Chapter-04: Profit Planning

4.1: Introduction:

The steps taken by businesses to achieve their planned levels of profits-a process called profit planning. Profit planning is accomplished by preparing a number of budgets that together form an integrated business plan known as the master budget. The master budget is an essential management tool that communicates management's plans throughout the organization, allocates resources, and coordinates activities.

4.2: The Basic Framework of Budgeting:

A **budget** is a quantitative plan for acquiring and using resources over a specified time period. Individuals often create household budgets that balance their income and expenditures for food, clothing, housing, and so on while providing for some savings. Once the budget is established, actual spending is compared to the budget to make sure the plan is being followed. Companies use budgets in a similar way, although the amount of work and underlying details involved far exceed a personal budget. In an organization, the term **master budget** refers to a summary of a company's plans including specific targets for sales, production, and financing activities. The master budget- which culminates in a cash budget, a budgeted income statement, and a budgeted balance sheet—formally lays out the financial aspects of management's plans for the future and assists in monitoring actual expenditures relative to those plans. Budgets are used for two distinct purposes-planning and control. **Planning** involves developing goals and preparing various budgets to achieve those goals. **Control** involves the steps taken by management to increase the likelihood that all parts of the organization are working together to achieve the goals set down at the planning stage. To be effective, a good budgeting system must provide for both planning and control. Good planning without effective control is a waste of time and effort.

4.3: Advantages of Budgeting:

Organizations realize many benefits from budgeting including:

a. Budgets communicate management's plans throughout the organization.
b. Budgets force managers to *think about* and plan for the future. In the absence of the necessity to prepare a budget, many managers would spend all of their time dealing with daily emergencies.
c. The budgeting process provides a means of allocating resources to those parts of the organization where they can be used most effectively.
d. The budgeting process can uncover potential bottlenecks before they occur.
e. Budgets coordinate the activities of the entire organization by integrating the plans of its various parts. Budgeting helps to ensure that everyone in the organization is pulling in the same direction.
f. Budgets define goals and objectives that can serve as benchmarks for evaluating subsequent performance.

4.4: The Self-Imposed Budget:

The success of a budget program is largely determined by the way a budget is developed. In the most successful budget programs, managers actively participate in preparing their own budgets rather than having them imposed from above. The participative approach is particularly effective when budgets are used to evaluate a manager's performance because imposing expectations from above and then penalizing employees who do not meet those expectations will generate resentment rather than cooperation and commitment. In fact, many managers believe that being empowered to create their own self-imposed budgets is the most effective method of budget preparation. A **self-imposed budget** or **participative budget** is a budget that is prepared with the full cooperation and participation of managers at all levels.

Self-imposed budgets have a number of advantages:

a. Individuals at all levels of the organization are recognized as members of the team whose views and judgments are valued by top management.
b. Budget estimates prepared by front-line managers are often more accurate and reliable than estimates prepared by top managers who have less intimate knowledge of markets and day-to-day operations.
c. Motivation is generally higher when individuals participate in setting their own goals than when the goals are imposed from above. Self-imposed budgets create commitment.
d. A manager who is not able to meet a budget that has been imposed from above can always say that the budget was unrealistic and impossible to meet. With a self-imposed budget, this excuse is not available.

4.5: Process of budget preparation:

Many organizations prepare budgets that they use as a method of comparison when evaluating their actual results over the next year. The process of preparing a budget should be highly regimented and follow a set schedule, so that the completed budget is ready for use by the beginning of the next fiscal year. Here are the basic steps to follow when preparing a budget:

a. Update budget assumptions: Review the assumptions about the company's business environment that were used as the basis for the last budget, and update as necessary.
b. Review bottlenecks: Determine the capacity level of the primary bottleneck that is constraining the company from generating further sales, and define how this will impact any additional company revenue growth.
c. Available funding: Determine the most likely amount of funding that will be available during the budget period, which may limit growth plans.
d. Step costing points: Determine whether any step costs will be incurred during the likely range of business activity in the upcoming budget period, and define the amount of these costs and at what activity levels they will be incurred.
e. Create budget package: Copy forward the basic budgeting instructions from the instruction packet used in the preceding year. Update it by including the year-to-date actual expenses incurred in the current year, and also annualize this information for the full current year. Add a commentary to the packet, stating step costing information, bottlenecks, and expected funding limitations for the upcoming budget year.
f. Issue budget package: Issue the budget package personally, where possible, and answer any questions from recipients. Also state the due date for the first draft of the budget package.
g. Obtain revenue forecast: Obtain the revenue forecast from the sales manager, validate it with the CEO, and then distribute it to the other department managers. They use the revenue information as the basis for developing their own budgets.
h. Obtain department budgets: Obtain the budgets from all departments, check for errors, and compare to the bottleneck, funding, and step costing constraints. Adjust the budgets as necessary.
i. Obtain capital budget requests: Validate all capital budget requests and forward them to the senior management team with comments and recommendations.

j. Update the budget model: Input all budget information into the master budget model.
k. Review the budget: Meet with the senior management team to review the budget. Highlight possible constraint issues, and any limitations caused by funding problems. Note all comments made by the management team, and forward this information back to the budget originators, with requests to modify their budgets.
l. Process budget iterations: Track outstanding budget change requests, and update the budget model with new iterations as they arrive.
m. Issue the budget: Create a bound version of the budget and distribute it to all authorized recipients.
n. Load the budget: Load the budget information into the financial software, so that you can generate budget versus actual reports.

The number of steps noted here may be excessive for a smaller business, where perhaps just one person is involved in the process. If so, the number of steps can be greatly compressed, to the point where a preliminary budget can possibly be prepared in a day or two.

4.6: Steps in preparing production budget:

Production budget It is a detailed plan showing the number of units that must be produced during a period in order to satisfy both sales & inventory needs.

The steps of preparing production budget are given below:

a. **Production planning:** To accomplished any work, there needs to accurate pre-planning. The quantity of products, the time of production time, the standard of production and products should be considered at first.
b. **Production capacity of plant:** The production capacity of plant should be assured before preparing of production budget. The production of products should not be possible without production capacity.
c. **Loading capacity of store:** The loading capacity of store should considered with the help of proper analysis. Because excess production than the production capacity can causes damage of products.
d. **Consideration of sales budget:** Products are produced for selling. The quantity of production should be based on sales unit.

4.7: Direct Material Budget; Purchase Budget; Sales Budget:

Direct materials budget: It is a detailed plan showing the amount of raw materials that must be purchased to fulfill the production budget & to provide for adequate inventories.

Purchase budget: It is a detailed plan shows the amount of goods to be purchased from suppliers during the period.

Sales budget: It is a detailed schedule showing expected sales expressed in both taka & units.

4.8: Zero-based budget:

Zero-based budget is a budget-planning procedure for the revaluation of an organization’s program and expenditure. It requires each manager to justify the entire budget request in details and places the burden of proof on the manager to justify why authorization to spend any money at all should be granted. It starts with the assumption that zero will be spent on each activity-thus, the term zero-based. Managers are asked to prepare for each activity or operation under their control a decision package that includes an analysis of cost, purpose, alternative course of action, measures of performance, consequences of not performing the activity and benefits. Success in implementing Zero-based budgeting requires:-

a. Linkage of zero-based budgeting to the short and long-range planning and control.
b. Sustain support and commitment from executive management.
c. Innovation among the managers who make up the budget decision packages.
d. Sale of the procedure to the people who must perform the work necessary to keep the concept vigorous.

4.9: Considering factors in preparing sales budget:

The budget which is prepared for determining what is the probable sales in future period called sales budget. The considering factors are given below:

a. **Analysis of past sales:** The regularity of past sales reflects in future periods. So, past sales should be considered in new sales budget.
b. **Experience of salesperson:** Salesperson can provide clear ideas of a special area and overall customers. For this reasons, the experience and counseling of salesperson should be considered.
c. **Production capacity:** The production capacity of business organizations should be considered in sales budget for increasing sales.
d. **Availability of raw materials and other supplies:** The availability of raw materials and other supplies should be considered in preparing sales budget for the overall benefit of a business organization.
e. **Government policy:** The demand of products increases and decreases for the reason of government policy. So, government policy should be considered in sales budget.
f. **Trade cycle:** Trade cycle effect the demand of a product. The fluctuation of trade cycle should be considered in sales budget.
g. **Financial capacity:** Financial condition and financial capacity should be considered in preparing sales budget. Because if a business wants to increase sales, them there needs to additional capital availability.
h. **Sales policy:** If a business organization has own sales policy, then it should be considered in preparing sales budget.
i. **Seasonal demand:** The demand of products changes due to season and weather. For example- the sales of warm cloth increases in winter seasons and umbrella increases in rainy season. So, seasonal demand should be considered in sales budget.
j. **Overall business conditions:** The increase and decreases of sales quantity can affect other area of business. So, there needs to be consider sales in other sectors.

4.10: Major sections of Cash Budget:

Cash budget is the projection or estimate of the anticipated cash receipts and cash disbursements and resulting cash balance within a specified period.

The cash budget is composed of four major sections. These are described below:

a. **The receipt sections:** It lists all of the cash inflows, except from financing, expected during the budget period. Generally, the major sources of receipts are from sales.
b. **The disbursements sections:** It summarizes all cash payments that are planned for the budget period. These payments include raw materials purchases, direct labor payments, manufacturing overhead costs, and so on, as contained in their respective budgets. Others cash disbursements such as equipment purchases and dividends are listed.

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

Cash Balance, beginning	Tk. xxxxx
Add: Receipt	xxxxx
Total Cash Available	xxxxx
Less: Cash disbursements	xxxxx
Excess (deficiency) of cash available over disbursements	xxxxx

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

d. **The financing section:** It details the borrowings and repayments projected to take place during the budget period. It also lists interests payments that will be due on money borrowed.

4.11: Documentary parts of the master budget:

Master budget refers to a summary of a company's plans including specific targets of sales, production, and financing activities. It consists of a number of separate but interdependent budgets. The master budget which culminates in a cash budget, a budgeted income statement, and a budgeted balance sheet- formally lays out the financial aspects of management's plans for the future and assists in monitoring actual expenditures relative to those plans. The master budget is the summary budget incorporating its component functional budgets and which is finally approved, adopted and employed.

The following list of documents that would be a part of the master budget:

a. A sales budget, including a schedule of expected cash collections.
b. A production budget (a merchandise purchase budget would be used in a merchandising company).
c. A direct materials budget, including a schedule of expected cash disbursements for purchases of materials.
d. A direct labor budget.
e. A manufacturing overhead budget.
f. An ending finished goods inventory budget.
g. A selling and administrative expense budget.
h. A cash budget.
i. A budgeted income statement.
j. A budgeted balance sheet.

4.12: Budgeted Income Statement and Budgeted Balance Sheet:

Budgeted Income Statement: Budgeted income statement is one of the key schedules in the budgeted process. It shows the company's planned profit and serves as a benchmark against which subsequent company performance can be measured.

Budgeted Balance Sheet: Budgeted balance sheet is developed using data from the balance sheet from the beginning of the budget period and data contained in the various schedules.

Exercise

Exc-01: Production Budget: Popular boomerang for the next four months as follows:

Month	**Sales in unit**
April	50,000
May	75,000
June	90,000
July	80,000

The company is now in process of preparing a production budget for the second quarter. Past experience has shown that end-of-month inventory levels must be equal 10% of the following months sales. The inventory at the end of March was 5,000 units.

Required: Prepare a production budget for the second quarter; in your budget show the number of units to be produced each month & for the quarter in total.

Exc-02: Direct materials budget: Three grams of musk oil are required for each bottle of mink cares, a very popular perfume made by a small company in western Siberia. The cost of the musk oil is 150 roubles per kilogram (Siberia is located in Russia, whose currency is the rouble). Budgeted production of mink caress is given below by quarters for Year-2 and for the first quarter of Year-3.

	Year-2 quarter				**Year-3 quarter**
	First	Second	Third	Fourth	First
Budgeted production in bottles	60,000	90,000	1,50,000	1,00,000	70,000

Musk oil has become so popular as a perfume ingredient that it has become necessary to carry large inventories as a precaution against stock-outs. For this reason, the inventory of musk oil at the end of a quarter must be equal to 20% of the following quarter's production needs. Some 36,000 grams of to musk oil will be on hand to start the first quarter of Year-2.

Required: Prepare a direct materials budget for musk oil, by quarter & in total for year 2. At the bottom of your budget, show the amount of purchases in roubles for each quarter & for the year in total.

Exc-3: Direct Labor Budget: The production department of Rordan Corporation has submitted the following forecast of units to be produced by quarter for the upcoming fiscal year:

Particulars	**1st Quarter**	**2nd Quarter**	**3rd Quarter**	**4th Quarter**
Units to be produced	8,000	6,500	7,000	7,500

Each unit requires 0.35 direct labor-hours and direct laborers are paid $12.00 per hour.

Required:

i) Construct the company's direct labor budget for the upcoming fiscal year, assuming that the direct labor work force is adjusted to match the number of hours required to be produced the forecasted number of units produced.

ii) Construct the company's direct labor budget for the upcoming fiscal year, assuming that the direct labor work force is not adjusted each quarter. Instead, assume that the company's direct labor work force consists of permanent employees who are guaranteed to be paid for at least 2,600 hours of work each quarter. If the number of required direct labor-hours is less than this number, the workers are paid for 2,600 hours anyway. Any hours worked in excess of 2,600 hours in a quarter are paid at the rate of 1.5 times the normal hourly rate for direct labor.

Exc-4: Manufacturing Overhead Budget: The direct labor budget of Yuvwell Corporation for the upcoming fiscal year contains the following details concerning budgeted direct labor budget:

Particulars	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Budgeted direct labor hours	8,000	8,200	8,500	7,800

The company's variable manufacturing overhead rate is $3.25 per direct labor hour and the company's fixed manufacturing overhead is $48,000 per quarter. The only non-cash item included in the fixed manufacturing overhead is depreciation, which is $16,000 per quarter.

Required:

i) Construct the company's manufacturing overhead budget for the upcoming fiscal year

ii) Compute the company's manufacturing overhead rate (including both variable and fixed manufacturing overhead) for the upcoming fiscal year. Round off to the nearest whole cent.

Exc-5: Selling & Administrative Expense Budget: The budgeted unit sales for Weller Company for the upcoming fiscal year are provided below:

Particulars	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Budgeted unit sales	15,000	16,000	14,000	13,000

The company's variable selling and administrative expense per unit is $2.50. Fixed selling and administrative expenses include advertising expense of $8,000 per quarter, executive salaries of Tk.35,000 per quarter and depreciation of $20,000 per quarter. In addition, the company will make insurance payments of $5,000 in the first quarter and $5,000 in third quarter. Finally, property taxes of Tk8,000 will be paid in the second quarter.

Required: Prepare the company's selling and administrative expense budget for the upcoming fiscal year.