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10th Edition

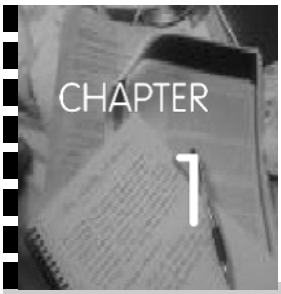
A TEXTBOOK OF COST AND MANAGEMENT ACCOUNTING

SECTION I
COST ACCOUNTING

This section covers Cost Accounting which is concerned with ascertainment of cost of products/services. In this section, the meaning, nature and scope of the subject have been explained along with various concepts. The accounting and control of the three main elements of cost, i.e., material, labour and overhead, and also the various methods of costing, i.e., ascertainment of cost in different industries have been discussed at length. The double entry book-keeping has been described in the end.

It includes the following chapters:

- **Overview of Cost Accounting**
- **Material Cost**
- **Employee Cost (Labour Cost)**
- **Overhead Costs**
- **Output or Unit Costing (Cost Sheet)**
- **Job and Batch Costing**
- **Contract Costing**
- **Process Costing**
- **Joint Products and By-products**
- **Operating Costing (Service Costing)**
- **Non-integrated and Integrated Accounts**
- **Reconciliation of Cost and Financial Accounts**



OVERVIEW OF COST ACCOUNTING

Learning Objectives

After studying this chapter, you should be able to:

- *Understand and define the terms 'costing' and 'cost accounting' and list the differences between cost accounting and financial accounting*
- *Describe the various objectives and functions of cost accounting*
- *Understand the meaning of cost, cost object, cost centre and cost unit*
- *Know the various method and techniques of costing*
- *Discuss the various classifications of cost*
- *Understand the elements of cost and components of total cost*
- *Know the steps in the installation of a cost accounting system and the difficulties faced therein*
- *Describe the advantages of cost accounting to management and others*
- *Understand the essentials of a good cost accounting system*

ACCOUNTING AS AN INFORMATION SYSTEM

The importance of accounting information for the successful operation of a business has been long recognised. Accounting is used to classify and record business transactions and provide financial information concerning the activities of an enterprise to a diverse group of people such as shareholders, managers, creditors, tax authorities, etc. On the basis of the purpose for which this information is used, accounting is divided into three parts—financial accounting, cost accounting and management accounting.

This overview chapter provides a framework of cost accounting, explaining its basic concepts, cost classifications, costing methods and techniques, elements of cost, etc.

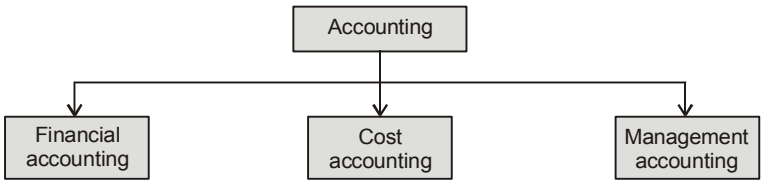


Fig. 1.1: *Classification of Accounting*

Financial Accounting

Financial accounting is mainly concerned with recording the business transactions in the books of account for the purpose of presenting final accounts to the management, shareholders and tax authorities, etc. It is defined as '*the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events, which are in part at least, of a financial character and interpreting the results thereof.*'[1]

The information supplied by financial accounting is summarized in the following three statements at the end of a period, generally one year.

(*a*) *Profit and Loss Account,* showing the net profit or loss during the period;

(*b*) *Balance Sheet,* showing the financial position of the firm at a point of time;

(*c*) *Cash Flow Statement,* showing the inflows and outflows of cash arising from the business activities during the period covered by the statement.

Thus, the objective of financial accounting is to present a true and fair view of a company's income, financial position and funds, at regular intervals of one year.

Cost Accounting

Compared with financial accounting, cost accounting is a relatively recent development. Modern cost accounting developed only during the nineteenth century. In fact, cost accounting started as a branch of financial accounting, but it is now regarded as an accounting system in its own right. The vital importance that cost accounting has acquired in the modern age is because of the increasing complexity of the modern industry.

Financial information, supplied by financial accounting in the form of financial statements stated above, relates to past activity. Cost accounting, on the other hand, is not restricted to just the past. It is concerned with the ascertainment of past, present and expected future costs of products manufactured or services supplied. Detailed meaning and definition of cost accounting is given later in this chapter. In brief, cost accounting is a system of determining the costs of products or services.

Cost accounting has primarily developed to help managers understand the costs of running a business. Profit and loss account and balance sheet are presented to the management by the financial accountant. But modern management needs much more detailed information than those supplied by these financial statements. Cost accounting provides detailed cost information to various levels of management for efficient performance of their functions. The information supplied by cost accounting acts as a management tool for decision making, to optimize the utilization of scarce resources and ultimately add to the profitability of business by controlling expenditure under various heads.

Management Accounting

Management accounting is the modern concept of accounts as a tool of management. It is concerned with all such accounting information that is useful to management. In other words, the term management accounting is applied to the provision of accounting information for management activities such as decision making, planning and controlling, etc. Thus, any form of accounting, which enables a business to be conducted more efficiently, can be regarded as management accounting. The Chartered Institute of Management

1. American Institute of Certified Public Accountants (AICPA).

Accountants (CIMA), London has defined management accounting as '*the presentation of accounting information in such a way as to assist management in the creation of policy and in the day-to-day operations of an undertaking.*'

Cost accounting and management accounting are intimately related areas, so much so that Horngren, a renowned author on the subject, has gone to the extent of saying, '*Modern cost accounting is often called management accounting. Why? Because cost accountants look at their organization through a manager's eyes.*' Thus managerial aspects of cost accounting are inseparable from management accounting.

Limitations of Financial Accounting

Cost accounting has emerged mainly because of certain limitations of financial accounting. Financial accounting is so limited and inadequate in regard to the information which it can supply to management that businessmen have been eager to adopt supplementary accounting systems like cost accounting. The limitations of financial accounting are summarized as follows:

1. **Shows only overall performance** Financial accounting provides information about profit, loss, cost, etc., of the collective activities of the business as a whole. It does not furnish costing data classified in terms of departments, products, processes, sales territories, etc.

2. **Historical in nature** Financial accounting is historical, since the data are summarized only at the end of the accounting period. There is no system of computing day-to-day cost and also for computing pre-determined costs.

3. **No performance appraisal** In financial accounting, there is no system of developing norms and standards to appraise the efficiency in the use of materials, labour and other costs by comparing the actual performance with what should have been accomplished during a given period of time.

4. **No material control system** Generally, there is no proper system of control over materials which may result in losses in the form of obsolescence, deterioration, excessive scrap, misappropriation, etc.

5. **No labour cost control** In financial accounting, there is no system of recording loss of labour time, *i.e.*, idle time. Labour cost is not recorded by jobs, processes or departments, and as such it offers no system of incentives that may be easily used to compensate workers for their above-standard performance.

6. **No proper classification of costs** In financial accounting, costs are not classified into direct and indirect, fixed and variable and controllable and uncontrollable costs. These classifications have utility of their own.

7. **No analysis of losses** Financial accounting does not fully analyse the losses due to idle time, idle plant capacity, inefficient labour, sub-standard materials, etc. Thus, exact causes of the losses are not known.

8. **Inadequate information for fixing of prices** Costs are not available as an aid in determining prices of products, services or production orders.

9. **No cost comparison** Comparison is the foundation of modern management control. But financial accounting does not provide data for comparison of costs of different periods, different jobs or departments, sales territories, etc.

10. **Fails to supply useful data to management** Financial accounting fails to supply useful data to management for taking various decisions, like, replacement of labour by machines, introduction of new products, make or buy and selection of the most profitable product mix.

MEANING OF COSTING AND COST ACCOUNTING

The Chartered Institute of Management Accountants (CIMA), London has defined costing as, '*the techniques and processes of ascertaining costs.*' Wheldon has defined costing as, '*the proper allocation of expenditure and involves the collection of costs for every order, job, process, service or unit.*' Thus, costing simply means cost finding by any process or technique. It consists of principles and rules which are used for determining:

(*a*) the cost of manufacturing a product, e.g., motor car, furniture, chemical, steel and paper and

(*b*) the cost of providing a service, e.g., electricity, transport and education.

The terms '*costing*' and '*cost accounting*' are often used interchangeably. Cost accounting is a formal system of accounting for costs in the books of account, by means of which, costs of products and services are ascertained and controlled. According to L C Cropper, '*cost accounting means a specialized application of the general principles of accounting, in order to ascertain the cost of producing and marketing any unit of manufacture or of carrying out any particular job or contract.*' An authoritative definition of cost accounting has been given by CIMA, London as follows: '*Cost accounting is the process of accounting for costs from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units. In its widest usage, it embraces the preparation of statistical data, the application of cost control methods and ascertainment of profitability of activities carried out or planned*.'

Costing and Cost Accounting—Difference Though the terms 'costing' and 'cost accounting' are interchangeably used, there is a difference between the two. Costing is simply the method of determining costs by using any method like arithmetic process, memorandum statements, etc. Cost accounting, on the other hand, denotes the formal accounting mechanism, by means of which costs are ascertained by recording them in the books of account. In simple words, costing means finding out the cost of products or services by any technique or method, while cost accounting means costing using the double entry system.

Cost Accountancy Cost accountancy is a very wide term. It means and includes the principles, conventions, techniques and systems which are employed in a business to plan and control the utilization of its resources. It is defined by CIMA, London as, '*the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purposes of managerial decision making.*'

Cost accountancy is thus the *science, art* and *practice* of a cost accountant. It is a *science* in the sense that it is a body of systematic knowledge, which a cost accountant should possess for the proper discharge of his duties and responsibilities. It is an *art* as it requires the ability and skill on the part of a cost accountant, in applying the principles of cost accountancy to various managerial problems, like price fixation, cost control, etc. *Practice* refers to constant efforts on the part of cost accountant, in the field of cost accountancy. Theoretical knowledge alone would not enable a cost accountant to deal with the various intricacies involved. He should, thus, have sufficient practical training, and exposure to real life costing dilemmas.

Cost accountancy has a very wide scope. It includes *costing, cost accounting, cost control* and *cost audit*. Cost control and cost audit have been discussed in Section II of this book.

Applications of Cost Accounting

Cost accounting is generally considered as being applicable only to manufacturing concerns. This is not so. Its applications are in fact much wider. All types of activities, manufacturing and non-manufacturing, in which monetary value is involved, should consider the use of cost accounting. Wholesale and retail businesses, banking and insurance companies, railways, airways, shipping and road transport companies, hotels, hospitals, schools, colleges, universities, farming and cinema houses, all may employ cost accounting techniques to operate efficiently. It is only a matter of recognition by the management of the applicability of these costing concepts and techniques in their own fields of endeavour.

OBJECTIVES AND FUNCTIONS OF COST ACCOUNTING

The main objectives of cost accounting are as follows:

1. **Ascertainment of cost** This is the primary objective of cost accounting. In cost accounting, cost of each unit of production, job, process or department, etc., is ascertained. Not only actual costs incurred are ascertained but costs are also predetermined for various purposes. For cost ascertainment, various methods and techniques are employed under different situations.

2. **Cost control and cost reduction** Cost accounting aims at improving profitability by controlling and reducing costs. For this purpose, various specialized techniques, like standard costing, budgetary control, inventory control, value analysis, etc., are used. This objective of cost control and cost reduction is becoming increasingly important in the present scenario because of growing competition in the business world.

3. **Guide to business policy** Cost accounting aims at serving the needs of the management in conducting the business with utmost efficiency. Cost data provide guidelines for various managerial decisions, like making or buying, selling below cost, utilization of idle plant capacity, introduction of a new product, etc.

4. **Determination of selling price** Cost accounting provides cost information on the basis of which selling prices of products or services may be fixed. In periods of depression, cost accounting guides the firms in deciding the extent to which the selling prices may be reduced to meet the situation.

In order to realize these objectives, the data provided by cost accounting may have to be re-classified, re-organized and supplemented by other relevant business data from outside the formal cost accounting system.

COST ACCOUNTING AND FINANCIAL ACCOUNTING—A COMPARISON

Both cost accounting and financial accounting are concerned with systematic recording and presentation of financial data. The two systems rest on the same principles concerning debit and credit and have the same sources of recording the transactions. But cost accounting is much more detailed than financial accounting. This is because in financial accounting, profit or loss is ascertained for the business as a whole whereas in cost accounting, detailed cost and profit data for various parts of business, like departments, products, etc., are shown. This is explained in the following illustration.

Suppose a company is manufacturing three products—*X*, *Y* and *Z*. Under financial accounting and cost accounting, the following types of statements are prepared:

Under Financial Accounting A profit and loss account is prepared to compute profit as shown on the next page (data is assumed):

Profit and Loss Account for the Period.....

	₹		₹
To Materials	75,000	By Sales	1,50,000
To Wages	20,000		
To Other expenses	25,000		
To Profit (Balance figure)	30,000		
	1,50,000		1,50,000

This statement shows that total profit is ₹30,000 but it does not disclose the details of profit/loss of each of the products *X*, *Y* and *Z* in the total profit. This is revealed by cost accounting.

Under Cost Accounting A detailed statement is prepared as follows (data of the above given profit and loss account with further assumptions):

Statement of Cost and Profit for the Period.....

	Total ₹	*Product X* ₹	*Product Y* ₹	*Product Z* ₹
Materials	75,000	40,000	12,000	23,000
Wages	20,000	10,000	5,000	5,000
Other expenses	25,000	20,000	3,000	2,000
Total cost	1,20,000	70,000	20,000	30,000
Sales	1,50,000	96,000	28,000	26,000
Profit/Loss (–)	30,000	26,000	8,000	(–) 4,000

The above detailed statement prepared under cost accounting shows that in the total profit of ₹30,000, Product *X* contributed ₹26,000 and Product *Y* ₹8,000, whereas Product *Z* gave a loss of ₹4,000. When the firm's management gets this information, it will investigate to find out the reasons for loss in product *Z*. If product *Z* cannot be made profitable, its production should be stopped to improve the overall profit picture of the company. However, this type of information is not revealed by financing accounting.

Differences between cost accounting and financial accounting are explained below:

Basis	*Financial Accounting*	*Cost Accounting*
1. **Purpose**	It main purpose is to prepare profit & loss account and balance sheet for reporting to owners or shareholders and other outside agencies, *i.e.*, external users.	The main purpose of cost accounting is to provide detailed cost information to management, *i.e.*, internal users.
2. **Statutory requirements**	These accounts have to be prepared according to the legal requirements of Companies Act and Income Tax Act.	Maintenance of these accounts is voluntary, except in certain specified industries where it has been made obligatory to keep cost records under the Companies Act.
3. **Analysis of cost and profit**	Financial accounts reveal the profit or loss of the business as a whole for a particular period. It does not	Cost accounts show the detailed cost and profit data for each product line, department, process, etc.

(*Contd.*)

	show the figures of cost and profit for individual products, departments and processes.	
4. **Periodicity of reporting**	Financial reports (profit and loss account and balance sheet) are prepared periodically, usually on an annual basis.	Cost reporting is a continuous process and may be done on a daily, weekly, monthly, etc., basis
5. **Control aspect**	It lays emphasis on the recording of financial transactions and does not attach any importance to the control aspect.	It provides for a detailed system of controls with the help of certain special techniques like standard costing and inventory control, etc.
6. **Historical and predetermined costs**	It is concerned almost exclusively with historical records. The historical nature of financial accounting can be easily understood in the context of the purposes for which it was designed.	It is concerned not only with historical costs but also with predetermined costs. This is because cost accounting does not end with what has happened in the past. It extends to plans and policies to improve performance in the future.
7. **Format of presenting information**	Financial accounting has a single uniform format of presenting information, *i.e.*, profit and loss account, balance sheet and cash flow statement.	Cost accounting has varied forms of presenting cost information, which are tailored to meet the needs of management and thus, lacks a uniform format.
8. **Types of transactions recorded**	Financial accounting records only external transactions, like sales, purchases, receipts, etc., with outside parties.	Cost accounting records not only external transactions but also internal or inter-departmental transactions like issue of materials by store keeper to production departments.
9. **Types of statements prepared**	Financial accounting prepares general purpose statements like profit and loss account and balance sheet. That is to say, financial accounting must produce information that is used by many classes of people, none of whom have explicitly defined informational needs.	Cost accounting generates special purpose statements and reports like report on loss of materials, idle time report, variance report, etc. It identifies the user, discusses his problems and needs and provides tailored information.

MEANING OF COST

The term 'cost' does not have a definite meaning and its scope is extremely broad and general. It is, therefore, not easy to define or explain this term without leaving any doubt concerning its meaning. Cost accountants, economists and others develop the concept of cost according to their needs because one complete description of 'cost' to suit all situations is not possible.

According to Cambridge International Dictionary of English, cost means '*the amount of money needed to buy, do or make something.*' However, some authoritative definitions of cost are given below:

1. *Cost is 'the amount of expenditure* (*actual or notional*), *incurred or attributable to a given thing.'* (CIMA, London)
2. *'A cost is the value of economic resources used as a result of producing or doing the things costed.'* (W M Harper)
3. *'Cost is a measurement, in monetary terms, of the amount of resources used for the purpose of production of goods or rendering of services.'* CAS-I of ICAI

In fact, in order to assign a definite meaning to the term 'cost', it should be used with a modifier or an adjective, according to the specific purpose for its use. For example, direct cost, fixed cost, variable cost, controllable cost, material cost, selling cost, prime cost, marginal cost, differential cost, standard cost, estimated cost, actual cost, joint cost, conversion cost, etc., have specific meanings. All these terms have been explained in this book.

Cost *vs* Expense and Loss

Often the terms 'cost' and 'expense' are used interchangeably. But cost should be distinguished from expense and loss.

Expense Expense is defined as *'an expired cost resulting from a productive usage of an asset.'* It is that cost which has been applied against revenue of a particular accounting period, in accordance with the principle of matching costs to revenue. In other words, an expense is that portion of the revenue-earning potential of an asset which has been consumed in the generation of revenue. Unexpired or unconsumed part of the cost is recorded as an asset in the balance sheet. Such an unexpired cost is converted into an expense when it expires while helping to earn revenue. For example, when a plant is purchased, depreciation on plant (expired cost) is charged to the profit and loss account as an expense and cost of plant remaining after providing depreciation (unexpired cost) is shown as an asset in the balance sheet. Every year, depreciation on plant, representing expense, is debited to profit and loss account and depreciated value representing unexpired cost is shown in the balance sheet. Pre-paid insurance is also an example of unexpired cost which is shown in the balance sheet as an asset.

Loss Loss is defined as *'reduction in a firm's equity, other than from withdrawals of capital for which no compensating value has been received.'* A loss is an expired cost resulting from the decline in the service potential of an asset that generated no benefit to the firm. Obsolescence or destruction of stock by fire are examples of loss.

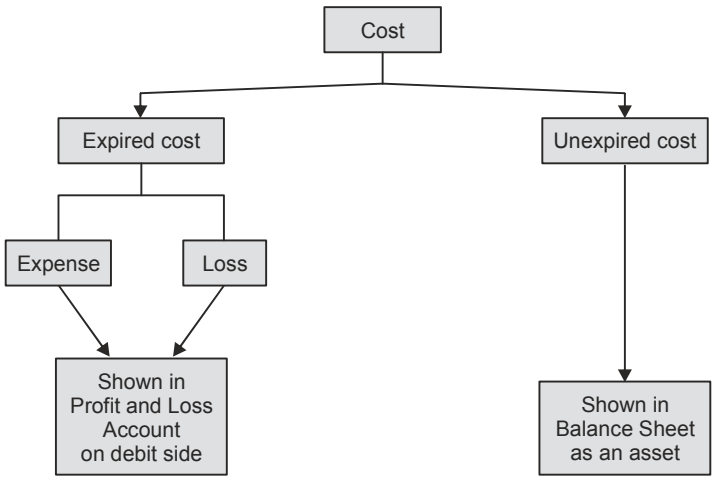


Fig. 1.2: *Relation of Cost, Expense and Loss*

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