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Financial Management Training Manual

Enhancing the Sustainability and Profitability of the
Carpet and Pashmina Industries in the Kathmandu Valley



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Carpet and Pashmina Industries in the Kathmandu Valley

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From the desk of Country Director

Mercy Corps Nepal has been actively involved in conducting Financial Literacy Training to the individuals/households of rural Nepal. The main objective of the Financial Literacy Training is to help individuals to record and understand income and expenditure, calculate interest rate of their savings and loans, choose the best suited financial product, and to help them understand the financial risk. In the process of increasing financial knowledge across various avenues, I am delighted to highlight that Mercy Corps Nepal has initiated delivery of Financial Management Trainings to private sector entities (Small and Medium-sized Enterprises (SMEs) and other stakeholders) associated with the project. In this regard, it is our great pleasure to introduce you "Financial Management Training Manual".

This training manual is made available as an initiative of the European Union funded project "Enhancing the Sustainability and Profitability of the Carpet and Pashmina Industries of the Kathmandu Valley" with the objective of reaching Small and Medium Enterprise through financial services.

We believe this curriculum will be a useful tool and serve as a reference book regarding financial knowledge for our target beneficiaries. This package is envisaged to foster better understanding of their business health and enable sound financial and management decisions. We also believe that this curriculum will help our beneficiaries to better understand the nature of financial products and at the same time access appropriate financial services.

The manual was prepared with feedback from key stakeholders that are part of Carpet and Pashmina enterprises. This manual has the possibility of revision and further refinement in view of changes in the need of the SMEs in a wider context.

The preparation of the manual was successful with the investment of time and expertise from Biruwa Advisors Pvt. Ltd. who have been working on financial ecosystem with Nepalese small and medium enterprises and Mercy Corps Nepal EC - SWITCH Project team members.

We would like to pay special thanks to the European Union SWITCH-Asia, donor of the project "Enhancing the Sustainability and Profitability of the Carpet and Pashmina Industries in the Kathmandu Valley".

Sanjay Karki

Country Director

Mercy Corps Nepal

About the Financial Management Training Manual

This Financial Management Training Manual is developed under the European Union - funded SWITCH-Asia project entitled, “Enhancing Sustainability and Profitability of the Carpet and Pashmina Industries in Kathmandu Valley”.

Financial Management is one of the most important and challenging features of an enterprise and everyday life. It is one of the essential skills that an individual needs to develop in today's world to achieve success. The Financial Management Training Manual which you are holding in your hand is developed as a means to better equip the trainee with financial management knowledge for sound and informed financial decision.

Additionally, the project seeks to enhance the financial capabilities of the small and medium enterprises through financial services, one of the four core intervention areas amongst many actions for the SMEs to switch to Resource Efficient Cleaner Production and become more competitive in the export market.

The manual has been prepared following the standards of financial management principles to serve the need of various categories of small and medium Carpet and Pashmina enterprises who are the intended beneficiaries that are involved in the project activities.

The manual is divided into six chapters. The chapters in the manual are arranged such that the depth of financial knowledge goes on increasing with each chapter. The first two chapters deal with the cost. The first chapter is on basic costing which gives the trainee with detail concept on direct and indirect manufacturing cost, costing terms, activity based costing, and standard costing with material charge variation, material usage variation. The second chapter deals with relevant cost which can occur in future and can differ with different actions taken.

The third chapter highlights on financial reports which each business has to generate at the end of the fiscal year. Financial reports are mandatory to submit to the government bodies and it is also mandatory to submit to commercial institutions in order to avail financing.

The fourth chapter will equip the trainee with concepts and techniques in analyzing capital budgeting which is very useful in evaluating investment opportunities and options.

The fifth chapter deals with various financial ratios which are useful to evaluate the overall financial condition of the company. The chapter gives detailed analysis on various ratios like profitability ratio, efficiency ratio, and liquidity ratio to name a few. The chapter also equips the trainee with techniques to calculate break even points of investment and payback period.

The sixth and the last chapter deals with financing which will furnish the trainees with the different ways that company can manage their financing, pros and cons associated with each financing option. The chapter includes financial and operational leverage for increasing profitability of the organization.

Exercises have been included for each chapter of the manual in order for the participants to practice and develop a better understanding of an enterprise level financial management. We encourage the trainee to go through each exercise in detail to have a better understanding of the financial concepts presented. Trainee can use this manual in future as a reference material to further brush up their financial management knowledge.

Happy Learning!

Surendra Chaudhary

Project Manager

EC- SWITCH

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Chapter 1 - Basic Costing

STEP 1

Objective

By the end of this section, trainees will have knowledge of:

1. Direct and indirect costs as well as cost of production
2. Components of cost structure
3. Format of cost sheet

1.1. Understanding Costs

Cost means the amount of expenditure that can be allocated to a product. Proper understanding of cost is very important for business because it helps in determining the product price in the market which affects the competitiveness of the product and profitability of the company. Product costing should be done after accounting for all the direct, indirect and opportunity costs.

Many a times, companies fix selling price of a product based on the competitors pricing, or only based on direct costs. All other factory and administrative overheads not considered. This approach leads to lesser profitability or even loss. Therefore, various direct and indirect cost need to be accounted for formulating actual cost.

1.1.1. Direct Cost

The price that can be directly traced to the production of specific goods or services is called direct cost. Direct cost includes direct materials and direct labor related to a product. Direct cost varies with the level of production.

Direct material: Materials which are directly related to products. For example, In a carpet industry wool, dyes etc. are the direct material. These include raw materials and consumables used for production.

Direct Labor: Labor that is directly related to production of goods is direct labors. This includes machine operators, painters etc. Their involvement varies with the level of production.

Collectively direct cost is called **prime cost**.

For example, If a company produces a carpet, the cost of wool, dyes, labour involved in the production is direct costs. These are the cost which needs no allocation for a specific product.

1.1.2. Indirect Cost

A cost not directly traceable to a product is indirect cost. This includes administrative cost, publication expenses, advertisement expenses, sales promotion expenses, depreciation, vehicle usage costs, audit fees etc.

Why should we know Direct and Indirect cost ?

It is necessary for businesses to know the difference between direct and indirect cost and the method to incorporate these costs while costing a product because:

- a. It helps the management in comparing changes in cost of goods sold in different accounting periods as well as in different quantity.
- b. Indirect costs like depreciation, opportunity cost and selling expenses are not considered in product costing however these are important and necessary in processes up to delivery of a product.
- c. In manufacturing companies, the indirect cost is generally lesser than direct cost and in service based company, it is reverse. Budget includes amount of indirect cost assessed for the period which helps to monitor the abnormal expenses which can be cut down in coming years.

Excercise 1

You received an order for 100 pieces of high quality Pashmina from USA, in Baisakh. The order is deliverable in the month of Asoj / Kartik. The order takes 3 months to complete. What are the cost factors you would consider ?

Exercise 2

Segregate the following costs into direct cost and indirect cost.

S.N.	Description	Direct Cost	Indirect Cost
a	Wages		
b	Salary		
c	Material		
d	Electricity		
e	Telephone Expenses		
f	Color for dyeing		
g	Insurance		
h	Fabric		
i	Transportation cost for bringing material into the factory		
j	Depreciation		

1.1.2.1. Terminologies in Cost Sheet

Cost sheet is a tool to systematically arrive at the cost of a product. Using cost sheet reduces the chance of missing any cost that should be incorporated in the cost of a product. Cost sheet enables the management to analyze cost composition of the product and a perspective to where the company can reduce costs.

Opening Stock: It is the stock of raw materials and/or finished goods carried forward from the previous year, which can be used this year. Opening stock is one of the input for arriving at cost of goods sold.

Purchases: It refers to the total purchases during the year and includes all the purchase for the business. As per accrual principal, the purchases should be booked, whenever the goods are received but not when paid.

Closing stock: It is the stock remaining at the end of the year. It can be utilized in the subsequent years. The stock can be of raw material, semi-finished products or finished products. Closing stock is an asset of the company and is valued based on the cost incurred on them.

Work Overheads: These are indirect costs which cannot be directly attributed to a product but are necessary for the operation of business. Example includes electricity cost, telephone cost etc.

Administrative Overhead: These are expenses for administration of the company. These includes salary to manager, helper etc. Company should properly book administrative overhead to analyze the overhead cost in relation to its revenue.

Selling and distribution overhead: Selling and distribution overheads are the costs incurred as sales promotion and advertisement. These include all costs relating to selling the goods.

Mark-up margin: This is the amount over and above the cost of production that the company charges for its product. The mark-up margin is determined according to the company's policy and industry standards/practice.

Total selling price: Total selling price is the amount after considering all the costs and mark up margin. It is an amount that the customers need to pay for the product.

[If the company is calculating the cost of its product, it should know the total cost of production by taking into consideration the opening and closing stock. Mathematically,

Cost of production= Opening stock+ Purchases- Closing stock]

1.2. Cost Sheet Format

Headings	Quantity	Amount
Opening Stock of raw material		
Add: Purchases		
Less: Closing Stock		
Cost of Material consumed		
Add: Direct Labor		
Prime Cost		
Add: Work Overheads		
Works Cost		
Add: Administration Overhead		
Cost of Production		
Add: Selling and Distribution Overhead		
Total Cost of Sales		
Add: Mark Up		
Total Selling Price		

Exercise 3

Calculate the cost of the production. Is there any information missing ? What should be the selling price of this product? Put the information into the cost sheet.

Materials Opening Stock	NPR 10,000
Material Purchase	NPR 1,00,000
Material Closing Stock	NPR 5,000
Direct labor	NPR 50,000
Works Overhead (includes rent for whole year)	NPR 15,000
Administration Overhead	NPR 20,000
Selling cost	NPR 10,000

Each item of raw materials is worth NPR 10.

1.3. Other Costing terms

Economic Order Quantity (EOQ): Economic Order Quantity is relevant in procurement of raw materials. In order to reduce blocking of funds in the form of working capital, raw materials should be purchased in such a way that the order costs are also kept at the minimum.

Storage Cost: The cost of storing the goods in a warehouse (rent, administration) is the storing cost. A healthy practice is to produce the goods in such a way that storage cost is not high. Moreover, storing goods for longer time will lower the quality and it is not suggested. Also, raw material must be bought in such a way that storage cost is minimum.

Mathematically,

$$\text{Economic order quantity (EOQ)} = \frac{\sqrt{2 \cdot A \cdot O}}{H}$$

Where,

A = Annual demand quantity of a material under consideration

O = Fixed cost per order i.e. ordering cost (includes cost of order)

H = Annual storage cost per unit

Review Questions:

1. Why is it important to understand and account cost of a product ?
2. What are the direct and indirect cost components ?
3. What are administrative and work overheads ?

STEP 2

Objective

By the end of this section, trainees will have knowledge of

1. Activity Based Costing, Cost drivers and methods of allocating costs
2. Standard costing and variances

1.4. Activity Based Costing

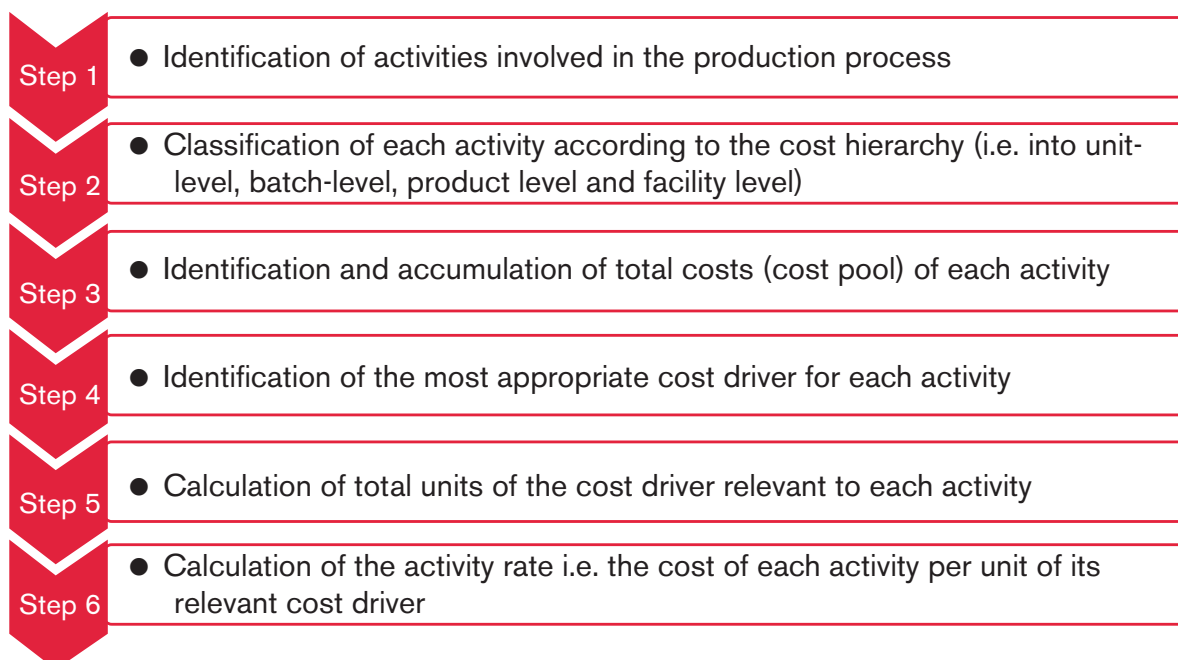
Activity based costing (ABC) is a costing methodology that identifies activities in an organization and assigns the cost of each activity with resources to all products and services according to the actual consumption of resources by them. Activity-based costing is a method of assigning indirect costs to products and services (because direct cost is directly assigned to product) which involves finding cost of each activity involved in the production process and assigning costs to each product based on its consumption of each activity.

For example, there are two products company produces. Product A and Product B. Product A is machine intensive and Product B is labor intensive. If we allocate the cost of machine equally for both products, our pricing would be wrong because Product B does not use machine hours as machine A. So, the costing should be based on the cost driver.

Cost Driver: They are the factor which contributes to the cost of the product. For e.g., machinery cost is a major cost in production so machine hour is a cost driver.

Cost pool: The aggregate of the cost for a service is called cost pool. The cost allocation is done from the cost pool based on cost driver. For e.g., machine setup before production is a cost pool, which has to be allocated over all the products that are produced during a single production run.

Following are the steps for Activity Based Costing:



Exercise 4

For example, a company has two activities. It calculates activity cost rates based on cost driver capacity.

Activity	Cost Driver	Capacity	Cost
Power	Kw/hr	50,000 Kw/hr	NPR 2,00,000
Quality Inspection	No. of inspection	10,000 Inspection	NPR 3,00,000

The company makes three products M, S and T. The following consumption of cost driver was reported at year end

Product	Kilowatt Hrs	Quality inspection
M	10,000	3,500
S	20,000	2,500
T	15,000	3,000

Required: Compute the cost of each product based on the activity ?

1.5. Standard Costing

In standard costing, the cost of each activity (material purchase, labor hours, overhead cost) is pre-set. The standard is assessed based on the cost of previous years. The actual cost of the period is then compared to the **benchmark** standard cost, and the variances are analyzed. This gives the management precise information about the factors that are driving the cost up or down. Examples are:

1. **Material price variance:** The difference between the actual purchase price and standard price of the material purchased is given by material price variance. This helps the management analyze variance in material cost due to difference in standard and actual price.

Mathematically,

$$\text{Material Price Variance} = (\text{SP} - \text{AP}) \times \text{AQ}$$

Where,

SP = Standard Price of a material based on the past year or standard purchasing price

AP = Actual purchase price of a material

AQ = Actual quantity of the material purchased.

Note: Positive variance is favorable for the business.

2. **Material usage variance:** The difference between the actual raw material consumption for a product and standard raw material consumption for a product is given by material usage variance. The variance can be used to analyze efficiency in material consumption during production.

Mathematically,

$$\text{Material usage variance} = (\text{SQ} - \text{AQ}) \times \text{SP}$$

Where,

SQ = Standard quantity of the material used for a product.

AQ = Actual quantity of the material used

SP = Standard price of the material based on past record

Standard Costing is useful because of following reasons:

- a. With standard costing, management can focus on increasing the efficiency of resources while reducing costs.
- b. Standard costing helps in efficient utilization of resources.

For example, A company purchases raw materials without standard costing. It purchased material X (10,000 units) and material Y (20,000) units. If standard approach is not used company may buy more of material X or Y which will be a waste. It gives the point of reference.

- c. Standard costing is used for budgetary controls and budget formation.

Exercise 5

A company has projected its material cost to be NPR 10 per unit but the company actually procured its material for NPR 12. The quantity of material purchased is 10,000 units. Calculate the material price variance ?

Exercise 6

A company expected to use 10,000 units of material for its production. The standard cost for each material is NPR 10 and actual cost of material is NPR8. However, the company completed its production using 8,000 units of material. Calculate the usage variance?

Exercise 7

Analyze the above variances in following parameters:

1. Positive
2. Negative

Review Questions:

1. How are costs segregated based on the Activity Based Costing ?
2. Why does management need to understand standard costing ?
3. What are cost pool and cost drivers?

Chapter 2 - Management and Cost

STEP 3

Objective:

By the end of this section, trainees will have knowledge of

1. Managing of cost for a business
2. Opportunity cost and key factors
3. Value chain analysis and value engineering
4. Inventory Management

2.1. Relevant Cost

To make appropriate decisions, management needs to understand different functions of cost. Mainly the costing concepts can be broadly divided into two parts (i) relevant and (ii) non-relevant.

Relevant cost: Relevant costs are the expected future costs which are different for alternative course of action being planned. In simpler terms, relevant costs are those which change according to the decision being taken.

The following two factors are important to decide whether a cost is relevant or not;

1. **Related cost occur in the future:** The decisions involving relevant cost occur in future. The cost which the company is bearing at the moment is not relevant for future costing because they have already been incurred. Only the additional cost that is going to be occurred should be the point of consideration.
2. **Differ among different course of action:** Relevant cost varies according to action the company is proposing.

Management needs to decide on the alternatives making use of relevant and non-relevant cost. For e.g., when a company has already paid for the rent for coming two years and it needs to decide whether to use that room for storage or sub-let the room, the decision will be independent of the room rent because that has already been finalized and company needs to pay the rent in either of the options. Therefore, the room rent in the given example is non-relevant cost.

Importance of relevance based costing approach are as follows:

- a. Relevant costing approach gives precise information on Limiting Factor or scarce resources (Key Factor), Make or buy decisions and product pricing.
- b. It takes into account only the future cost, which will vary according to the condition.

2.2. Opportunity Cost

Opportunity cost is the value of next best alternative in any decision making. According to Chartered Institute of Management Accountants (CIMA), "opportunity cost is the value of benefit sacrificed when one course of action is chosen in preference to the other." Opportunity cost is the reference point for any costing related decisions. If you are putting money into a business or product, the product should earn the revenue more than opportunity cost.

Examples:

1. The opportunity cost of using a machine to produce a particular product is the earning foregone that would have been possible, if the machine was used to produce another product.
2. The opportunity cost of funds invested in business is the interest that could have been earned had the money been deposited in a bank. If fixed deposit in a bank earns 10%, NPR 10,00,000 invested in a business should earn more than NPR 1,00,000 per year else the investment is not justified.

Exercise 8

You get a special order for producing addition carpets. For this you need to divert your labor from current order to the special order. What considerations are required for assessing the opportunity cost ?

Exercise 9

If not for the order as mentioned in Exercise 1, you can lease out the premise for 6 months which would yield revenue of NPR 1,00,000 and profit of NPR 60,000. How would you consider this proposition ? What price would you quote ?

2.2.1. Make or Buy Decision

Most of the time, a company has spare resources (material and labor) which are not used to the advantage of the company. If the company can make use of such resources then, it will certainly make the business more profitable. In such a case, the company can look into the products or services it buys from other and see, if the spare resources can be used to make such things. In other cases too, the company may be building such products at higher price which may be available in market at low price. Management should analyze the profitability- whether producing any product in-house will increase profit or not.

Example:

A company purchases dyed fabric from the market. The cost is NPR 100 per metre. The company has machine for the process and has spare labor hours. The company needs to purchase color for the process. The company can analyze the cost for doing the same inhouse including the opportunity cost and decide accordingly.

In the same case, let us suppose the company produces dyed fabric in-house for the cost of 110 per metre. Assuming the same quality, such fabric is available in the market for 100 per metre. The company can buy the fabric and use the spare capacity in another process to increase its profitability.

Key factor

The limiting factor (resource that is in limited quantity) that is in scarce supply and without which the functions of organization cannot continue are called key factors. Management must take decisions based such that usage of key factor is optimum.

For example, If machine hour is key factor, management must take decision so as to make optimum use of machine hour, such as double timing for labor, maintenance of machine etc. If labor is in short supply then labor becomes key factor, the company must take projects which will provide better return on labor expenses.

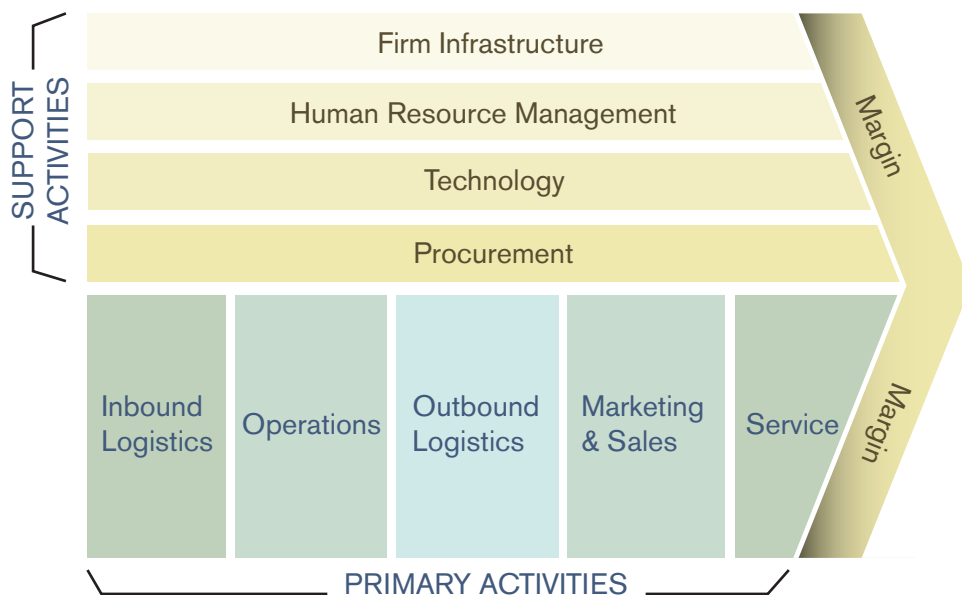
Exercise 10

A company is dyeing its fabric in-house for its product. It sees an opportunity to outsource the same activity? What are the considerations for the decision?

2.2.2. Value Chain

A value chain is a set of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market.

Value engineering (VE) is a systematic method to improve the “value” of goods or products and services by using an examination of functions. This includes close monitoring of each and every steps of the process flow, from purchase of raw material to the final delivery of the goods. This analysis helps the management to identify the areas that need improvement. Value, as defined, is the ratio of function to cost. Value can therefore be increased by either improving the function or by reducing cost. It is a primary tenet of value engineering that basic functions be preserved and not be reduced as a consequence of pursuing value improvements.



Total Quality Management (TQM)

The process of maintaining the **quality** throughout the processes and throughout product life cycle is called Total Quality Management. Some of the examples are:

1. To check whether the goods meet standard before dispatching to the customer.
2. To check the resource efficiency at every stage of production.
3. To aim to keep the sales return as low as possible.
4. To check whether a machine needs preventive maintenance, even if it is doing good work.
5. To provide after sales services.

Review Questions:

1. What are the differences between relevant and non-relevant cost ?
2. How can management use cost to improve the business strategy ?
3. Why is it important for management to keep track of components of value chain ?

2.3. Inventory Management

Inventory is a physical stock of goods that contain economic value and are stored to meet the future demand of the company. Any organization which is into production, trading, sales and service of a product must hold inventory for future consumption and sales. However, service as such cannot be stored. Service is developed and consumed almost simultaneously. For example, travelling in a plane/ bus, customer service in a bank and many others.

Types of Inventory

Generally Inventory are of following types:

1. Raw materials inventory (Input for manufacturing)
2. Semi- finished goods or work-in-progress inventory
3. Finished goods inventory (for sales and distribution)
4. Maintenance, repair, and operating supplies (for supporting production or trading)

Cost Associated with Inventory

Basically, there are three different types of costs associated with inventory. These cost are to be taken care of or analyzed to determine: the level of inventory in our stores and the frequency of purchase. Following are the cost associated with inventory:

a) Inventory carrying cost or holding cost:

Inventory carrying cost includes storage and management cost, and cost of capital. Rental cost, human resource cost to manage inventory, IT hardware, Communication cost, damaged goods while in storage comes under storage and management. Similarly, to hold any inventory one needs to invest on goods. Therefore, cost of capital of the investment, interest on working capital, insurance cost and many others comes into play.

b) Cost of Shortage or Stock-out:

Shortage or Stock-out cost is the estimated value of opportunity cost if we do not have the required material in the stock when the demand arises. This actually depends upon circumstances that may arise in the future. The obvious result of shortage is loss of customer, back-order, loss of good will, project/production delays and many others. It is difficult to assign value to cost of shortage or stock-out as compared to other cost, but an approximate estimate of the cost is better than ignoring such cost altogether.

c) Ordering Cost:

It is the cost and effort incurred every time to placing order of inventories. It depends upon purchase procedure, paper work involved and the extent of bureaucracy in the processing of the purchase order. In general, ordering cost includes cost of invoice processing, accounting, communication cost, transportation cost, cost of unfolding goods at warehouse, and cost of goods inspection among others.

Chapter 3 - Financial Reports

Step 1

Objective:

By the end of this section, trainees will understand:

1. Audit reports and its importance
2. What value addition can audit reports add to business

3.1. Understanding Financial Reports

All accounts of a company are mandatorily subject to thorough examination and verification. This check is generally done by a designated person known as an auditor. An auditor check the accounts of the company generally at the end of the year (sometime earlier too based on requirements like bank loan) based on generally accepted accounting and legal provisions. After the examination, an auditor prepares a report known as the audit report. The auditor also vouches and verifies the financial statements of the company. These financial statements generally consist of Profit and loss account, Balance sheet and Cash flow statement.

Purpose of Financial Statements

The purpose of financial statements is to provide information about the financial position, financial performance and cash flows of an entity that is useful to a wide range of users in making economic decisions and to analyze the position of the company.

Audit report is important as it validates the financial standing of the company presented by the management and helps in corporate governance. Most of the time, management considers it as an unnecessary burden. But if used properly, this can be a great value addition. Thus, the importance of audit report cannot be undermined and it is important for management to understand audit report.

Audit report is important primarily because:

1. It gives management true and fair picture of financial health of the company
2. It gives management input about future course of action for the company
3. It assists management in making business related decisions

Step 2

Objective:

By the end of this section, trainees will understand:

1. Profit and Loss Account and its importance
2. Various components of Profit Loss Account
3. Format of Profit Loss Account

3.1.1. Profit and Loss Account (P&L Account)

An account in the books of organization which shows net profit or loss of the company over a given period of time is the Profit and Loss Account. Here, all the incomes and gains are credited and expenses and losses are debited. These records provide information that shows the ability of a company to generate profit by increasing revenue and reducing costs. The P&L Account is also known as a “Statement of Profit and Loss”, an “Income Statement” or an “Income and Expense Statement”.

3.1.1.1. Some terms in Profit and Loss account

Sales/Revenue: This is the primary income of the company. Sales income reflects the net sales of the company after deducting the sales return (Sales which is returned due to the product being defective or any other reason). The profitability of company depends mostly on sales.

Other income: This is the income of company other than sale. This includes non-operating income such as bank interest, tax refunds, compensation received and income from sale of assets.

Gross profit: This is the figure arrived after deducting the cost of sales from the sales income. Mathematically,

Gross Profit = Net sales- Cost of goods sold

Other office overheads: These are the non-direct cost for a company such as electricity, telephone cost, advertisement, sales promotion, etc.

Operating profit: A profit from business operations (gross profit minus operating expenses) before deduction of interest and taxes.

Depreciation: Depreciation is the reduction in the value of assets over time due to wear and tear. It is not a cash expense but a provision/reserve. The main reason for depreciating an asset over its life is to allocate a certain portion of profit to it so that the asset can be replaced at the end of its useful life.

Depreciation is a mandatory provision i.e. company needs to depreciate its assets irrespective of whether there is profit or not. Depreciation gives tax benefit to the company. There are various way to depreciate an asset. The major ones are Straight Line Method (SLM) and Written Down Value (WDV) method.

Straight Line Method of Depreciation (SLM): In Straight Line Method of depreciation, the assets are evenly depreciated over the period of useful life. In this the total amount to be depreciated is arrived at after deducting the salvage value.

For example, A machine, having useful life of 5 years, is bought for NPR 1,00,000. The salvage value at the end of its useful is estimated to be NPR 20,000. According to Straight Line Method of depreciation, amount to be depreciated will be

$$(\text{Purchase value}-\text{salvage value})/\text{useful life} = (1,00,000-20,000)/5$$

Therefore, amount of depreciation per year will be NPR 16,000.

Written Down Value method (WDV): In WDV method assets are depreciated over the useful life based on the percentage company decides. In Nepal, all company should be depreciated at the rate specified in the statutes.

For example, If an asset is bought for NPR 1,00,000 and the rate of depreciation is 10%. Then for year 1 and 2 the depreciation will be:

Year 1: $100000 \times 10\% = 10000$, Value at year end: $(100000 - 10000) = \text{NPR } 90000$

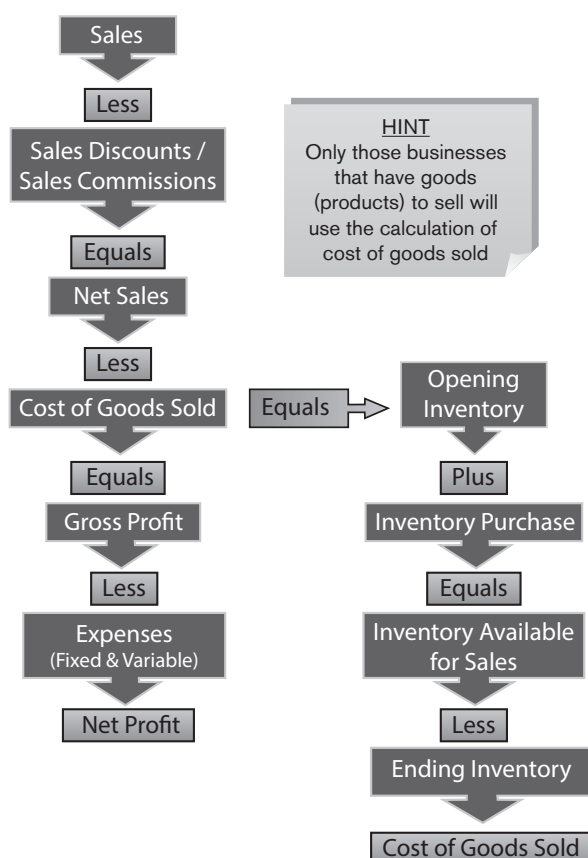
Year 2: $90000 \times 10\% = 9000$, Value at year end: $(90000 - 9000) = \text{NPR } 81000$

Amortization: Amortization is an accounting term that refers to the process of allocating the cost of an intangible asset over a period of time. Intangible asset means those assets which doesn't have physical presence but contributes to revenue of the company. For e.g., Goodwill, preliminary expenses etc.

For example, If a company expends NPR 1,00,000 on relocation. The benefit of relocation can be gained for more than one year. If the expense is allocated for 5 years, amortization per year for 5 years will be NPR 20,000 $(1,00,000/5)$.

Retained earnings: Retained earnings is the profit of the company retained after distributing dividends. Retained earnings get accumulated over the years in a profit making company and may become a major contribution in increasing the net worth of a company.

Process flow of profit and loss account



3.1.1.2. Profit and Loss Format

Company Name

Profit & Loss account

For the year _____

SN	Particulars		Amount in NRs
1	Income		
	Revenue		
	Less: Cost of goods sold		
	Total Gross Profit		
	Add: Other income		
	Less:		
i	Total Income		
2	Expenses		
	Salary & Allowances		
	Other Office Overheads		
ii	Total Operating Expenses		
3	Operating Profit (i-ii)		
i	Depreciation		
ii	Amortization		
	Earnings Before Interest & Tax		
4	Financial Expenses		
i	Interest on loan		
	Profit before tax		
5	Tax*		
	Profit after tax		
6	Retained Earnings		
7	Less: Dividend		
8	Balance transferred to B/S	-	

Exercise 11: Analyze the given profit and loss account

Profit and Loss Account

For the period _____

SN	Particulars	Amount in NPR
1	<u>Income</u>	
	Revenue	50,00,000
	Less: Cost of goods sold	25,00,000
	Total Gross Profit	25,00,000
	Add: Other income	5,00,000
(i)	Total Income	30,00,000
2	<u>Expenses</u>	
	Salary & Allowances	10,00,000
	Other Office Overheads	5,00,000
(ii)	Total operating expenses	15,00,000
3	<u>Operating Profit (i-ii)</u>	15,00,000
	Depreciation	5,00,000
	Amortization	1,00,000
	Earnings Before Interest & Tax	9,00,000
4	<u>Financial Expenses</u>	
	Interest on loan	2,00,000
	Profit before tax	7,00,000
5	Tax*	1,75,000
6	Profit after tax	5,25,000
7	Retained Earnings	-
8	Less: Dividend	
9	Balance transferred to B/S	5,25,000

Exercise 12

Calculate (i) Gross Profit (ii) Profit from operations (iii) Tax (assume tax rate to be 25%) (iv) Profit after tax

Sales income:	10,00,000
Cost of goods sold:	6,00,000
Other income:	2,00,000
Administrative cost:	1,00,000
Interest Expenses:	1,00,000
Depreciation:	1,00,000

Review Questions:

1. Are you confident in preparing and reading a Profit and Loss Account ?
2. How can management use Profit and Loss Account to formulate a business strategy ?

Step 3

Objective:

By the end of this section, trainees will understand:

1. Balance Sheet and its importance
2. Various components of Balance Sheet
3. Format of Balance Sheet

3.1.2. Balance Sheet

The Balance Sheet is a financial statement that shows what the business is worth at a point in time.

3.1.2.1. Components of a Balance Sheet

The Balance Sheet shows a business what it owns (assets), what it owes (liabilities), and what is left over (net value or equity in the business). The numbers in a Balance Sheet change every time a business receives money or gives credit to a client as well as, when it prepays or accrues an expense.

Balance Sheet has three parts:

- ❖ Assets
- ❖ Liabilities
- ❖ Shareholder's Equity

Assets are the resources that a business uses to operate its business. Whereas, **liabilities** are the financial obligations or debts of the business and include claims that creditors have on resources of the business.

Assets and liabilities are divided into current (short term) and non-current (long term), and may have several components within each sub division.

Non-current Assets

These include assets which are not expected to be converted into cash or consumed within a year.

Example: Property, plant, equipment, machinery, motor vehicles, furniture and fixture, leasehold assets and intangible assets such as goodwill, patents.

Current Assets

These include assets which are expected to be converted or consumed into cash within a year.

Example: Inventories, trade receivables, cash and cash equivalents and prepaid expenses.

Current Liabilities

These include obligations due within one year.

Example: Trade payables, bank overdrafts and taxation and owing expenses.

Non-current liabilities

These include obligations which are due after more than a year.

Example: Bank loans and long term provisions.

Shareholders' Equity

Shareholder Equity is the net worth of a company. It represents the stockholders' claim to the assets of a business after all creditors and debts have been paid. It consists of share capital (both ordinary and preference share capital) and all the reserves.

It can be calculated by subtracting total liabilities from total assets.

Share Capital

Equal parts into which a company's capital is divided, entitling the holder to a proportion of the profits is Share. The total amount of capital derived through the shares is the share capital.

Some of the key reserves include:

Retained Earnings

Retained Earnings are the profits that a company has earned to date less any dividends or other distributions paid to investors. A large retained earnings balance implies a financially healthy company.

Revaluation Reserve

Revaluation Reserves arise when the value of an asset revaluated and becomes greater than the value at which it was previously carried on the balance sheet, increasing shareholders fund.

The relationship of these items is expressed in the fundamental balance sheet equation:

Assets = Liabilities + Equity

On completion of an accurate Balance Sheet, following can be determined:

- ❖ The general financial state of the business at a specific point in time
- ❖ The amount of capital retained in the business
- ❖ How fast or slow assets can be converted to capital
- ❖ Percentages and ratios (which are extracted from the numbers) necessary to analyze your business
- ❖ Compare values such as cash, accounts payable, accounts receivable, equity, inventory and retained earnings over two different accounting periods.
- ❖ The total profit or loss for the given period.
- ❖ Compare whether current assets and current liabilities are proportionate and justifiable or not.

3.1.2.2. Format of Balance Sheet generally accepted by Banks

Company Name

BALANCE SHEET

As of _____

(Amount in NPR '000)

LIABILITIES	Current Yr.	Previous Yr.	ASSETS	Current Yr.	Previous Yr.
Capital (Invested & Paid up)			Land & building		
Accumulated Profits			Furniture & Fixture		
Borrowing from members of firm			Machinery, Equipment & Vehicle		
Borrowing from Companies in the group			Total Fixed & Non-Current Assets		
Loan (Shareholders)			Stocks		
Long Term Credits			Bills Receivable		
Adv. Pmt./deposits by the customer			Sundry Debtors		
Bills Payable			Other Investment		
Sundry creditors			Cash on hand & bank		
Bank Loan & overdraft			Deposits/Staff adv.		
			L/C, GT Cash Margin		
			Misc. assets/advance		
TOTAL LIABILITIES			TOTAL ASSETS		

Exercise 13

Make a balance sheet from the following data

Account Title	Debit	Credit
Cash	8,000	
Accounts Receivable	3,000	
Office Supplies	3,000	
Machine	5,000	
Bank Loan		5,000
Accounts Payable		1,000
Equity		11,000
Revenue		7,000
Rent Expense	600	
Salaries Expenses	2,500	
Supplies Used	1,200	
Utility Expenses	700	
Total	24,000	24,000

Review Questions:

1. What does the Balance Sheet tell about the company's financial health ?
2. Can you analyze the asset liability mismatch ?

Step 4

Objective:

By the end of this section, trainees will understand:

1. Cash Flow Statement and its importance
2. Various components of Cash Flow Statement
3. Format of Cash Flow Statement

3.1.3. Cash Flow Statement

The Statement of Cash Flows/ Cash Flow Statement is one of the financial statements that summarizes the cash inflow and out flow over a period of time. The basic premise for preparation of Cash Flow Statement is that the profits may not always translate to cash and Cash Flow Statement depicts how the cash flowed.

The Cash Flow Statement is vital as it shows the movement of cash for the year. The Cash Flow Statement also depicts the ability of the business to generate cash from its trading activities is shown. Creditors may be more interested in the ability of the business to pay them than the amount of profit it makes. Furthermore, it provides useful information as a backup to the Income Statement and Statement of Financial Provision.

3.1.3.1. Components of Cash Flow

Cash inflows include:

Cash sales, payments from customers, money received from the sale of surplus non-current assets, loans, government grants, personal funds invested, receipts from factoring etc.

Cash outflows include:

Payment to suppliers and creditors, wages and salaries to employees, purchase of non-current assets, interest on loans and debentures, payments of dividends, repayment of loans etc.

Cash and Profit: Is there a difference ?

Although it is important to know the amount of profit a business has made, profit is not cash in the bank. The business does not pay its creditors from the balance on the retained earnings account. No business has ever been forced to close down by its creditors because it made an operating loss. But a business can be forced into liquidation, if it has insufficient money in its bank account to pay its debts when they fall due.

Sections in Cash Flow Statement

Cash Flow Statements have three distinct sections, each of which relates to a particular component of a company's business activities. They are:

1. Operating Activities

The cash flows from operating activities tell you how much cash the company generated from its core business, as opposed to its peripheral activities such as investing or borrowing. It paints the best picture of how well a firm's business operations are producing cash that will ultimately

benefit shareholders. Some of the main line items found in this section are described below:

Net income, which is taken directly from the Income Statement, is the starting point of cash contribution by the core operations of a business when Indirect Method is used. However, there are several items in the Income Statement that affects income but does not affect cash flow, so all the non-cash items are adjustments to net income to arrive at Cash Flow from Operating Activities.

Working capital - The amount of funds required to meet the day to day fund requirement of operation is the working capital. Working capital represents operating liquidity available to a business.

Mathematically,

Working Capital = Current Assets - Current Liabilities

If accounts receivable increase, this means that the firm collected less money from its customers than its sales during the same year. This is a negative event for cash flow and thus it is subtracted from the cash flow. On the other side, if accounts payable were to increase, it means a firm is able to pay its suppliers more slowly, which is a positive event for cash flow so it is added to the cash flow.

2. Investing Activities

This section of the Cash Flow Statement consists of items depicting cash inflow or outflow in the nature of investment activities. Investments are usually classified as either capital expenditure, which is the money spent on items such as new equipment or anything else needed to keep the business running or monetary investments such as the purchase or sale of government bonds.

3. Financing Activities

The last section of the cash flow statement shows the cash inflows and outflows related to transactions with the providers of finance i.e. the owners (shareholders) and the banks/financiers of the company. Thus, cash flows from financing activities include transactions such as proceeds from borrowings (both short-term and long-term), repayments to owners, receipts from the issue of new shares and payments for the redemption of shares.

3.1.3.2. Format of Cash Flow Statement

Company Name _____

Cash Flow Statement

For the F.Y. _____

(Amount in NPR '000)

S. No.	Particulars	Last year	This year
A	<u>Cash flow from Operational Activities</u>		
	Net Profit/ (Loss) Before Income Tax		
	<u>ADD:</u>		
	Depreciation		
	Amortization		
	Interest Expenses		
	Provisioning		
	Loss from sale of Fixed Assets		
	Other Non-Cash Expenses		
	<u>Subtract:</u>		
	Profit from sale of Fixed Assets		
	Cash flow prior to change in Working Capital		
	Change in Current Assets: Decrease/ (Increase)		
	Change in Current Liabilities : Increase / (Decrease)		
	Cash flow from operation		
	Interest Payment		
	Tax Payment / Reversal of Tax payment		
	Net Cash flow from Operational Activities		
B	<u>Cash flow from Investment Activities</u>		
	Receipt of Interest and Dividend		
	Fixed Assets/ Investment Sale/ (Purchase)		
	Change in Loans & Advance :Decrease / (Increase)		
	Change in Pre-operating Expenses : Decrease / (Increase)		
	Securities Sale /(Purchase)		
	Net Cash flow from Investment Activities		
C	<u>Cash flow from Financial Activities</u>		
	Issuance of Shares except Bonus share		
	Payment of Long Term Debt		
	Distribution of Dividend		
	Other		
	Net Cash flow from Financial Activities		
	Net Change in Cash : Increase/ (Decrease) {A +B + C}		
	Cash and Bank Balance at the beginning of the year		
	Cash and Bank Balance at the end of year		

Exercise 14

In the above example of Profit and loss, make a cash flow. Assume

Increase in current assets:	NPR 1,00,000
Decrease in current liabilities:	NPR 50,000
Loan payment:	NPR 2,00,000
Opening cash balance:	NPR 2,50,000
Sale of fixed assets:	NPR 1,00,000

Review Questions:

- 1) What does the cash flow show about company's financial health ?
- 2) Why doesn't a sale translate into cash flow ?

Chapter 4 - Capital Budgeting

Step 1

Objective:

By the end of this section, trainees will have knowledge of:

1. Capital budgeting and its importance
2. Investment evaluation techniques
3. Cost Benefit Analysis

Capital budgeting, or investment appraisal, is the planning process used to determine whether an organization's long term investment such as new machinery, replacement machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure (debt, equity or retained earnings). It is the process of allocating resources for major capital, or investment, expenditures. Oftentimes, a prospective project's lifetime cash inflows and outflows are assessed in order to determine whether the returns generated meet a sufficient target benchmark. In other words, the system of capital budgeting is in use to evaluate expenditure which involves current outlays but are likely to produce benefits over longer period of time. The benefits may be either in form of increased revenue or reduced cost. Capital expenditure management, therefore, includes addition, deletion, disposition, modification and replacement of fixed assets.

Capital budgeting decision is important for any business primarily because it involves decision on huge investment. Therefore, a company will need to analyze capital budgeting prior to making capital expenditure so that appropriate decisions are made. Furthermore, such decisions have a major influence in the profitability of the company in the long run. A well worked decision can yield healthy return whereas ad hoc decision can endanger the profitability of the firm.

Capital budgeting decisions are generally in the nature of cost benefit analysis. With techniques of capital budgeting companies can analyze whether the cost that is expended can be recovered through projected revenues.

Capital Budgeting is useful in following investment evaluation:

1. **Accept-reject Decision:** With capital budgeting analysis, we can figure out whether to accept or reject a certain proposal. If the project is accepted, the firm would invest in project and if declined there will be no investment. Such decision is based on the yield of the project.
2. **Mutually Exclusive Decision:** When there are more than one project under consideration and the firm has the resources only for one project, in that case company needs to decide on one of the option using the appropriate and desired concept.
3. **Capital Rationing:** When there are more than one investment options and the company

has adequate capital for more than one option, company needs to decide which project gives highest profitability and decide accordingly.

4.1. Evaluation Techniques

The capital budgeting techniques are primarily based on the concept of time value of money.

This is also called Discounted Cash Flow (DCF) technique. In this technique, the cash inflows projected for coming years are discounted using the discounting factor (generally the IRR or the prevailing interest rates). The primary reason for discounting is to adjust the inflow for inflation. For example, NPR 100 earned this year is usually lesser than NPR 100 earned in next year.

Discounting Factor

Discounting factor is the multiple by which the income or expenses of future years are brought at present value. Mathematically,

$$\text{Discounting factor (DF)} = (1 / (1 + \text{discounting rate}))^{\text{year}}$$

Example

If the discounting rate is 10% and we have to calculate the discounting factor for year 2. The discounting factor for this problem is:

$$DF = (1 / (1 + 10\%))^2 = 0.826$$

The methods of appraising capital expenditure proposals are classified into two broad categories (i) Traditional and (ii) Time adjusted

Traditional method doesn't account for time adjustment or discounting, so it is less relevant in decision making. So, here we will be discussion only on the time adjusted techniques.

4.1.1. Net Present Value (NPV) Method

The NPV technique is a discounted cash flow method that considers the time value of money in evaluating capital investments. The NPV method uses a specified discount rate to bring all the subsequent net cash inflows after the initial investment to their present value at the time of initial investment or year 0.

Mathematically,

$$NPV = \text{Present value of net cash inflows} - \text{total net initial investment.}$$

Steps

- a. Determine the net cash inflow in each year after the investment
- b. Select the desired rate of investment
- c. Find the discount factor for each year based on desired return
- d. Determine present value of net cash flow by multiplying them by discount factor

- e. Add discounted cash flows of all the years in the life of the project
- f. Subtract the total initial investment to arrive at the Net Present Value.

NPV of the project is the easiest and the most scientific approach to evaluate a project. If the cash projections can be fairly estimated the result of NPV gives the management a correct decision whether to accept or reject a project.

Decision:

Selection Criteria of the NPV is positive (i.e. if the total discounted cash inflow over year is more than the initial investment) then the project is acceptable. If the NPV is negative the project should not be accepted. If the NPV is zero then, the project can either be accepted or rejected based on the management preference.

Advantages of NPV:

1. This method considers the time value of money. For example, even for same cash inflow, if the timings are different then NPV method acknowledges the effect. This can be illustrated by following example:

	Machine A	Machine B
Year 1	100,000	50,000
Year 2	2,00,000	50,000
Year 3	3,00,000	5,00,000

Suppose the discounting factor is 10%

Machine A

Year	Inflow	Discounting factor	Discounted Cash Flow
1	1,00,000	0.909	90,909.09
2	2,00,000	0.826	1,65,289.3
3	3,00,000	0.751	2,25,394.4
TOTAL			4,81,592.8

Machine B

Year	Inflow	Discounting factor	Discounted Cash Flow
1	50,000	0.909	45,454.55
2	50,000	0.826	41,322.31
3	5,00,000	0.751	3,75,657.4
TOTAL			4,62,434.3

2. A change in discount rate can be incorporated into calculations; the longer the time span, lower the value of money and higher the discount rate.
3. This method is very suitable for evaluation of mutually exclusive decisions.

4.1.2. Internal Rate of Return (IRR) Method

This is also known as Yield on Investment. IRR method also considers time value of money by discounting the cash flow. The IRR method uses the discounting factor but the discounting rate is internal rather than external. IRR is the discounting rate which equates the aggregate present values of cash inflow with the aggregate present value of cash outflow. In other words, this is the rate where Net Present Value of a project is zero.

Decision:

The decision involves a comparison of the actual IRR with the required rate of return of the company which is also known as cut-off rate. The project qualifies to be accepted, if the IRR exceeds the cut off rate.

4.1.3. Profitability Index (PI)

The PI approach measures the present value of returns per rupee invested. It is the ratio obtained by dividing the present value of future cash inflow by the present value of cash outflow.

Mathematically,

$$PI = (\text{Present value of cash inflow}) / (\text{Present value of cash outflow})$$

Decision:

A project will qualify for acceptance, if its PI exceeds one. If the PI is less than one, project should not be accepted. If the PI equals one, the firm is indifferent. PI is more useful, if there is capital rationing to be done.

4.1.4. Discounted Pay Back Period

Discounted Pay Back Period is also a capital budgeting procedure used to determine the profitability of a project. In contrast to an NPV analysis, which provides the overall value of a project, a discounted payback period gives the number of years it takes to break even from undertaking the initial expenditure. Future cash flows considered are discounted to time "zero." This procedure is similar to a payback period; however, the payback period only measures how long it takes for the initial cash outflow to be paid back, ignoring the time value of money.

Exercise 15

You have to decide on buying two things - toothbrush and machinery for your company. What may be the difference between these two in terms of decision making?

Exercise 16

A machine costs NPR 10,00,000 to install. The machine has a useful life of 5 years and can produce 1,000 units of product which can be sold for NPR 350 each. The cost of making each product is NPR 100. The salvage value of machine is NPR 1,00,000. Depreciation is calculated on Straight-Line Method (SLM) basis and corporate tax is 25%. Should the company accept this decision ? The prevailing interest rate is 10%.

4.2. Cost Benefit Analysis (CBA)

Cost Benefit Analysis is a process by which business decisions are analyzed. The benefits of a given situation or business-related actions are aggregated and the costs associated with the action are subtracted. In other words, cost benefit analysis is a technique used to compare the total costs of a program/project with its benefits, using a common metric (most commonly monetary units). This enables the calculation of the net cost or benefit associated with the program.

As a technique, it is used most often at the start of a program or project when different options or courses of action are being appraised and compared, as an option for choosing the best approach. It can also be used, however, to evaluate the overall impact of a program in quantifiable and monetized terms.

Broadly CBA has two purposes:

- a. To determine, if the investment is feasible / justifiable
- b. To provide a basis for comparing projects. It involves comparing the total expected cost of each option against the total expected benefits, to see whether the benefits outweigh the costs, and by how much

Steps involved in CBA

Identifying Costs

The first step is to identify and quantify all costs associated with a proposed action. In order to successfully identify all potential costs of a project, one must follow the subsequent steps.

1. Make a list of all monetary costs that will be incurred upon implementation and throughout the life of the project. These include start-up fees, licenses, production materials, payroll expenses, user acceptance processes, training, and travel expenses, among others.
2. Make a list of all non-monetary costs that are likely to be absorbed. These include time, lost production on other tasks, imperfect processes, potential risks, market saturation or penetration uncertainties, and influences on one's reputation.
3. Assign monetary values to the costs identified in steps one and two. To ensure equality across time, monetary values are stated in present value terms. If realistic cost values cannot be readily evaluated, consult with market trends and industry surveys for comparable implementation costs in similar businesses.
4. Add all anticipated costs together to get a total costs value.

Identifying Benefits

The next step is to identify and quantify all benefits anticipated as a result of successful implementation of the proposed action. To do so, complete the following steps.

1. Make a list of all monetary benefits that will be experienced upon implementation and thereafter. These benefits include direct profits from products and/or services, increased

contributions from investors, decreased production costs due to improved and standardized processes, and increased production capabilities, among others.

2. Make a list of all non-monetary items that one is likely to experience. These include decreased production times, increased reliability and durability, greater customer base, greater market saturation, greater customer satisfaction, and improved company or project reputation, among others.
3. Assign monetary values to the benefits identified in steps one and two. Be sure to state these monetary values in present value terms as well.
4. Add all anticipated benefits together to get a total benefits value.

Evaluate Costs and Benefits

The final step when creating a cost benefit analysis is to weigh the costs and benefits to determine if the proposed action is worthwhile. To properly do so, follow the subsequent steps.

1. Compare the total costs and total benefits values. If the total costs are greater than the total benefits, one can conclude that the project is not a worthwhile investment of company time and resources.
2. If total costs and total benefits are roughly equal to one another, it is best to re-evaluate the costs and benefits identified and revise the cost benefit analysis. Often times, items are missed or incorrectly quantified, which are common errors in a cost benefit analysis.
3. If the total benefits are much greater than the total costs, one can conclude that the proposed action is potentially a worthwhile investment and should be further evaluated as a realistic opportunity.

Review Questions:

1. What is the importance of capital budgeting ?
2. What do you understand by capital and revenue expenses ?
3. Why is NPV a good technique to decide on projects ?
4. What is cost benefit analysis ?

Chapter 5 - Financial Ratios

Objective:

1. By the end of this section, trainees will have knowledge of: Financial ratios and their importance
2. Various ratios and how they diagnose the finances of a company
3. Current Assets/liabilities, liquidity, leverage
4. Various margins

A financial ratio or accounting ratio is a relative magnitude of two selected numerical values taken from an enterprise's financial statements. Often used in accounting, there are many standard ratios used to evaluate the overall financial condition of a corporation or other organization. Financial ratios are extensively used to gauge the performances of the company in various parameters. Some of which are:

1. Analyzing Financial Statements

Ratio analysis is an important technique of financial statement analysis. Accounting ratios are useful for understanding the financial position of a company. Different users, such as investors, management bankers, and creditors use the ratio to analyze the financial situation of the company for their decision making purpose.

2. Judging Efficiency

Accounting ratios are important for judging the efficiency of a company in terms of its operations and management. They help judge how well the company has been able to utilize its assets and earn profits.

3. Locating Weakness

Accounting ratios can also be used in locating weakness of the operations of a company even though its overall performance may be quite good. Management can focus in the weakness to take remedial actions.

4. Formulating Plans

Although accounting ratios are used to analyze past financial performance, they can also be used to establish future trends of financial performance. This can be used to formulate future plans of the company.

5. Comparing Performance

It is essential for a company to know how well it is performing over the years and as compared to the other firms of the similar nature. It is also important to know how well its divisions/lines are performing among themselves in different years. Ratio analysis can be used to make such comparisons.

5.1. Profitability Ratios

5.1.1. Gross Profit Margin

Gross Profit Margin is a financial metric used to assess the financial health of a company by revealing the proportion of money left over from revenues after accounting for the cost of goods sold. It serves as the source for paying additional expenses and future savings.

Calculated as:

$$\text{Gross Profit Margin} = (\text{Revenue} - \text{COGS}) / \text{Revenue}$$

Where: COGS = Cost of Goods Sold

Also known as, “gross margin.”

Gross profit margin is a key measure of profitability by which investors and analysts compare similar companies and companies to their overall industry. The metric is an indication of the profitability, financial success and viability of a particular product or service. The higher the percentage, the more the company retains on each rupee of sales to service its other costs and obligations.

5.1.2. Net Profit Margin

Net Profit Margin/ Net Margin is the ratio of net profits to revenues of a company or business segment, typically expressed as a percentage, which shows how much of each rupee earned by the company is translated into profits. Net margins can generally be calculated as:

$$\text{Net Margin} = (\text{Net Profit}) / \text{Revenue}$$

Where,

$$\text{Net Profit} = \text{Revenue} - \text{cost of goods sold} - \text{operating expenses} - \text{Interest and taxes}$$

Net profit margin and gross profit margin can be compared to check if the operating expenses are justifiable or not.

5.1.3. Return on Capital Employed

Return on Capital Employed (ROCE) is a financial ratio that measures the profitability and efficiency of a company with which capital is employed. It is calculated as:

$$\text{ROCE} = \text{Earnings before Interest and Tax (EBIT)} / \text{Capital Employed}$$

“Capital Employed” as shown in the denominator is the sum of shareholders’ equity, retained earnings and debt liabilities. It can be simplified as (Total Assets – Current Liabilities).

A higher ROCE indicates more efficient use of capital. ROCE should be higher than the capital cost of a company.

5.2. Efficiency Ratios

The ratios that are typically used to analyze how well a company uses its assets and liabilities internally are Efficiency Ratio. Efficiency Ratios are used to calculate the turnover of receivables, the repayment of liabilities, the quantity and usage of equity and the general use of inventory and machinery.

5.2.1. Debtors turnover ratio

An accounting measure used to quantify a firm's effectiveness in extending credit as well as collecting its debts. The receivables turnover ratio is an activity ratio, measuring how efficiently a firm uses its assets.

Formula:

Debtor Turnover= (Net Credit Sales)/Average debtors

A high ratio implies that a company manages extension of credit and collection of accounts receivable efficiently.

A low ratio implies the company should re-assess its credit policies in order to ensure the timely collection of imparted credit that is not earning interest for the firm and reduce the blockage of fund in working capital.

5.2.2. Stock Turnover Ratio

A ratio showing how many times the inventory of a company is sold and replaced over a period. The days in the period can then be divided by the inventory turnover formula to calculate the days it takes to sell the inventory on hand or "inventory turnover days."

Formula:

Stock Turnover= (Cost of goods sold)/ (Average inventory)

This ratio should be compared against industry averages. A low turnover implies poor sales and, therefore, excess inventory. A high ratio implies either strong sales or ineffective buying.

High inventory levels are unhealthy because they represent an investment with a rate of return of zero. It also opens the company up to risks should prices begin to fall.

5.3. Liquidity Ratios

5.3.1. Current Ratio

Current Ratio is the financial ratio that measures whether the firm has enough resources to pay its debt over a year. It is the comparison of current assets to current liabilities.

Mathematically,

Current ratio = (Current assets) / (Current liabilities)

Where,

Current assets are the cash and other assets that are expected to be converted to cash within a year. This includes cash and bank balances, short term securities, short term debtors etc.

Current liabilities are debts or obligations of the company that are due within one year. It appears on the balance sheet and include short term debt, accounts payable, accrued liabilities and other debts.

The higher the current ratio, the more capable the company is in paying its obligations. Current ratio greater than 1 suggests that the company is in good position to clear all its current liability with all its current asset. Current ratio lower than 1 suggests that the company would be unable to pay off its obligations, if they came due at that point. While this shows the company is not in good financial health, it does not necessarily mean that it will go bankrupt - as there are many ways to access financing - but it is not a good sign. On the other hand, it may also indicate the dominance of a company in the value chain.

The current ratio can give a sense of efficiency in the operating cycle or its ability to turn its product into cash. Companies that have trouble getting paid on their receivables or have long inventory turnover can run into liquidity problems because they are unable to alleviate their obligations. Because business operations differ in each industry, it is always more useful to compare companies within the same industry.

5.4. Other ratios

5.4.1. Debt ratio

Debt ratio is a financial ratio that measures the extent of financial leverage of a company. The debt ratio is defined as the ratio of total debt to total assets, expressed in percentage, and can be interpreted as the proportion of assets financed by debt.

Mathematically,

$$\text{Debt ratio} = (\text{Total debt}) / (\text{Total assets})$$

The higher ratio indicates the greater financial risk of the business. A debt ratio of greater than 1 indicates that a company has more debt than assets. Meanwhile, a debt ratio of less than 1 indicates that a company has more assets than debt. Used in conjunction with other measures of financial health, the debt ratio can help investors determine the risk level of a company.

5.4.2. Interest Coverage Ratio

Interest Coverage Ratio is used to determine how easily a company can pay interest on outstanding debt. The interest coverage ratio is calculated by dividing Earnings Before Interest and Taxes (EBIT) of one period by the interest expenses of the same period.

Mathematically,

$$\text{Interest Coverage Ratio} = (\text{EBIT}) / (\text{Interest Expenses})$$

Where,

EBIT is the earnings of the company before Interest and taxes

The lower the ratio, the more the company is burdened by debt expense. When interest coverage ratio is 1.5 or lower, its ability to meet interest expenses may be questionable. An interest coverage ratio below 1 indicates the company is not generating sufficient revenues to satisfy interest expenses. Higher ratio indicates that company is earning much more than its interest expenses. Ideally, interest coverage ratio of the company should be higher.

5.4.3. Debt Equity Ratio

Mathematically, Debt Equity ratio is total debt divided by total equity. Debt equity ratio provides an indication of the composition and financing structure for a company. More the debt in the capital structure indicates more risk because of the risk of default and the impact on cash flow due to interest payments. However, debt financing may be advantageous, if company has ensured cash flow because of reduced opportunity cost of using equity.

5.5. Break-Even Calculations

Break-even analysis is used to determine the point at which revenue earned equals the costs associated with earning the revenue. At break-even level company is neither at profit nor at loss. Break-even analysis calculates margin of safety, the amount that revenues exceed the break-even point.

For example, If it costs NPR 50 to produce a chocolate, and there are fixed costs of NPR 1000, the break-even point for selling the chocolate would be:

If selling for NPR 100: The company needs to sell 20 chocolate (If 20 chocolate are sold revenue would be $(20 \times 100) = 2000$, the cost of goods sold is NPR 50, so direct cost is $(50 \times 20) = \text{NPR } 1000$ and NPR 1000 is fixed cost. Here the company neither has profit or loss. In this case company needs to sell more than 20 chocolates for being profitable.

Mathematically,

$$\text{Breakeven Point (BEP) (in Quantity)} = (\text{Fixed cost}) / (\text{Selling price}-\text{COGS})$$

Exercise 17

Separate these headings into current assets and current liabilities

Distinguish the current assets and current liabilities and find the current ratio

Items	Current Assets	Current Liabilities
Closing stock: 1,00,000		
Cash: 5,00,000		
Receivables: 1,00,000		
Creditors: 1,50,000		
Tax payable: 10,000		
Salary Payable : 50,000		

Exercise 18

Analyze the given ratios of the companies

Ratio	Company A	Company B
Gross Margin	60%	55%
Current ratio	3:1	1.5:1
Debt Equity	2:1	1:1

Review Questions:

1. What is operating and net margin ?
2. What is the significance of debt equity and current ratio ?
3. How can management use financial ratio to draft a strategy ?

Chapter 6 - Financing

Objectives:

By the end of this section, trainees will have knowledge of:

1. Different ways company can manage their finance
2. The pros and cons of each method of financing
3. Taxation and leverage implications of financing

The process of gathering the funds for business is called financing. There are different ways company can gather the funds. There are different ways to finance and each has its own set of merits and demerits. So it is important to understand the source of finance and decide which one is best for the company.

Debt

Money borrowed by one party from another is debt. Many companies/individuals use debt as a method for making large purchases that they cannot afford under normal circumstances. A debt arrangement gives the borrowing party permission to borrow money under term the condition that it is to be paid back at a later date, usually with interest.

Capital

The amount of investment the owner / owners put into a business is the capital. Capital is different from money. Money is used simply to purchase goods and services for consumption. Capital is more durable and is used to generate wealth through investment. There is a basic understanding that for a business to operate three factors needs to operate in tandem (i) Land (ii) Labor (iii) Capital. To create wealth, capital must be combined with labor, the work of individuals who exchange their time and skills for money.

Internal Funds (Retained earnings)

Internal financing is the name for a firm using its profit as a source of capital for new investments, rather than:

1. Distributing them to firm's owners or other investors and
2. Obtaining capital elsewhere.

It is different from external financing which consists of new investment from outside of the firm. Internal financing is generally thought to be less expensive for the firm than external financing because the firm does not have to incur transaction costs to obtain it.

Advantages and disadvantages of Internal Financing

Advantages	Disadvantages
<ul style="list-style-type: none">• Capital is immediately available• No interest payments• No control procedures regarding creditworthiness• Spares credit line• No influence of third parties	<ul style="list-style-type: none">• Expensive because internal financing is not tax-deductible• No increase of capital• Not as flexible as external financing• Losses (shrinking of capital) are not tax-deductible• Limited in volume (there is more capital available in the markets than inside of a company)

Thus management needs to analyze the capital requirement and see whether managing fund from internal financing is more profitable and feasible than external financing. For this, the management needs to consider the opportunity cost, projected profit and loss statement, cash flow statement and decide which capital structure it wants to pursue.

6.1. Leverage

The use of taking maximum advantage of the operational and financial fixed cost in terms of earnings is called leverage. For e.g., there is a storage room of the company whose rent is Rs 10,000 per month. The company stores 100 units of goods. The fixed cost needs to be paid no matter the amount of goods in the room. Now if the company stores 150 goods, it can sell more goods which thus translates into more earning. This is a leverage of fixed assets.

Basically there are two kinds of leverage:

1. Operational Leverage
2. Financial Leverage

6.2. Banking Terminologies

Banking and Financing

The act for providing funds for business or enterprise is called financing. Business needs finances to start, operate and expand. Selecting the best financing model is of utmost importance to every business because the financing model has a significant bearing on the earning and profitability of the firm. Financing is required for existing business to expand and scale up.

Short Term Finance: This is financing for short period, generally 1 year or less. This type of finance includes overdraft, short term loans and trade credit. They are generally taken to pay a creditor, for working capital or for buying more stocks.

Medium Term Loan: These include taking loans for medium term which is considered as 3 to 5 years. They are generally taken for expansion or purchase of new machinery.

Long Term Loans: They are for longer terms than medium term. Long term loans are generally taken for purchase or moving to new establishment and heavy capital expenditure.

Collateral

Property or other assets that a borrower offers a lender to secure a loan. Banks generally keep collateral as a buffer in case a loan is not repaid. If the borrower stops making the committed loan payments, the lender can seize the collateral to make good its losses. Because of reduced risk of non-collection, loans that are secured by collateral have lower interest rates than non-collateral loans.

Loan Processing Charge

An amount charged by the banks for all the processing related to loan under consideration is called Loan Processing Charge. Generally, they are charged as a percentage of the loan amount.

EMI / EQI

Equated Monthly/Quarterly Installments (EMI/EQI) are fixed payment amounts made by a borrower to a lender at a specified date each calendar month. Equated monthly installments are used to pay off both interest and principal each month, so that over a specified number of years, the loan is paid off in full.

Capital Expenditure

A capital expenditure is an amount spent to acquire or improve a long-term asset such as equipment or buildings. Usually the cost is recorded in an account classified as Property, Plant and Equipment. The cost (except for the cost of land) will then be charged to depreciation expense over the useful life of the asset. Its benefit is accrued in a period extending over one year and this generally involves high costs.

Revenue Expenditure

Revenue expenditure is an amount that is expensed immediately—thereby being matched with revenues of the accounting period. Routine repairs are revenue expenditures because they are charged directly to an account such as Repairs and Maintenance Expense. These expenses are operating expenses whose benefit accrues immediately or within a year.

Know Your Customer (KYC)

KYC is a procedure adopted by banks and financial institutions to know about their clients and client's business as per the statutory requirement mandated by the Nepal Rastra Bank. In other terms, it is the process of verifying the identity of the clients. The primary objective of KYC is to ensure that the clients are bona-fide and to skim the companies that are involved in money laundering. This is now a standard procedure across the world. KYC norms differ from bank to bank.

Net Trading Assets (NTA)

Net Trading Assets are the assets of the company that are used for trading/sales activities. These include accounts payable, accounts receivable and inventories. Mathematically,

$$\text{NTA} = \text{Account receivables} + \text{Inventories} - \text{Account Payable}$$

Working Capital Loan

A working capital loan is the loan used by the company to cover the day to day running expenses. In many cases, companies find it difficult to manage cash for timely payment of operational expenses including (Utilities and salaries). In such cases, companies may opt for working capital loan.

Review Questions:

1. In what case can financing and internal fund can be used in business ?
2. How can a company make use of its operational and financial leverage ?
3. What is working capital loan ?
4. How can company better negotiate with bank while taking a loan ?

Chapter 7 - Glossary of terms

Accrual Accounting: Recognizing the income and expenses, when they occur rather than when they are received or paid for.

Accounting Period: A period for which financial statements (Profit and loss Account, Balance Sheet and Cash Flow Statement) are prepared. Financial year is also an accounting period. In Nepal the financial year starts from Shrawan 1 and ends on Ashad 31.

Break-Even Revenue: The amount of revenue the company needs to earn to cover all its expenses. At breakeven point there is neither profit nor loss.

Capital Expenditure: An amount of expenditure on assets that is likely to give benefit for more than one year. Generally, they consist of investment in land, buildings and machinery. The expenses which are for day to day operation of the company and not likely to give benefit for more than one year are called revenue expenditures.

Financial Ratios: Financial ratios are indicators which are used to measure the financial health of the company and compare them with industry standards.

Receivables: Income that is already accrued to the business but which has not been received yet.

EBIT: Earnings before Interest and Taxes is derived from profit and loss account. It is the earnings of the company before accounting for interest and taxes. In less capital intensive industries, **EBITDA** (Earnings before Interest, Tax, Depreciation and Amortization) is more relevant.

Payables: The amount that a business has to pay to its creditors.

Work in Progress (WIP): It refers to the raw materials and labor which has already been used for production where the production is not complete.

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