

**SUBJECT—MANAGEMENT
ACCOUNTING**

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BY::

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SEGMENT PERFORMANCE

In this lecture we are going to understand some basic concepts and meaning of segment accounting and its importance in management accounting.

A segment or division may be either a profit centre having responsibility for both revenues and operating costs, or an investment centre, having responsibility for assets in addition to revenues and operating costs.

The manager of each segment are free to take decisions regarding the performance of their centres. When an organization grows it is inevitable to create divisions or segments to control operations of different divisions. This requires accounting information which discloses not only the objectives and performances of divisions but also whether or not each division is performing in the interest of the organization as a whole. This section illustrates how segment data should be presented so that meaningful decisions regarding segment performance can be taken.

A manager's performance is evaluated generally on the basis of comparison of costs incurred with costs budgeted. It is therefore, important to allocate appropriate costs to the respective segments. While allocating the costs, the costs relating to general administration or head office should not be charged to any segment as these costs remain constant irrespective of the volume of sales by each department.

MEASURING SEGMENT PERFORMANCE

The primary purpose of a responsibility accounting is to determine the individual segment performance of an organization. The managers of different cost centres of the organisation are responsible to earn acceptable profit measured in terms of segment margin, or rate of return on sales for the profit centre. Segment margin represents the amount of income that has been earned by the particular segment. The manager of an investment centre is responsible for earning a rate of return on the segment's investment in assets. There are various criteria to measure divisional performance such as profit on turnover, sales per employee and sales growth etc. The most popular criteria are:

- 1) Return on Investment (ROI)
- 2) Residual Income (RI)

Return on Investment

Divisional operating profit is generally, used as a common measure of performance.

But divisional profit by itself does not provide a basis for measuring a divisions performance in generating a return on the funds invested in the division. For example Division A and Division B had an operating profit of Rs.1,00,000 and Rs.80,000 respectively does not necessarily mean that Division A was more successful than Division B. The difference in profit levels may be due to the difference in the size of the divisions. Therefore, a suitable measure may be used to scale the profit for the amount of capital invested in the division.

The ROI of partial segment must be high enough to provide adequate rate of return for the firm as a whole. It is always better to require a segment to earn a higher minimum rate of return on their investment. To improve this rate of return, a segment can increase its return on sales, increase its investment turnover or do both. The other way of increasing ROI is to reduce expenses and investment. If a segment reduces its investment without reducing sales, its ROI will increase. The ROI for the firm as a whole must not fail to meet the goals of top management. Though ROI is used widely to measure the segment performance, it has many limitations. One of the most limitations is that it can motivate managers to act contrary to the aims of goal congruence. If managers are encouraged to have a high ROI, they may turn down investment opportunities that are above the minimum acceptable rate, but below the current ROI of the divisional performance the investment would have positive benefit for the company as a whole. To overcome this drawback, Residual Income Method is used to evaluate the acceptability of a project proposal.

Residual Income

Residual income is the profit remaining after deduction of the cost of capital on investment. It is the excess of net earnings over the cost of capital. Any income earned above the cost of capital is profit to the firm. The cost of capital charged to each division will be the same rate that is applicable to the organization as a whole. The more the income earned above the cost of capital, the better off the firm will be.

The Residual Income may be calculated as follows:

$$RI = \text{Profit} - (\text{Capital Charge} \cdot \text{Investment Centre Asset})$$

Where, capital is the minimum acceptable rate of return on investment.

TRANSFER PRICING

Large businesses are organized into different divisions for effective management control. When the business is organized into divisions and if one division supplies its finished output as input to another division, there arise the question of transfer pricing.

Transfer price is the price at which the supplying division prices its transfer of output to the user division. The price assigned to the interdivisional transfer of output represents a revenue of the selling division and a cost of the buying division. It should be noted that there is only an internal transfer and not a 'sale'. Transfer prices are set at the time of the transfer rather than waiting until the manufacturing process is completed and the goods are sold to someone outside the company. As the pricing of these goods or services is likely to have an impact on the performance evaluation of divisions, setting an appropriate transfer pricing is a problem. Questions like what should be the transfer price? Whether it should be equal to manufacturing cost of selling division or the amount at which the selling division could sell its output externally? Or should the transfer price be negotiated amount between the selling division's cost of manufacturing and the external market price? etc. would arise. Selection of transfer price to some extent depends upon the nature of the product, type of the product and policy of the organization. Transferer would like to obtain the highest possible price while the transferee would require the lowest possible price. Goal congruence should be taken into account while fixing the transfer price because the actions of one division should not have a detrimental effect on the group as a whole.

METHODS OF TRANSFER PRICING

There are different methods for pricing the output of one division to another. The selection of an appropriate transfer price will have significant impact on decision making, product costing and performance evaluation of different divisions in the organization.

Generally transfer pricing methods can be classified into two broad categories.

They

are: (1) Market Price Based and (2) Cost - based. There are a number of alternative methods within each of the above two methods and these are discussed below.

Market Price Based

This method consist of the following methods:

- a) Market Price
- b) Adjusted Market Price, and

c) Negotiated Price

a) Market Price: When a market price is available or when there is a comparable product on the market and its price is available, this price can be used as a transfer price. Both the selling and buying divisions can sell and buy as much as they can at this market price. Managers of both the selling and buying divisions are indifferent trading with each other or with outsiders.

b) Adjusted Market Price: This price is based on the above market price, but it is adjusted to allow for the fact that such cost as sales commission and bad debts should not be incurred within the divisions.

c) Negotiated Price: This price can occur when there is some basis on which to negotiate between the divisional managers. The negotiated price, normally, may be a market price or a cost price. For example, one basis may be the contribution margin on the product being transferred divided between the transferor and the transferee or it may be the total cost which the transferor could suggest or the market price which the transferee could suggest. Both the divisions could negotiate between these two figures. Sometimes the negotiated price may be based on manufacturing cost plus an extra percentage added to approximate market price. Whatever the basis chosen, the company should be careful in avoiding arbitrary price between the divisions. The arbitrary price may be rewarding to one division and prevailing to another division. Some times negotiated prices are imposed by company top level, but this could not hamper the autonomy of divisional managers and distorting the financial performance of any division.

Cost Price Based

Another method to be followed for charging transfer price for the transfer of output from one division to another division is Cost Price. When external markets do not exist or when the information about external market prices is not readily available, companies may elect to use some of cost based transfer pricing methods as stated below:

- a) Absorption Cost
- b) Cost Plus Profit Margin
- c) Marginal Cost
- d) Standard Cost

e) Opportunity Cost

a) **Absorption Cost:** Absorption or full cost is based on the total cost incurred in manufacturing a product. When cost alone is used for transfer pricing, the selling division cannot realise any profit on the goods transferred. This method has a disadvantage that any excess cost on account of inefficiency may be passed on to the other divisions.

b) **Cost Plus Profit Margin:** Under absorption costing when cost alone is used for transfer pricing, the selling division cannot make any profit on the goods transferred. This is disincentive to selling division. To overcome this problem, some companies set transfer price on cost plus profit margin. This includes the cost of the item plus a mark up or other profit allowance. Under this method, the selling division obtains a profit contribution on the units transferred. It also benefits the transferring division if performance is measured on the basis of divisional operating profits. At the same time, it has also similar drawback of absorption costing that the inefficiencies if any, may also creep into the other divisions.

c) **Marginal Cost:** Another method to be followed for transfer pricing is the marginal cost. All costs that change in response to the change in the level of activity should be taken into account for the transfer price while transferring output from one division to another division. But this method fails to motivate divisional managers because it makes no contribution towards fixed overheads and profit.

d) **Standard Cost:** If actual costs are used as the basis for the transfer, any variances or inefficiencies in the selling division are passed along to the buying division.

e) **Opportunity Cost:** It represents the opportunity which has been foregone by following one course of action rather than another. Thus, if goods are transferred internally the organization could lose a contribution to profit which could have been obtained from an external sale. Generally, an opportunity cost approach will be used to establish a range of transfer prices in situations where the market is imperfect.

KEY WORDS

Cost Centre: A responsibility level where employees are concerned only with cost management.

Controllable Cost: A cost for which the departmental supervisor is able to exert influence over the amount spent.

Flexible Budget: A budget prepared using the actual sales volume realized by a segment. It is used for computing the effects of differences between actual sales prices and costs, and budgeted sales prices and costs on the profit goals of the segment.

Investment Centre: A responsibility level whose manager is concerned not only with cost management but also with revenue generation and investment decisions.

Management by Exception: A management principle by which managers concentrate their attention on exceptional or unusual items in the performance reports.

Non-controllable Cost: A cost assigned to a department or responsibility centre that is not incurred or controlled by the department head.

Negotiated Price: Either the market price or cost price which is negotiated between divisional managers.

Performance Report: A report produced by each decision centre which discloses budgeted and performance measures, and variances from the budget.

Profit Center: A responsibility level in which performance is measured in terms of budgeted profits and has responsibility for both income and expenses.

Responsibility Centre (RC): A unit or segment of the organization in which a specific manager has the authority and responsibility to make decisions.

Transfer Price: The price at which the supplying division prices its transfer of output to the user division.

QUESTIONS (assignment)

- 1) “Responsibility accounting is a responsibility set-up of management accounting”. Comment.
- 2) Define Responsibility Accounting. How does it differ from conventional cost accounting?
- 3) Is it fair to opine that responsibility accounting is a method of budgeting and performance reporting created around the structure?
- 4) While designing a responsibility accounting system for a decentralized corporation, discuss the steps in terms of the structure and the process.
- 5) Explain ‘how the choice’ of the responsibility center type (cost revenue, profit or investment affects budgeting and performance reporting.