

	QUARTER I			QUARTER II		
	Budget	Actual	Variance	Budget	Actual	Variance
Sales	160	200	40(F)	240	180	60(A)
Marketing expenses	25	26	4(A)	20.8	23.5	2.7(F)

## 8.5 BUDGETARY CONTROL SYSTEM

### 8.5.1 Introduction

CIMA Terminology defines Budgetary Control as "The establishment of budgets relating the responsibilities of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objectives of that policy or to provide a basis for its revision".

Budgetary Control System, like any other control system, comprises several important steps that need to be taken up in a logical sequence, as follows

- i) Developing the budgets as well as breaking these up into departmental/sectional details and also for shorter periods;
- ii) Continuous comparison at regular periodic intervals, say, monthly or quarterly, between the budgeted figures and the corresponding actuals, using suitably designed formats;
- iii) As a sequel to (ii) above, location of divergences between the budgeted figures and actual figures and pinpointing those that are adverse in nature and higher in magnitude;
- iv) analysing the reasons for the divergences so pinpointed;
- v) Initiating remedial measures, again through the active involvement of the operating people, in order to correct the adverse divergences in the immediate next time-period; and
- vi) if any major divergence, whether favourable or adverse, is found to be beyond control during the budget period, then working out a rational basis for revising the budget itself.

### 8.5.2 Budgetary Control and Standard Costing

Budgets are usually based on historical costs adjusted for anticipated changes and generally broad in nature. Standard cost is an estimated cost of a product following a systematic and scientific study of each element of cost. According to CIMA it is "A standard expressed in money". And "It is built up from an assessment of the value of cost elements.



Certain basic principles and steps are common to both Budgetary Control and Standard Costing. They are:

- a) Establishment of a predetermined standard, target or yardstick of performance;
- b) Measurement of actual performance vis-à-vis the yardstick;
- c) Location of variances between actual and standard performances;
- d) Disclosure of reasons of such variations;
- e) Suggestions as to corrective actions where necessary,

In spite of these points of similarity in principles, steps, attitude, approach and aim, Standard Costing and Budgetary Control differ in scope, nature and technique of operation.

<b>Standard Costing</b>	<b>Budgetary Control</b>
i) Applicable to only production operations and product costs	i) Applicable to all functional areas of an enterprise
ii) More intensive in nature	ii) More extensive in nature
iii) Projection of cost accounts	iii) Projection of financial accounts
iv) Variations revealed through accounts	iv) Variations not normally revealed through accounts
v) Cannot be operated in parts or elements	v) Can be operated in parts, sections or departments
vi) Technically a more improved system	vi) Elementary in nature

It may be noted also that Budgetary Control System can be operated independently, but Standard Costing System would depend to some extent on budgeting.

### 8.5.3 Administration of Budgetary Control System

It is important to note that a sound organisation, systematic budget development, proper budget maintenance and efficient budget administration are prerequisites for successful Budgetary Control System. Since Budgetary Control System involves team work it is to be ensured that proper co-ordination exists among the departments. Those who take part in the budget preparation and are responsible for execution and operation of the system must be taken into confidence and their concurrence in the final tape of the budget preparation should be ensured.

The organizational structure for this purpose should obviously comply with the basic principles underlying any organization structure design in general. The responsibilities and authority relationships should be clearly spelt out in particular. Depending on the size and complexity of the organization it should be headed by a Budget Controller, Budget Manager or Budget Director. The selection of the head deserves special attention as he should be able to carry the whole team with him and discharge the responsibilities efficiently.

The key person (e.g. Budget Controller) should frame a Budget Committee representing all the functional heads. In broad out line the responsibility of the Budget Committee should be :

- a) To obtain the functional budgets within the time-frame, review and approve the same.
- b) To receive periodic budget reports and observe the actual trend



- c) To suggest corrective actions when necessary.
- d) To develop a rationale for budget revision, if necessary.

In short, the budget committee should be in overall control of both budget preparation and budget administration.

The Budget Manual is a document or rule book which sets relevant instructions governing the responsibilities of persons, and outlines the procedures, forms and records relating to the preparation of and use of budgets.

The Manual avoids ambiguity, reduces staff training period and eliminates risk of overlapping of functions, which are common problems in Budget Administration.

The planned activities of the organization are divided into Budget Centres indicating the areas which must be clearly definable and should be put in charge of respective defined persons so as to avoid overlapping of duties. The budget centres are also the basis of what is known as Departmental Budgets that are essential for operation of responsibility accounting system.

The success of planning and control process is dependent on effective communication, coordination and performance evaluation. The concept of coordination implies that interests of the functional managers are to be subordinated for serving the greater interest of the corporate entity.

The formulation and administration of budgets might reveal some weak links in the communication process vis-à-vis the organisation structure. Setting of individual targets in the backdrop of the corporate objectives compels the key personnel to think ahead and thus a corporate spirit is inculcated steadily.

Budget acts as a framework for performance appraisal. The targets set of in the budget formulation act as a guide to the persons involved in operations and they become conscious about the expectation of management. This human involvement plays a significant role in achieving corporate objectives, existence of computer and automation notwithstanding.

While on the subject of performance appraisal using budgets as the yardsticks we may underline the importance of using suitably designed formats for presentation of budget-actual comparison. A format for this purpose should preferably provide a multiple frame of comparison and the following column-heads may be suggested to this end:

Budget TM (This month)	Actual TM	
Budget YTD (year-to-date)	Actual YTD	Actual YTD LY (year-to-date last year)
Variance TM	Variance YTD	Variance YTD LY

#### **8.5.4 Performance Reporting**

From the point of view of performance reporting as well for Management Information System (MIS) there are three levels of management that would be relevant namely :

Corporate level or top level

Executive level or middle level

Operating level or supervisory level

The nature of reports meant for these different levels of management will be different, so will be the contents, structure of formats and frequency of the reports. We may give here a few examples of both special reports and routine reports applicable to the different levels of management.



**Special Reports**

- Corporate level - Company's financial position-financial ratios  
Project feasibility study  
Report on sourcing of funds
- Executive level - Report on make or buy decision  
Product Profitability Studies  
Price Fixation  
Cost Reduction Measures
- Operating level - Plant utilisation and idle capacity cost  
Slow and non-moving inventory  
Change in production methods/processes

**Routine Reports**

- Corporate level - Project Cost Reports  
  
Labour efficiency and productivity  
Inventory turnover ratio  
Debtors turnover ratio  
Periodic profit & loss account and balance sheet
- Executive level - Inventory planning and control reports  
Variance analysis (summarised)  
Report on production achieved  
Report on sales achieved
- Operating level - Product cost reports  
Maintenance cost reports Production  
Power & fuel consumption and cost  
Variance analysis (detailed)  
  
Sales and order booking analysis Sales&Marketing  
Marketing cost analysis  
Distribution cost analysis  
Credit control report  
  
Labour turnover and cost  
Welfare schemes and cost Personnel  
Incentive schemes and cost  
  
R & D cost reports  
Quality cost reports  
Administration overhead statement

The above list is only indicative and is by no means exhaustive,

Periodicity of Reports is another important aspect, in reporting. Frequency of reporting as well as periodicity should vary depending on the contents of the reports and the different levels of management who would be the recipients of the reports:..

Special reports by their very nature do not generally have any predetermined periodicity. Studies or analyses may be commissioned by any. level of management and at any time and reports will be prepared as a sequel and submitted to the persons who need the same within the deadline agreed to beforehand.

As regards routine reports, however, the periodicity in general should as follows

- Corporate level- Monthly/Quarterly
- Executive level Fortnightly/Monthly
- Operating level - Daily/Weekly/Monthly





Closely related to the above is the structuring of the report formats. The general guidelines are as follows :

Corporate level- Lesser degree of structuring

Executive level - Mostly structured

Operating level - Fully structured

### 8.5.5 Uses of Performance Reports

Very often it is found that Performance Reports serve only the purpose of providing information to the recipients and perhaps a psychological sense of security or a feeling that the business is as usual! While this aspect of utility of reports cannot be totally ruled out, it needs also to be kept in view that the primary purpose of a report is to trigger of decisions - decisions for better planning and more effective control.

Coming to the planning part first, reports should contribute towards a continuous improvement in the planning process through more rational decisions. Generally special reports lead to decisions on special issues or one-off situations and planning process follows accordingly. The Routine Reports also improves planning process through improved decision making in a large and diverse number of operational matters. In passing it needs to be underlined that to aid the planning process the concerned report should be futuristic or feed-forward oriented rather than providing just feedback information.

Next we come to the control dimension. Reports meant for control are essentially of the ex-poste or feedback type. These reports generally marshal actuals against the predetermined norms or performance yardsticks (e.g. budgets, standard costs, etc.) throw up the divergences (favourable / adverse and large / small) and thus draw the attention of the recipients to the areas that need managerial action. As a sequel certain decisions follow that are called corrective actions and these are, as the expression suggests, meant to correct the adverse divergences and bridge to the extent possible the emerging gap between what is happening (actuals) and what should be happening (norms).'

We have to sound a note of caution at this stage. Planning and control are really not two separate management functions - it is high time that the Walls of Jericho between planning and control crumbled down and managers realised that these are two sides of the same coin. A good manager therefore effectively uses a performance report both for the purpose of controlling the operations in the current period and planning the same for the immediate next period.

### 8.5.6 Limitations of Performance Reporting and Cost Controllability

First and foremost one should remember that Performance Reports are not ends in themselves but only means -means to initiate decisions and actions. Reports would not automatically do the job; it is the human beings - the managers receiving such reports who will have to do it.

This brings us to a very important dimension in the decision making process the human dimension or as it is called the Human Factor in Management. Human beings by their very nature like to follow the path of least resistance and because of zero-risk taking attitude managers are wary of taking decisions or initiating actions even when performance reports would warrant them to do so.

There are several other issues, that have been covered under Behavioural & Ethical Aspects in Budgeting and Reporting (8.7). We are not repeating here the observations made there we would nonetheless advise the reader to go through the same.



The next intriguing aspect or limitations is that reports will generally contain figures: but facts lie hidden behind the figures and systematic efforts are needed to discover these facts. Otherwise it would not be possible to take right decisions based on the figures alone.

Finally, reports are reports only - these can only be aids to decision making but cannot replace human judgements that are an integral part of the decision-making process. Sometimes using his own judgement a manager may have to take a decision that are at variance with the contents and recommendations in the relevant performance report and such decisions might be found to be in order.

Last but not the least is the Cost Controllability aspect vis-à-vis performance reporting. There are certain myths about cost control. One of these is that costs can be classified as controllable and non-controllable and this is strongly advocated by the accountants. But the fact of the matter is that controllability of costs would depend on four factors:

- the person in charge
- the level of the concerned person in the organisation
- the situations prevailing at the moment
- the time-frame (for e.g. everything is controllable in the long run but uncontrollable in the very short run)

This, the classification of costs into controllable and no controllable categories cannot be taken as rigid or fixed for all persons or situations or for all time to come. For different levels of management, different situations and different time-frames, the management accountant should work out totally different sets of controllable and uncontrollable costs. Only if such a flexible approach is adopted, can performance reports be used meaningfully and effectively as a tool for cost control, otherwise not.

### Activity 6

Describe a typical organization's process of budget administration

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## 8.6 CAPITAL BUDGETING AND CONTROL

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Capital Budgeting as against Revenue Budgeting discussed above assumes greater importance in view of substantial investment involved and any decision once taken is irreversible in this area.

The mode of control of capital expenditure should be significantly different from that of normal revenue expenditure since any capital expenditure :

- a) involves immediate cash outflow, sometimes of a significant amount, with little possibility of immediate returns; and
- b) it brings in its train a series of extra revenue expenditures (e.g. depreciation, maintenance, operators wages or salaries, general overhead expenses, etc.) which are a drain on the revenue profits of the particular year and also of a few subsequent years.



Capital expenditures at the same time increase the profit earning capacity of the business. Hence the importance of prudent investment on capital items needs hardly be emphasised.

While we are not going into a detailed and comprehensive control system for capital expenditures, we would like to mention here a few important considerations involved in it,

- i) All capital expenditures should be categorised as productive (say, plant and machinery) and service or support (office equipment, furniture, automobiles etc). It has been found that capital expenditures have a greater tendency to increase in the second category (service or support). A more stringent system of control is therefore called for in this area.

Some multi-national corporations as well as progressive organisations are known to apply a thumb-rule such as allocation of the total capital expenditure budget for a year on a 50:50 basis between productive and support assets. The logic behind this may be that the additional contribution generated through the additional productive assets (consuming at least 50 per cent of the budget) should be able to take care of the full revenue backlash arising out of the entire capital expenditures pertaining to both productive and support assets

- ii) All capital expenditure may be streamlined and centralised through a document, namely, Capital Expenditure Requisition (CAPEX) in a standard form, preferably printed. The CAPEX will contain in detail, the details of the asset to be purchased and the financial and non financial justification for it.
- iii) For each item of capital expenditure, a CAPEX should be initiated by the head of the department requiring the item. He should then pass it on to a responsible officer in the accounts department (say, the capital expenditure coordinator) for necessary verification and calculation of DCF returns (in case of high value items).
- iv) Before an item is purchased the relative CAPEX, duly verified, should be authorised by the appropriate approval authority. The levels of such approval authorities have to be decided in advance, depending on the amount of capital expenditure involved. For example, a departmental head may approve any CAPEX upto Rs. 1000, the general manager may approve upto Rs. 2500 and beyond that all CAPEX have to be authorised by the chief executive. Such limits should be determined with reference to the nature and volume of business and other pertinent factors.
- v) The CAPEX for every item must be included in the budget. For any unbudgeted item, special approval by the chief executive would be necessary, irrespective of the amount involved,
- vi) The capital expenditure budget or capital budget of the company should be completed in every detail viz. details of items, departments requiring them, nature of requirement (replacement or new), purpose code (expansion, production support, employee welfare, pollution control, etc.) estimated amount in each case, the timing of the cash flow, etc.

There is another very important area with respect to Capital Budgeting. This is appraisal of capital projects and evaluation of financial attractiveness of at least the major capital expenditure projects. A plethora of tools and techniques, under both undiscounted and discounted cash flow bases, are available in literature on Managerial Economics, Financial Management etc. Details in this regard are outside the purview of our subject here.



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## **8.7 BEHAVIOURAL AND ETHICAL ASPECTS IN BUDGETING AND REPORTING**

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### **8.7.1 Introduction**

Budgetary Control System or any management control system cannot be operated unless the human factor in management is given adequate consideration to. This aspect has long been neglected since the accent was on the quantitative aspect of budgeting, variance analysis etc. According to Kaplan and Champour "Management Accountants who limit their resources to technical procedures and who fail to make an effort to understand the organisational and behavioural roles of accounting are living in the past and doing less than half a job in the present",

Behavioural issues are intimately linked with ethics. Perhaps the most important problem is a steady erosion of faith and confidence that results in behavioural problems. The top management's role, also contributes to the undesirable and sometimes unethical behaviour of managers. Performance appraisal system, which are extremely sensitive to adverse variances, can vitiate the atmosphere within the organ organisation. Constant fear of getting a negative appraisal degenerates the organisation's climate and take a heavy toll of efficiency, productivity and creativity of managers, and of course their ethical behaviour.

Sometimes a new manager, who inherits problems created by his predecessor, becomes a victim of the latters past errors of omissions and commissions. He could be made a scapegoat by his other colleagues in the division.Thi's can lead to the new manager becoming demoralised and demotivated.

### **8.7.2 Behavioural Problems**

The major behavioural problems usually encountered in Budgetary Control System are summarised as under :

- a) Budgeting as well as target setting and efforts for achieving the targets are not generally by the same set of people, resulting in mutual mistrust.
- b) The corporate goals outlined in the budgets do not necessarily coincide with the individual goals, thus leading to a problem of goal incongruence.
- c) Excessive reliance on performance measurement through budget actual comparison encourages Slack Budgeting, as discussed later.
- d) The operating people get conditioned not to look beyond the target set.
- e) In course of preparation of departmental budgets particularly of the cost centre departments, an inter-departmental rivalry is created because of demand on resources in general and on scarce resources in particular. This leads to an untoward situation called 'Budget Bargaining'.
- f) Operating management staff at the lower levels may be hesitant to meet the targets under the impression that, once a target is reached it will be immediately raised to a higher level.
- g) Non-management staff, feels they are remote from the goals of the company and as such, not only are they apathetic to the budgeting exercise but they also feel that the system is only an indirect means Of squeezing them.

### **8.7.3 Budget Slack**

Excessive reliance on performance measurement through budget actual comparison, encourages the operating managers to inflate their budgeted expenses and depress the budgetary revenue. Such 'padding' and 'sand bagging' practices result in slacks



within the budget.

The organisation's reward structure, by over reacting to under achievement of objectives, is one of the causes of managerial desire for slack. Managers view slack as a prefabricated protective device, as a means of avoiding the stigma normally attached to underachievers.

Managers generally create slack in their budgets by underestimation of gross revenue, inclusion of discretionary increases in personnel requirements, establishment of liberal marketing and sales expense budgets with internal limits on funds to be spent, use of manufacturing costs based on overstated standards and inclusion of discretionary 'special' budgets.

Sometimes budget slacks introduced at a number of successive levels lead to widespread confusion as to what the true budget is - the budget which is so necessary for planning and decision purposes. This also entails unproductive efforts for maintaining secrecy of the budget figures at different levels. Example of a sales budget for a period (hypothetical but not unrealistic) :

Level	Accountable To	Budget Commitment Rs.
Marketing Director (MD)	CEO	100
Gen. Manager (GM)	MD	110
Sales Manager (SM)	GM	121
Sales Supervisor (SS)	SM	133
Salesperson	SS	150

The Head of Marketing has committed a budget figure of 100 to his superior (CEO), but gets a commitment for 110 from his immediate subordinate GM, providing for a cushion or budget slack of 10. The GM in turn keeps a cushion of 11 and indicates to as well as obtains a commitment from SM for a figure of 121. A slack of 21 has already been built into the budgeting system. But the game goes on at the subsequent levels and, at the end of it all, the field salesman is advised that his budget is 150, the total slack being 50 (i.e. 50%).

In this type of game it is important that each manager in the chain of hierarchy maintains 'his real budget' a closely guarded secret. But in the process budget loses its significance and reliability as a tool for planning and control. And in the event of a sales review meeting, in the presence of two or three contiguous levels, there will be a total confusion as to what the true budget or expected norm of performance is.

In order to deal with such untoward situation, the organisation needs to encourage a culture of faith and trust on the one hand and transparency and free flow of communication on the other. These in turn are very much in the domain of ethicality in the behaviour of the different role players in the organisation.

#### 8.7.4 Problems of Motivation

Because of the above-mentioned problems it becomes difficult to motivate all concerned to play an active part in the budgetary control process. In this context Horngren defines motivation as "the need to achieve some selected goal and the resulting drive that influences action towards that goal", and suggests two aspects of motivation

- a) **Direction:** efforts of managers should be directed to act in unison to achieve the goal.
- b) **Incentive:** Incentive is concerned with getting subordinates to run rather than walk towards the desired goal.



Absence of motivation is evident in both the planning and implementation stages of budgeting. At the planning stage this can be tackled through a participative process in budget setting rather than budget being decided upon at the top and pushed down the line. Management by Objectives (MBO) has been found to be extremely useful in inculcating a participative culture of setting budgets and targets. It is a pity that MBO has almost been discarded worldwide. But it is an acknowledge fact that only the process' and 'style' of MBO, if not the outcome, could benefit an organization immensely. No doubt implementation of MBO is fraught with problems. But in discarding MBO have we been throwing away the baby with the bath water?

Coming back to the motivational aspect, Atkinson suggests, "while budgets which are best for motivational purposes need to be stated in terms of aspirations" rather than expectations, the budgets which are so necessary for planning and decision purposes need to be stated in terms of the best available estimate of expected actual performance". The expressions are appealing; but we wonder whether this differentiation is practicable and if so, how this can be concretized.

At the implementation stage feedback is very important for motivational impact. Unless the individuals are regularly kept informed how actual results are progressing and how these compare with the targets, it will be difficult for them to monitor their performance and take appropriate actions or remedial measures as and when necessary.

Apart from the feedback aspect as such the performance evaluation mechanism also needs to be taken a hard look at. There is particularly a strongly emerging need for non-accounting approach to evaluation. Also controllability and non-controllability aspect with reference to the respective budget centres need to be kept in view in any performance evaluation system.

Finally, motivational aspects can be taken care of through a culture of all round cooperation and coordination, communication, job enrichment and enlargement and sustained Human Resource Development (HRD) activities covering all such areas.

### **8.7.5 Behavioral Aspects in Performance Improvement.**

Review and comparison between budgets and actual on a regular basis and generating budgetary control statements form only one part of budgetary control system. But the other part of the story is the process through which these statements trigger off control actions. The most vital requirement to this end is that somebody has to take the responsibility of initiating such actions. Lack of initiative on the part of managers to take up not-so-easy tasks becomes a stumbling block at this stage. As Annie Besant rightly observed:

The world is inhabited by two classes of people. One class says, "Somebody should do it- why should I?" The other class will say, "Somebody should do it-why should then not I?"

There is an acute dearth of people in the second group! Because risk taking and unpleasant tough decisions are essential under a situation of consistent adverse variances, generally people do not like to shoulder such responsibility and budgetary control ends there. Consequently, organisational effectiveness through budgetary control system is seriously impaired.

After all an organisation is a collection of diverse human beings and as human beings they have imperfections, imprecisions, inhibitions, ego and other psychological aberrations. People have been found to be a bit too sensitive to adverse variances. Confronted with the same, they start building up defence mechanism in their own minds, rather than thinking constructively how to correct the situation. They start



finding scapegoats, alibis and excuses to justify non-performance. An atmosphere of mutual faith and confidence has therefore to be restored or created in the organisation whereby people will look upon variances not as fault-finding or witch-hunting exercises. This is imperative, otherwise the entire budgetary control system will degenerate into only mechanistic rituals with nothing coming out of these.

Psychological considerations are therefore dominant in management control. Activities such as communication, persuading, exhorting, inspiring and criticising are an important part of the process. If these behavioural aspects of Budgetary Control are not duly considered and dealt with (on the lines broadly suggested above), ethical dimension of MC S will also continue to suffer shipwreck.

### Activity 7

Discuss the behaviour implications of budgetary slacks.

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## 8.8 SUMMARY

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A budget is a quantitative translation of an organisations goal in monetary terms for a specific time period and involves estimation of cash inflows and outflows. The budget process involves the following steps:

- 1) Identification and setting of long term objectives (Strategic Planning)
- 2) As per the strategic planning long term objectives are broken into short term goals and resources are dedicated for achievement of these goals.
- 3) The use of the dedicated resources is monitored and performance is evaluated relative to these goals.

The budgeting process recognises the fact that there is a need to view the organization as a system of interacting components that must be coordinated. The success of the process is largely dependent on the fact that how effectively the organization's objectives have been communicated to all organization members and their degree of involvement and participation in the budgeting process.

The master budget is a set of operating and financial plans that summarises the organisation's activity level for the budgeted period which is usually one year. The master budget also includes projected balance sheet, profit & loss account and cash flow statement which are used to evaluate the financial impact of the budget.

This unit also deals with various type of budgets and budgetary concepts. Finally there are important behavioural considerations regarding the budgeting process such as who all should be involved, budget slack, motivation, performance improvement and commitments.



## 8.9 SELF ASSESSMENT QUESTIONS

- A) Theoretical
- 1) What do you mean by Budget Package and Budget Bargaining?
  - 2) Discuss the important features and requirements of a good financial report.
  - 3) Write short notes on the followings: (any four)
    - (a) Revision of Budget Package.
    - (b) Limitation of Performance Reporting.
    - (c) Cost Control liability.
    - (d) Uses of Probability in Budgeting.

- B) Problems
- 1) Boon Institute, which has been operating on the basis of 2,000 patient-days per month, has been reorganised to accommodate 3,000 patient-days per month from December 19X2.

The institute charges patients Rs. 30 per day and incurs direct charges per patient - day as under:

	Rs.
Staff salaries	8
Food and provisions	8
Dressings and medicaments	4

Monthly overhead costs are :

	At the level of:	
	2,000 patient days	3,000 patient days
	Rs. 000	Rs. 000
Supervisory and general staff	4	5
Administration	2	3
Other expenses	8	10

Salaries are paid at the end of each month. Food and provisions are received evenly throughout the month, but dressing and medicaments are delivered in the month prior to use. All are paid for at the end of the month following their receipt.

Overhead costs are paid for of the end of the month in which they are incurred except for the following items which are included above in 'other expenses'.

Rent- Rs. 48,000 per year paid in two equal installments on June and December.  
Depreciation - Rs. 24,000 per year.

Both of these are allocated to the accounts in equal monthly amounts. Patients are invoiced at the end of each month and payments are received:

- 40% by the end of month following month of invoice;
- 50% by the end of the next subsequent month; and
- 10% one further month later.

At the end of October there was a bank overdraft of Rs. 50,000.





You are required to:

- a) Prepare
  - i) a forecasted financial statement for the three months to January 19X6 showing the contribution and net profit;
  - ii) a cash budget for each of the months of November, December and January;
- b) Advise whether the higher income from the increased capacity will clear the overdraft by 31st January, 19X3;

**Note:** Ignore the effects of taxation and inflation in the calculations.

2. The ABC company is preparing budgets for the first quarter of 19X4. The company has a single product, the details of which are as follows

	Rs
Budgeted variable costs per unit	
Materials	12
Labour (4 hours at Rs. 6)	24
Production overhead	8
Selling price	90

Administration overhead is Rs. 23,000 per month and the fixed production overhead is Rs. 15,000 per month, including Rs. 3,500 depreciation.

The factory has a normal capacity of 1,500 units per month. Finished goods stocks are valued at full actual production cost and the budgeted opening stock at 1 January 19X1 is 1,200 units valued at Rs. 66,500. It is company policy to keep finished stocks at a constant ratio to the budgeted unit sales of the following month. Extra production over 1,500 units per month can be achieved by working overtime which means paying labour double time for the overtime.

Expected sales	Units
December 19X3	1,300
January 19X4	1,000
February 19X4	1,400
March 19X4	1,600.
April 19X4	1,800
May 19X4	1,550

Materials are paid for in the month following delivery and enough stock is kept to cover the next month's budgeted production. Sales are on credit with 30% of debts collected in the month of sale and 67% in the following month, the balance being bad debts. All other costs are paid for in the month they are incurred and no capital expenditure is expected.

You are required:

- a) to prepare a single budgeted profit and loss account for the quarter (January, February, March);
- b) to prepare cash budgets for each month of the quarter;
- c) to reconcile the net cash movement for the quarter to the budgeted profit.



3. ST Ltd. makes a product in three different flavours which require similar materials, labour and production facilities. The company's trading results for the year ending 31st December, 19X1 are expected to be as shown below:

	Pineapple	Strawberry	Peppermint	Total
	Rs.	Rs.	Rs.	Rs.
Sales	5,36,000	40,000	2,160,000	12,26,000
Direct materials	1,34,000	1,29,000	1,04,000	3,67,000
Direct wages	1,07,200	64,500	84,000	2,55,700
Variable overhead	1,07,200	64,500	84,000	2,55,700
Total variable cost	3,48,400	2,58,000	2,72,000	8,78,400
Contribution	1,87,600	1,72,000	(12,000)	3,47,600
Fixed overhead				<u>2,17,600</u>
Profit				<u>1,30,000</u>

The peppermint flavour product has been causing management some concern and because it is not possible to raise the selling price, it has decided, reluctantly, to cease production of this flavour. However, the production of the pineapple and strawberry flavours, for which there are willing buyers, is to be increased.

Management is unwilling to make anyone redundant and has decided to transfer 60% of the labour which was used on peppermint flavour to the production of pineapple - the remainder being transferred to strawberry. This change is proposed to be effective from 1st January, 19X2.

Other relevant information for 19X2 is as follows:

- The total direct labour cost in 19X2 is expected to be the same as that of 19X1. (As part of the no redundancies' policy of management, the trade unions have agreed not to press for pay increases).
- The unit variable cost structure and selling prices of pineapple and strawberry are to be the same in 19X2 as in 19X1.
- Fixed overhead will increase by 13,800.

You are required to :

- Prepare a budgeted statement for 19X2 in a similar format to that shown above.
  - Comment on the statement you have prepared for (a) above.
  - Advise management whether a greater profit would be possible if the 60% of labour from the peppermint line were transferred to the strawberry line and 40% of labour to pineapple (Note: there is no need to calculate the profit figure but your reason(s) for your conclusion).
4. Bright Future Ltd. has the following Divisions: Marketing, Manufacturing, Materials Management, Despatch and Warehousing, Research and Engineering, Finance and Secretarial, Personnel and General Administration.

All the seven Divisional Heads after many meetings amongst themselves and due deliberation submit through the Managing director, for the consideration of the Board of Directors, the Budget for the year 19X2, indicating therein a pre-tax profit for the year of Rs. 22.5 millions.

The Directors are not satisfied with the figure of profit shown in the Budget. They feel that the profit can be improved upon by at least 25% and ask the Divisional.



Heads to have another look at the budget as the budget for 19X2 has been prepared simply on the 19X1 basis.

Meanwhile the Finance Manager finds that the profit figure shown in the budget has not taken into account the carry over effects of certain actions taken in 19X1:

- The effect of Salaries and Wages increase in total would be Rs. 0.5 million, comprising Rs. 20,000 in each of the Marketing, Materials Management and Finance and Secretarial Divisions, Rs. 0.4 million in Manufacturing Division, Rs. 30,000 in Research and Engineering and Rs. 10,000 in Personnel Division.
- Machine tools reconditioning programme undertaken already would increase the profit by Rs. 0.4 million.
- Sale price increase effected would add Rs. 0.3 million to profit.
- Net impact of other actions would result in a saving of Rs. 0.45 million. Actions taken in manufacturing, Engineering, Personnel and General Administration contributed to cost saving of Rs. 0.47 million, Rs. 20,000 and Rs. 0.2 million respectively, while correspondingly cost increases resulted in Marketing, Materials Management, Despatch and Warehousing to an extent of Rs. 30,000, Rs. 0.2 million and Rs. 20,000 respectively.

Scanning the indications of environmental changes in 19X2, the Marketing Manager envisages a market demand which would increase the sales by Rs. 3.3 million, out of which, a third would be clean profit. On the other hand, Materials Manager envisages an inevitable rise in material cost of Rs. 0.8 million.

Even when these are incorporated, as the profit comes no where near the target set by the Board, the Managing Director in concurrence with the Divisional Heads draws out a Management Plan of Action to improve the profit.

- An increase in Sale Price will result in a profit of Rs. 0.7 million.
- A deeper market penetration to bring in an additional sale of Rs. 9 million with a clean profit of one third.
- Reduction in material usage would save Rs. 0.5 million. Improvement in manpower utilisation would bring in a saving of Rs; 0.55 million.
- Expenditure towards additional Sales Promotion would be Rs. 0.15 million and expenditure towards training in manufacturing division would be Rs. 0.2 million and in marketing Rs. 50,000.
- Other actions taken in the divisions would net a saving of Rs. 0.7 million - Machinery to a tune of Rs. 3.5 million (cash outgo Rs. 2.5 million) would be installed and this will effect a saving of Rs. 0.7 million in manufacturing operations, Rs. 60,000 in Despatch and Warehousing and Rs. 20,000 in Engineering, while streamlining in Marketing, Finance and General Administration would increase the cost by Rs. 40,000, Rs. 20,000 and Rs. 20,000 respectively.

Keeping the pre-tax profit of Rs. 22.5 million given in the Budget in the base, you are required to prepare:

- a) A simple statement for the Directors detailing the improvement on profit, itemwise as aforesaid under the three heads - carry over effect of actions in 19X 1, Environmental changes in 19X2, and changes resulting from Management Action Plan.



- b) A profit impact Summary by Divisional Accountability, itemwise, under the three heads, to enable each Divisional head to know his contribution or otherwise, towards profit improvement, for which he is responsible.
- 5) The Managing Director of your company has been given the following statement showing the results for a recent month:

Month ending 31st October 19X5			
	Master Budget	Actual	Variance
Units produced and sold	<u>10 000</u>	<u>9 000</u>	<u>(1,000)</u>
Sales	<u>Rs. 40,000</u>	<u>Rs. 35,000</u>	<u>Rs.(5,000)</u>
Direct Materials	10,000	9,200	800
Direct wages	15,000	13,100	1,900
Variable overheads	5,000	4,700	300
Fixed overheads	<u>5,000</u>	<u>4,900</u>	<u>100</u>
	35,000	31,900	3,100
	(5,000)	3,100	(1,900)

Figures in parentheses indicate adverse variances.

The standard costs' of the product are as follows:

	per, unit
Direct material (1 kg at Re.1 per kg)	Rs. 1.00
Direct wages (1 hour at Re. 1.50)	Rs. 1.50
Variable overheads (1 hour at Re. 0.50)	Rs.0.50

Actual results for the month showed that 9,800 kg. of material were used and 8,800 labour hours were recorded.

- (a) Prepare a flexible budget for the month and compare with the actual results.
- (b) Calculate the variances which have arisen.
- (c) Comment on the calculations you have made in (a) & (b).

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## 8.10 FURTHER READINGS

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Brownwel I P. "Participation in Budgeting Process: When it works and when it doesn't Journal of Accounting Literature no. 1(1982), pp 124-53

Collins F., P Munter and D.W. Finn "The budgeting games people play ". The Accounting Review LXII no. 1 (January 1988) pp. 111-22

Penne Mark "Accounting Systems, Participation in Budgeting and Performance Evaluation. " The Accounting Review 65 no. 2 (April 1990) pp 303-14

Srinivasan Umapathy "How successful Firms Budget". Management Accounting, February 1987, pp 25-27