Chapter – 5

Costing Approach

5.1 In this chapter, the costing approach, that is to be followed for Accounting Separation is discussed. The Accounting Methodologies to derive cost base and cost allocation principle include the following:

- **Cost Base** – Historical Cost Accounting (HCA) or Current Cost Accounting (CCA)
- **Cost Allocation Principle** – Fully Allocated Cost (FAC) or Long Run Incremental Cost (LRIC)

Cost Base

5.2 HCA is the conventional Accounting Method, wherein assets are valued and depreciated at the cost recorded at the time of their purchase. The CCA methodology prescribes valuation of assets at current costs. As per the Indian Accounting Standards, preparation of accounts under CCA is not mandatory. However, in the context of telecom industry, where cost trends rapidly leave historic accounts out of step with current realities, CCA is considered to be more relevant for analyzing costs and revenues. In view of this, **Accounting Separation Statements shall be generated on Historical Cost as well as on Current Cost basis.**

5.3 There are two alternative approaches to CCA, which differ in their treatment of "capital maintenance". Capital maintenance means the manner in which capital of the company is viewed for determining the profit. This issue is of greatest importance for the determination of profits available for distribution in the Profit and Loss account. It also affects the division between capital and retained profits in the balance sheet

- **Operating Capital Maintenance (OCM)** is concerned with maintaining the physical output capability of the assets of the company. Capital

maintenance under this approach requires the company to have as much operating capability – or productive capacity – at the end of the period as at the beginning. Under OCM, profit is therefore only measured after provision has been made for replacing the output capability of a company's physical assets. Generally, this would require the application of specific inflation indices to the values of the company's assets.

- **Financial Capital Maintenance (FCM)** is concerned with maintaining the real financial capital of the company and with its ability to continue financing its functions. Capital is assumed to be maintained if shareholders' funds at the end of the period are maintained in real terms at the same level as at the beginning of the period. Under FCM, profit is therefore only measured after provision has been made to maintain the purchasing power of opening financial capital.

5.4   The use of the OCM concept may systematically incorporate insufficient or excess returns into the level of allowed revenue (depending, respectively, on whether asset-specific inflation was expected to be lower than or higher than general inflation). This is not a desirable feature of any regulatory regime, as it would not provide appropriate investment incentives. Under FCM, however, the returns to the providers of capital would equal the required return (as measured by the cost of capital) irrespective of whether replacement costs were rising or falling relative to general prices. Hence, if current cost accounting information is used as the basis to determine telecom prices or interconnection charges, FCM is the preferred capital maintenance concept. The conceptual framework of current cost accounting and financial capital maintenance has been discussed in detail at **Annexure 1**. **Therefore FCM Method is to be followed for CCA. Further CCA is to be implemented only in respect of fixed assets and other adjustments like cost of sale adjustment, monetary working capital adjustment, gearing adjustment and erosion in the value of shareholders funds due to general inflation is not to be carried out.**

5.5   **It is well understood that implementation of CCA involves extensive revaluation** exercise**. Preparation of CCA adjustments require detailed**

inputs in terms of description of assets, capital asset costs, age profile of assets, etc. In view of this -

- **Accounting Separation will be initiated on Historical Cost Accounting basis. However, the operators shall gear up their systems and create necessary database so as to follow CCA within a period of 2 years. During this period, Accounting Separation on historical base would have to be stabilized.**

- **In order to minimize the efforts involved in CCA, reporting on CCA basis will be done every second year unlike reporting on HCA basis, which would have to be done every year.**

- **CCA has to be followed by those operators who have been in the operations for more than 3 years.**

- **The Current Cost adjustments will be limited to fixed assets only and full-fledged implementation of CCA is not required.**

<u>**Cost Allocation Principles**</u>

5.6   The Cost Allocation Principles indicate how various costs should be treated and allocated/apportioned to different services/network elements. The following two methods are generally used for allocation/apportionment of cost:

- Fully Allocated Costing (FAC)
- Long Run Incremental Costing (LRIC)

5.7   Implementation of FAC is done in two steps. In the first step, all the costs are identified into three categories:

- **Direct costs**: These are the costs, which can be directly identified to services/ network elements. For example, in a Basic Telephone Service network, cost of

local exchange can be directly allocated to the account head of "Local Exchange".

- **Indirect costs**: These costs cannot be directly allocated to any one-service/ network element as they may be shared by more than one (identifiable) services/ network elements. For example, in a Basic Telephone Service network, access cables and exchange cables may share the cable trench. Hence, the cost of trench for laying cables will be shared by the network elements "Access – cable" as well as "Network- Exchange to Exchange Transmission".

- **Unattributable Costs**: Such costs cannot be identified to a particular service/network element such as corporate expenses.

In the second step, the direct, indirect and un-attributable costs are allocated to various services / network elements on the basis of suitable cost drivers.

5.8 LRIC are the incremental costs that arise in the long run with a specific increment in volume of production. An increment is the unit of output over which costs are being measured. Incremental costs are the costs that are caused by providing a defined increment of output given that some level of output is already being produced. Long Run Average Incremental Cost (LRAIC) is a variant of LRIC, which associates long-term horizon to incremental cost. Incremental costs measure the cost variance when increasing or decreasing the production output by a substantial and discrete increment.

5.9 Implementing LRAIC could be a complex task and it typically involves the following steps:

- In a top-down cost estimation approach for LRAIC, various costs are grouped into manageable sets of homogeneous cost categories (HCCs). The level of homogeneity is determined by the need to identify individual cost drivers and to account for changes in individual costs over time. Grouping costs into

HCCs that enable individual cost drivers to be tracked, may result in generating a large number of HCC.

- After generating HCCs, Cost Volume Relationships (CVRs) are developed which track how individual costs vary with the underlying cost drivers. Obtaining the data for constructing CVRs is a time-consuming exercise and involves engineering models/simulations, statistical surveys and field research.

   The international experience shows that the LRIC Model takes many years to develop and implement.

5.10 Keeping in view the international experience and considering the complexities involved with development and implementation of the LRIC Model, Accounting **Separation shall be done on the basis of FAC. The implementation of LRIC for Accounting Separation shall be reviewed at a later date.**

Cost Allocation Principles

5.11 For Accounting Separation, revenue and cost are to be allocated or attributed to different services, geographical areas, network elements and products/network services through following Accounting Standards/Principles:

- *Causation* - Revenues and costs should be allocated to those services or products/network services that cause the cost or revenue to arise.
- *Survey and sampling* - Operators may need to use survey and sampling techniques such as pattern of usage of network element for each type of product/network service, staff activity data, engineering information etc. in order to allocate costs to the relevant segments. The fundamental objective of this activity is to arrive at an appropriate basis of attribution to comply with the principle of causation. Where sampling is used it should be based either on

generally accepted statistical techniques or other methods, which should result in accurate attribution of cost, revenue, etc.

- *Consistency* - To assist comparability, the same bases and assumptions should be used from year to year. However, it is recognised that with rapidly changing technologies, it may be necessary to review attribution principle annually.

- *Materiality* – The principle of materiality may be followed to avoid any detailed/ cumbersome procedures if the impact is not considered very material. For example the iterative attribution methods may not be used for certain items, if the effect of that particular item is not expected to be material to the ultimate outcome.

- *Practicality* - The principle of practicality would reflect the need in any system to undertake sampling analysis, and at times use prudent and unbiased estimates of cost and volumes.

- *Objectivity* – This principle requires that the allocation method proposed should be reasonable, substantiated and arbitrary allocation method should be minimal.

- *Transparency* - The methodologies followed for attribution and preparation of statements by each operator should be comprehensively documented so as to be transparent to the regulator / other users of the statement.

5.12 The methodology for allocation and apportionment of cost has been discussed in detail in Chapter 6.