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Draft Guidelines on Costing Methodologies for Accounting Separation

Consultation Draft

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1.1 Introduction

1) This section contains the principles and guidelines on the methodologies to be used for allocation and apportionment of revenues, costs, assets and liabilities[1] within the accounting separation process. It proposes various categories of costs and how they should be treated for the preparation of Separated Accounts. The issue of relevant costs for regulatory decision-making is also highlighted along with the proposed treatment of non-relevant cost by the operators. Different cost conventions to be used for preparing Separated Accounts are also discussed including Fully Allocated Cost (FAC), Historical Cost, Current Cost and Long Run Incremental Cost (LRIC) along with the steps to reach LRIC based methodology from the conventional FAC approach.

2) These Guidelines are intended to provide operators with a general framework for allocating revenue and costs to different business units. However, the allocation of specific individual items of revenue and costs that are not covered under these Guidelines, shall be made in accordance with the given cost allocation principles.

1.2. Cost categories

1) Using the principle of cost causation, each item of cost and revenues should be allocated to the products and services provided by an operator. In case of revenue most, if not all, revenues can be allocated directly to their related products and services. However, this is not the case for costs due to the relatively high proportion of the costs that are shared between different products and services. Each cost item may be considered to fall into one of the following categories:

   a) Direct and directly attributable costs

   b) Indirectly attributable (or joint/shared) costs

   c) Unattributable (or common) costs

Direct and Directly Attributable Costs

2) Direct costs are those costs that can be directly and unambiguously related to a service or product and which are recorded against the relevant product and service in the operator's accounting system. Directly attributable costs are also directly and unambiguously related to a service or product but they are not recorded in the financial accounts against the product or service to which they relate.

Indirectly Attributable Costs

3) Indirectly attributable costs are those costs that are shared by more than one service, but can be allocated between services on a non-arbitrary basis. To allocate these costs to products and services on cost causation basis, activity based costing (ABC) may be used. ABC allows the establishment of stronger causal relations between costs and products or services. ABC views the products and services as a series of activities, each of which consumes resources and therefore generates costs. This methodology, based on the cause of costs (cost drivers), traces

[1] For ease of reference these four terms shall be referred to as "Costs" in these guidelines, unless specified otherwise.

and allocates costs through the activities performed and establishes a clear cause-and-effect relation between activities, their associated costs and the resulting output from those activities.

4) ABC introduces an intermediate stage of activities, enabling some costs, that would otherwise be allocated in a less direct way, to be attributed to the services that cause them to occur. This enables a higher proportion of indirect costs to be allocated in an objective fashion to outputs. Nevertheless, with ABC it will generally not be possible to allocate all costs to services via activities, and hence some costs will remain to be apportioned to outputs in a relatively arbitrary manner.

Unattributable Costs

5) Unattributable costs are those costs for which no direct or indirect method of apportionment can be identified. It is, therefore, not possible to allocate these costs to products and services on a non-arbitrary basis. These costs are likely to be of the character of 'corporate overheads'. Once direct and indirectly attributable costs have been allocated to particular services on the basis of causality, the remaining costs should be allocated to products and services on some rational basis. In a well-defined costing system these remaining costs should be kept to a minimum, not exceeding 10% of the total costs. There are a number of methods to allocate unattributable costs. Two of the most important are as follows:

   ? Ramsey Pricing

   ? Equal Proportionate Mark-Up (EPMU)

Ramsey Pricing

6) Ramsey pricing determines the theoretically efficient allocation of common costs over multiple products given the condition that all common costs have to be recovered. For this purpose, one has to take account of the impact of tariff changes of the products involved on the operator's profitability. Products with low demand elasticity generate only limited welfare losses if a significant mark-up in the tariffs is imposed. Hence, with Ramsey Pricing, these products bear a larger share of the common costs.

7) Ramsey pricing is rarely used in practice where regulation is concerned. An important reason for this is that this method is practically infeasible due to the complex and dynamic information requirements on demand elasticities. Furthermore, Ramsey pricing may lead to price-setting that is detrimental for competition. Often, the services with the highest demand elasticity are those where competition is most intense. Not allocating common costs to these services results in relatively low prices, which may prove to be too low for competitors. Also, allowing the common costs to be allocated entirely to non-competitive (low demand elasticity) services might lead to conflicts with universal service obligations.

Equal Proportionate Mark-Up

8) A more practical way of allocating common costs, is applying the EPMU method. Using this method, common costs are recovered in proportion to the cost already allocated to the separate products and services. The advantage of this method is that it is generally easy to implement and use.

9) Disadvantage is that the allocation of common costs may not be related to the relative use of common cost by the separate products or services, which could make the allocation rather arbitrary. This may not be optimal from a welfare perspective, and could introduce adverse incentives for the producing and consuming parties involved.

10) The Authority is of the view that the risk of arbitrary and potentially sub-optimal allocation of common costs is less harmful than the detrimental competitive effects that Ramsey pricing could cause. Therefore, in the current market situation where the SMP operator has the ability

to cross-subsidize competitive services with supernormal margins in non-competitive services, EPMU is the preferred method.

1.3 Process and Methods of Cost Allocation

1) Annex-I illustrates a typical cost allocation process. It should be noted that actual allocation process may vary depending on the operator's organizational structure and the ways in which financial/operating data are captured, and will be considerably more complex than Annex-I implies. It is important to note, however, that the ultimate aim of allocating costs is the same.

2) The process of cost allocation starts from information and data captured by the general ledger or other costing or financial systems operated by the company. The costing information held by these systems may be divided between operating costs (including depreciation) and capital costs.

3) Costs may be attributed either directly to services or to cost pools called network components, related functions or other functions. These are defined as follows:

Services

4) These are the costs that can be directly identified with particular service. For these purposes, the term "service" refers both to retail services (e.g. the provision of payphones) and wholesale services (e.g. interconnection services).

Network Components

5) This pool contains the costs relating to various components of transmission, switching and other network plant and systems. The costs will be in respect of network components that cannot be attributed directly to a particular service as they are utilized in the provision of a number of services.

Related Functions

6) This pool contains the costs of functions necessary for the provision of services to the customer such as billing, maintenance, and customer services. These are the costs that can be indirectly attributed to network components and/or services using activity based costing.

Other Functions

7) This pool contains the costs of functions that are not related to the provision of particular services but are an important part of the operations of the company. Examples of such costs include planning, personnel and general finance. These are the common or unattributable costs, that need to be allocated using equal proportionate mark-up.

8) As noted from Annex-I, there are a series of steps which allocate cost pools in a tiered approach to eventually allocate costs to services. These step-wise allocations are performed using appropriate cost drivers. Each step is summarized below:

   a) The allocation of other functions across related functions, network elements and services.

   b) The allocation of the related function costs to services and the network elements.

   c) The allocation of network components to services.

d) The grouping of services into main business units and disaggregated activities, as defined for the purposes of Accounting Separation. Each of the allocation steps illustrated above could involve a number of detailed sub-steps, particularly if the initial capture of cost information is at an aggregated level.

Allocation of Revenue

9) Generally the revenues from the provision of products and services can be directly allocated to the main business units and disaggregated activities to which they relate, based on accounting records and billing system information. In those instances where direct allocation based on the above is not possible, revenues should be allocated on the basis of causation.

10) By way of illustration, the allocation of revenue from telephony services between the main business units of a fixed-line operator as well as of a mobile operator is shown in Annex-II.

Allocation of Operating Costs

11) The operating costs of a typical telecom operator can be categorized under the following headings:

(i) Depreciation

(ii) Provision and installation of equipment,

(iii) Maintenance and repair costs,

(iv) Network planning and development costs,

(v) Network management costs,

(vi) Marketing and sales costs,

(vii) Billing and collection costs,

(viii) Operator services costs,

(ix) Directory services costs,

(x) Payments to other operators, and

(xi) Support costs.

These headings are purely illustrative and are not intended to reflect the way in which operators are expected to record costs. They are intended to provide high-level guidance only. Individual operators will need to develop cost allocation procedures specific to the way in which they currently capture and record costs, and to refine these over time, as appropriate.

12) By way of illustration, Annex-III provides a summary of possible allocation and attribution methods for operating costs. The final column of Table in Annex-III provides an indication of the main business units to which it might be expected that the majority of the operating costs in question would be allocated.

Allocation of Capital Employed

13) In order to build an efficient inter-operator charging model, the charges for interconnection should be cost-oriented, including a reasonable return on investment. The determinants of the level of this return are:

(a) Cost of Capital, and

(b) Value of Capital Employed.

14) There must be consistency between the measure of capital employed on which the cost of capital is based and the measure of capital employed reported in the Separated Accounts. This will enable comparison of the actual percentage returns earned by operators from their regulated activities, such as interconnection, with the cost of capital allowed by the Authority when reviewing charges for these activities.

Cost of Capital

15) The cost of capital of operators should reflect the opportunity cost of funds invested in network components and other related assets. It conventionally reflects the following:

(i) the (weighted) average cost of debt for the different forms of debt held by the operator,

(ii) the cost of equity as measured by the returns that shareholders require in order to invest in the network given the associated risks, and

(iii) the values of debt and equity.

16) This information can then be used to determine the weighted average cost of capital (WACC) using the following formula:

$$WACC = Re \times \frac{E}{D+E} + Rd \times \frac{D}{D+E} \times (1-T)$$

where Re is the cost of equity, Rd is the cost of debt, E is the total value of equity, D is the total value of interest-bearing debt and T is the corporate tax rate. This calculation gives the post-tax WACC which needs to be converted to the pre-tax rate i.e. post-tax WACC divided by (1-T).

17) The calculation of the WACC for an individual operator in total would be relatively straightforward, notwithstanding that there is scope for discussion about the precise derivation and value of inputs into the WACC formulae. Different risks premiums normally apply to different activities, which could be reflected in different costs of equity `Re', even if the financial structure is the same. If so, there could be a different WACC for each business unit or disaggregated activity. However, for the sake of simplicity it is suggested to apply the total WACC to main business units and disaggregated activities of operators.

Value of Capital Employed

18) The WACC must be applied to a capital value for network components and other related assets in order to determine the return that needs to be recovered through interconnection charges. While it may be easy to identify the values of debt and equity for an operator as a whole, it is not easy to do so for each of its constituent activities. This is because decisions about debt finance are largely corporate decisions determined by number of factors. Hence, the debt position of the corporate may not relate specifically to the funding requirements of individual activities. An alternative approach for determining the capital value for regulated activities, such as interconnection, is therefore required. One approach is provided by the following equation:

Capital Employed = Fixed Assets + Working Capital

19) It follows that the capital values of regulated activities can be determined by apportioning capital employed. This apportionment should be carried out on a causal basis. Annex-IV provides a summary of possible allocation methods for different items of capital employed, together with an indication of the main business units to which it might be expected that the majority of each

item would be allocated. The application of these and, as appropriate, other methods will determine the capital values of different regulated activities, including interconnection. The table is not intended to be an exhaustive list of items that might be classified as capital employed nor of the methods for allocating them to different activities.

20) For price-setting purposes, the Authority will be concerned with average capital employed during any period rather than with capital employed at a single point in time such as the financial year-end. This is because a `snap-shot' at any point in time may not be representative of the average level of capital employed by operators. Specifically, working capital balances at a single point in time may not be representative of average working capital requirements over an extended period. The Separated Accounts of operators should therefore show average capital employed, rather than year-end balances.

21) Annex-IV proposes one approach to the treatment of working capital in the calculation of capital employed. There are, however, other approaches which may be equally valid. In practice, there are two principles that ought to be applied when considering the treatment of individual items of working capital for the purposes of accounting separation. These are as follows:

    a) there should be consistency between the treatment of assets and their associated costs and revenues, and

    b) inclusion or exclusion of individual items ought, in principle, to have a corresponding impact on the WACC. These two effects (i.e. the decision to include or exclude items and the corresponding adjustment to the WACC) offset each other in terms of their overall effect on the returns required by operators.

1.4 Relevant Costs for Regulatory Decisions

1) Regulatory decision-making is based on a combination of financial analysis and non-financial information. Financial analysis involves the preparation of relevant costs, which can be defined as costs arising as a direct consequence of the current decision to provide a specific product or service. While certain costs published under accounting separation may be allocated to business areas as part of the costing/pricing methodology, they may not be relevant in making certain decisions.

2) This issue relates particularly to the area of interconnection charges. Costs such as R&D, reorganization provisions, asset revaluation, etc. may not reflect the long-run trend in the organization and hence may create short-term distortions which affect pricing decisions. Also, the costs incurred by an operator may be based on decisions that are not in line with the characteristics of a competitive environment, or are for the benefit of certain operating segments of the organization. The Authority is of the view that charges for interconnection services should be set to cover the fully justified costs of conveyance, including a share of relevant overheads and a return on capital employed. The Authority is of the opinion that non-relevant costs shall be excluded when determining charges for services and these will be judged on a case-by-case basis.

3) The fair treatment of non-relevant costs for regulatory decision purposes is important for accounting separation. The Authority is of the view that non-relevant costs for regulatory decision purposes should be disclosed as reconciling items. This is the best approach as it is transparent, avoids further re-allocation of costs, and will enable easy reconciliation to the statutory accounts.

1.5 Costing Methodologies to be Applied in Accounting Separation

1) The principles and methods to prepare Separated Accounts and cost allocation, generally hold good regardless of the costing convention that is applied by the operators. However, it is essential to consider the appropriateness of the costing methodologies that are to be applied.

Fully Allocated Cost (FAC)

2) Under the Fully Allocated Cost standard, all costs of the operator, including directly attributable cost, indirectly attributable cost and unattributable cost are fully allocated to the company's final products. Generally, FAC is based on historical cost (HC) i.e. the cost which telecom operators actually paid for their businesses and which are reflected in operator's accounts. The benefits of using this basis include transparency and objectivity. The cost of individual services and related data may be used to aggregate to the total cost of the operator. The same may be compared with the audited annual accounts to see whether there is any difference between the two.

3) However, FAC based on historical cost accounting (HCA) suffers from the following major flaws, particularly if used as a basis for setting interconnect or certain other prices:

   a) HCA FAC, by focusing on the past, reflects all inefficiencies that have developed over the years. This can be particularly significant when a company has enjoyed a de facto monopoly for many years.

   b) Evolution of the costs of assets is not taken into account. Purchase prices can significantly increase or decrease over time and affect the value of assets. Decreases in equipment costs have characterized telecommunications in recent years.

   c) Separated Accounts based on historical costs cannot incorporate the impact of continuously evolving technologies. Hence, they cannot ensure that costs are those of an operator employing modern technologies.

4) The result of these flaws is that if HCA FAC is used to set prices in circumstances where a new entrant to a telecommunications market may have the choice of buying services from the incumbent or investing on its own account i.e. a 'make or buy decision', it is probable that the decision will be distorted by inappropriate information, and thus not be economically efficient.

Long Run Incremental Cost (LRIC)

5) 'Incremental cost' represents the addition in costs that arises when output is raised by a substantial defined amount. 'Long run' refers to the time horizon which is sufficiently long for all types of cost to be avoidable. LRIC includes all variable (i.e. volume sensitive) costs and also the fixed costs specifically relevant to the increment of output under consideration. Fixed costs that are shared between a number of services are not included as they will not be avoided if an increment of output of a particular service is no longer provided. Interconnection prices based only on LRIC will generally be lower than those based on other costing methodologies. Such low prices may promote new market entry.

6) However, charges based solely on LRIC are generally considered to be too low and do not provide an incumbent with sufficient compensation to build additional network. The SMP Operator will only recover its marginal cost from the interconnecting operators and will be left with no choice but to recover all of its joint and common cost from its own subscribers. To overcome this problem, most of the regulators have decided to add a mark-up of unattributable costs to LRIC. Interconnection charges based on LRIC (LRIC plus mark-up) are considered to be the most efficient prices to be charged to new entrants.

7) In order to achieve the objective of forming a forward view of costs and thus pricing, the Authority considers that it is necessary to move by the following steps:

Step I - Adjusting FAC Historic Cost accounts to reflect Current Costs, and

Step II - Adoption of Long Run Incremental Costs.

STEP I - Adjusting FAC Historic Cost Accounts to Reflect Current Costs

8) This step requires the use of Fully Allocated Cost (FAC) using Current Costs (CC). This implies that all resources be reassessed at their current cost and that for the assets that are not available anymore in the market, the "Modern Equivalent Asset" (MEA) methodology is applied. Under a current cost methodology, assets are valued on a Net Replacement Cost basis.

9) The Net Replacement Cost is the cost of replacing the asset with another asset of similar characteristics and age. Replacement cost can simply be the cost of replacing the asset today with an identical one. However, when technology is changing rapidly, the existing asset may no longer be replaceable (e.g. it is no longer manufactured). In this case it is necessary to calculate the Modern Equivalent Asset (MEA) value which is the value of an asset with the same level of capacity and functionality as the existing asset. The issues relating to the calculation of MEA values for telecommunications operators and other allied matters are considered below:

Modern Equivalent Asset (MEA) Valuation

10) The adoption of current cost methodologies in telecommunications is complicated by the rate of technological change in the industry. This has implications in both identifying suitable replacement costs for old technology assets and ensuring the assets exhibit the same levels of functionality and capability. The new technologies are usually far superior to the old technologies in terms of functionality and efficiency. However, since MEA values are required to reflect assets of equivalent capacity and functionality, it is necessary to make adjustments to the current purchase price and also the related operating costs, for example, the new asset may require less maintenance.

Adjustments to Depreciation

11) The depreciation charge for the year is calculated on the basis of the new asset valuations. This ensures that the current cost of fixed assets consumed during the year is charged against revenue. Supplementary depreciation is the difference between historical cost depreciation and current cost depreciation charge. It may be positive or negative depending on whether the value of assets is rising or falling. It is a charge against profits in the P&L account. For each asset, or group of assets, the depreciation charge, assuming straight-line depreciation, can be derived by dividing the gross replacement cost by the useful economic life of the asset.

12) It is increasingly common for the assessed life of an asset to be changed. In recent years, the pace of change in telecommunications technology has led to a trend to reassess the life of assets downward. To the extent that the effect of such adjustments is not captured by the valuation factors, any depreciation adjustment or write-off should be separately recorded and reported. Any adjustments arising within this section should be treated in exactly the same way as they are dealt with in the historical cost accounts.

Capital Maintenance

13) There are two alternative approaches within the current cost accounting concept regarding the treatment of capital of a business. Both recognize the principle that capital must be maintained before any profit is recognized, otherwise a false picture of the business will be portrayed. This issue is of greatest importance for the measurement of profits available for distribution in the Profit and Loss account, and it also affects the division between capital and retained profits in the balance sheet.

14) Capital can either be viewed in operational terms i.e. as the company's capacity to produce goods and services (Operating Capital Maintenance), or, in financial terms i.e. as the value of shareholder's equity interest (Financial Capital Maintenance). 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.

15) The alternative, 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. 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). 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.

16) The Authority is of the view that the concept of Financial Capital Maintenance should be applied as the appropriate basis to be associated with Current Cost Accounting.

Adjustments Associated with FCM

17) Under FCM, P&L items need to be further adjusted to take into account holding gains or losses that arise due to the effect of asset-specific inflation on the current cost of assets and the effect of general inflation on shareholders' funds.

18) While the adjustment of asset values and FCM related adjustments can move some way forward in adjusting the respective operator's figures to more closely approximate to those of an operator employing modern methods, it will remain necessary for the Authority, in its use of figures for pricing control or approval purposes, to ensure that further efficiency factors are applied. This is because whatever the decisions of the Authority or those of other individual licensees to carry costs above the efficient minimum, these costs should not be passed to new entrants in the market.

19) It is not possible for the Authority to be prescriptive with regard to these factors at this time, but it can be anticipated that they would seek to eliminate monopoly inefficiencies from pricing calculations. In considering these factors the Authority intends to consider benchmark data from other countries, together with an analytical review of data supplied by the concerned operators.

STEP II - Adoption of Long Run Incremental Costs (LRIC)

20) In applying LRIC, the Authority is of the view that for the purpose of preparing Separated Accounts, initially costs may be determined on a *top-down basis* reconciled back to actual costs and the reported current cost accounting statements. In making its assessment the Authority does not rule out the imposition of the *bottom-up approach* at a later date, should competition not develop at an acceptable level and grounds exist to believe that the alternative approach might be beneficial to achieving efficient competition.

21) The Authority is of the view that the 'Scorched Node' approach should be applied. This means that the existing node topology of the given operator network should be accepted as optimum. The 'Scorched Node' approach contrasts with its alternative, the 'Scorched Earth' approach. Under the latter approach the operator's network would not be accepted as an efficient model

and the entire operation would be reassessed on the basis of modern engineering principles. In theory this approach would eliminate the effect of any inefficiency within the operations of an operator. It may be noted that where the 'Scorched Earth' approach has been applied in other countries, difficulties of reconciliation to Historical Cost and Current Cost numbers have arisen.

22) In order to achieve a forward view, LRIC demands that costs are extrapolated. This is achieved by establishing a cost/volume relationship between elements of cost, using the causation principle. At an individual service level, this implies a move to Activity Based Costing (ABC) techniques. ABC focuses on determining what causes costs to occur and the causation principle is applied to determine the appropriate extrapolated time horizon for each element of cost. Clearly, the cost/volume relationship is not normally linear and thus a series of curves arise that may be utilized in considering output from the LRIC process.

23) The descriptions that have been supplied indicate a significant level of complexity in the application of Current Cost and LRIC. It is implicit within LRIC that there is some dependency on extrapolations and assumptions.

24) The Authority is of the view that although LRIC based costing is the preferred methodology, to achieve this end in a more practical way, it is reasonable for the operators to follow the given roadmap for the preparation of Separated Accounts:

a) Fully Allocated Cost (Historical Cost Base) …… 1st year

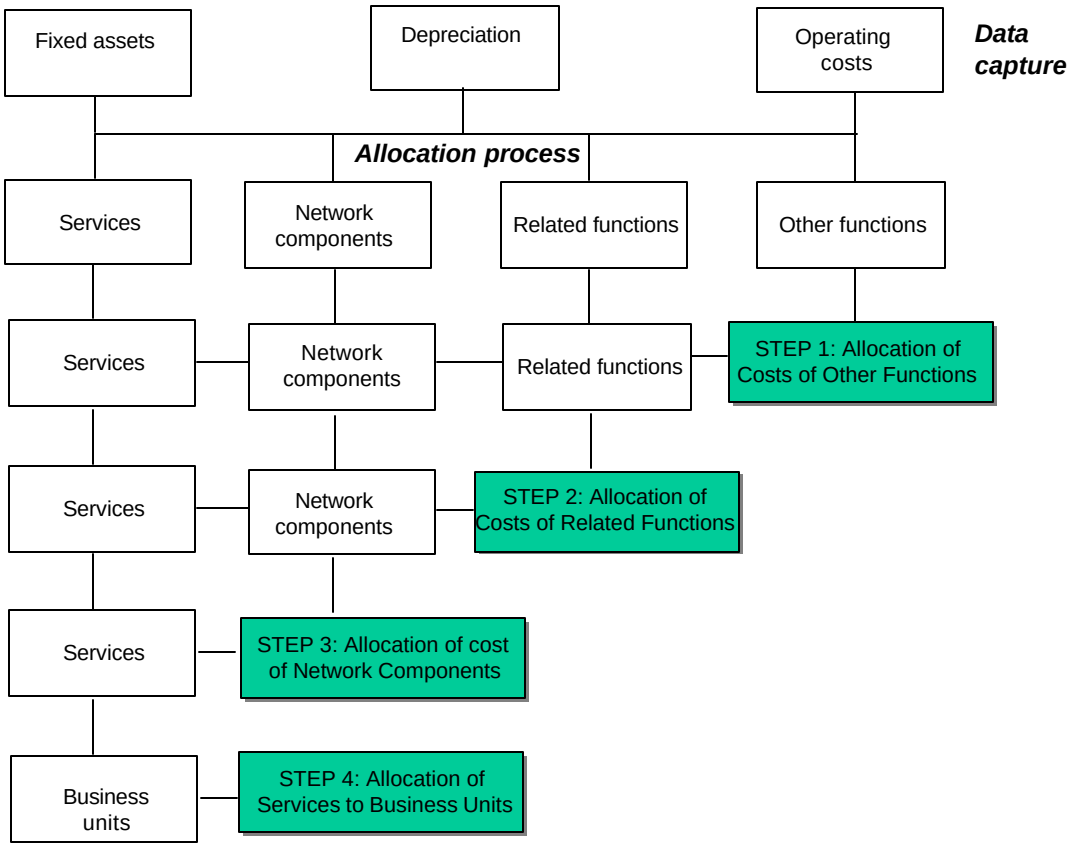
b) Fully Allocated Cost (Current Cost Base) …… 2nd year

c) Long Run Incremental Cost (Top Down Approach) …….. 3rd year

25) The above-mentioned deadlines will be effective from the date of the issuance of the Accounting Separation Regulations and related Guidelines, or the date of the relevant determination of SMP by the Authority, whichever is the later.

26) As far as determination of cost-based interconnection charges is concerned, the Authority is of the view that it may additionally require the development of a bottom-up LRIC model, to be used in conjunction with the Regulated Separated Accounts, at any time during the above-mentioned transition period. The charges so calculated will set the lower limit of rates for interconnection services, below which the operators may incur losses. This approach will also ensure that determination of LRIC-based charges will not be delayed on account of late submission of Separated Accounts. Moreover, the strategy will be helpful to reconcile the charges calculated through the bottom-up LRIC approach with those implied by the top-down LRIC approach.

Annex I: A typical cost allocation process



Annex II: An example of revenue allocation

1. Fixed network

The example shows how different revenue categories for a fixed line operator may be allocated to business units.

Category of Revenue	**Main Business Units**
Connection charges	Charges for establishing new connections (other than for establishing a point of interconnect) should be assigned to Retail.
Customer line rental charges	Line rental charges should be assigned to Retail.
Revenues from leased lines	Revenue from leased lines should be allocated to Retail.
Revenues from line rental to other operators	Where provided to other market players, revenue from line rental of unbundled local loops should be assigned to Access Network.
Access promotion contributions Interconnection charges	Access promotion contributions should be allocated to Access Network. Interconnection charges, including the one-off costs of establishing a point of interconnect and volume-related charges, should be allocated to Core Network.
Call charges	Revenue from call charges should be allocated to the appropriate service within the Retail business.
Equipment rentals and sales	Revenue from the rental and sale of equipment such as telephones and facsimile machines should be allocated to the appropriate services within 'Other Activities`.
Revenue from advertising in directories	Revenue received from advertising in directories should be allocated to a directory services account in 'Other Activities`.
Engineering services/consultancy	Revenue from engineering services/consultancy other than for interconnection should be allocated to 'Other Activities`.

2. Mobile network

The example shows how different revenue categories for a mobile operator may be allocated to business units.

Category of Revenue	**Main Business Units**
Subscription charges	Subscriber acquisition and retention charges should be assigned to Retail.
Interconnection charges	Interconnection charges, including the one-off costs of establishing a point of interconnect and volume-related charges, should be allocated to Network.
Call charges	Revenue from call charges should be allocated to the appropriate service within the Retail business.
Equipment rentals and sales	Revenue from the rental and sale of equipment such as mobile handsets should be allocated to the appropriate services within 'Other Activities`.
Revenue from advertising in directories	Revenue received from advertising in directories should be allocated to a directory services account in 'Other Activities`.
Engineering services/consultancy	Revenue from engineering services/consultancy other than for interconnection should be allocated to 'Other Activities`.

Annex III: An example of operating cost allocation

The example shows how different operating cost categories for a fixed line operator may be allocated to business units.

Category of Operating Costs	Description	Method of Allocation	Main Business Units
Depreciation	Depreciation	The allocation of depreciation should follow the allocation of the fixed assets to which it relates.	All
Provision and installation of equipment	Payroll costs	Direct to network components/other plant where possible; otherwise allocate based on the time spent carrying out installation work.	Network
	Installation, contract and maintenance costs	Direct to network components/other plant on the basis of the plant installed or maintained where possible.	Network
Maintenance and repair costs	Payroll costs	Direct to network components/other plant where possible; otherwise allocate based on the time spent carrying out installation work.	Network
	Other costs	Direct to network components/other plant where possible.	Network
Network planning and developments costs	Payroll and external costs	Direct to network components/other plant where possible.	Network
	Other costs	Allocate to network components/other plant on the basis of the plant managed, where possible.	Network
Licensing/Spectrum costs	Initial fee	The initial fee for licence/spectrum should be allocated to Retail.	Retail
	Annual fees	The annually recurring licensing/spectrum usage fees should be allocated to (Core) Network.	Network
Marketing and sales costs	Payroll	Direct to products and services where possible; otherwise allocate between products based on labour time.	Retail
	Cost of sales of equipment	Allocate to customer equipment services within "Other activities".	Other Activities
	Publicity	Direct to products and services where	Retail

	Promotions Market research Distributors fees Other costs	possible. Otherwise, for those costs where multiple services are being marketed or promoted, cost shall be attributed to the related services on a reasonable basis.	
Billing and collection costs	Payroll costs	Direct to products and services where possible; otherwise allocate between products based on labour time.	Retail
	Other billing costs (incl. bad debts)	Direct to products and services where possible; otherwise allocate between products based on usage (e.g. number of bills produced).	Retail
Operator services costs	Payroll costs	Direct to services where possible. The costs of staff that carry out tasks for several operator services shall be allocated to the related operator services based on time spent on different tasks.	Retail
Directory services costs	Payroll and other costs	Direct to products and services.	Retail
Payments to other operators	Out-payments for outgoing international traffic	Direct to products and services.	Retail
	Payments for interconnection agreements	Direct to products and services.	Retail
Support costs	Human resources function costs	HR function costs should be allocated to the staff that are overseen by the HR function and allocated using the same basis as the payroll costs of HR staff.	All
	Finance and other head office support functions	If related specifically to a product, service or business allocate accordingly.	All
	Building costs and rent	Costs should be allocated in the same way as land and buildings (see Annex-I).	All
	General computing/IT costs	Allocate to the applications run by the operator on the basis of the use of the computers to support each application. Costs allocated to applications can then be attributed to those products and services that they support.	All

Annex IV: An example of cost allocation for capital employed

The example shows how different capital cost categories for a fixed line operator may be allocated to business units.

Category of assets and liabilities	Description	Method of Allocation	Main Business Units
Switching equipment	Local switching equipment	Direct to access or network components where possible. Otherwise allocate to Access Network services and to network components on the basis of the relevant cost of the equipment dedicated to provide customer lines and of the parts dedicated to switch traffic, respectively. Local switch network components can be allocated to products and services based on seconds of use.	Core Network (some costs to Access Network)
	Tandem switching equipment	Direct to network components where possible, otherwise allocate based on seconds of use.	Core Network
	International switching Equipment	Direct to network components where possible, otherwise allocate based on seconds of use.	Core Network
	Switching equipment for special services networks	Direct to Core Network components where appropriate/required by regulation or to the specific services provided by other networks - e.g. data transmission switching equipment should be allocated directly to data transmission services.	Core Network, Other Activities
	Other switching equipment	Direct to network services where possible, otherwise allocate to other switching network components on the basis of the use of the equipment.	Core Network
Transmission equipment	Traffic-sensitive transmission Equipment	Direct to network components where possible, otherwise allocate based on the usage of circuits.	Core Network
	Cable and wire	Direct to access or network components where possible, otherwise allocate to components based on the amount of cable used to provide different services.	Access Network, Core Network
	Local loop equipment	Direct to products where possible (e.g. separately identifiable ISDN access equipment), otherwise allocate between access services based on line usage.	Access Network
	Radio and satellite equipment	Direct to network components where possible, otherwise allocate based on the usage of channels.	Core Network

Category of assets and liabilities	Description	Method of Allocation	Main Business Units
	Transmission equipment for special services networks	Direct to the specific non-PSTN/non-ISDN services provided by the network - e.g. data transmission equipment directly allocated to data transmission services.	Core Network
	International/sub marine cable	Direct to network components where possible, otherwise allocate based on usage.	Core Network
	Customer premises equipment	Direct to products and services.	Other Activities
	Public payphones and related equipment	Direct to service.	Retail
Support Plant	Ducting	Ducting can be allocated to the cable and wire that it supports and allocated to products in the same way as cable and wire.	Access Network, Core Network
	Power equipment	Allocate to primary plant groups on the basis of the use of power equipment to support each plant- e.g. kilowatts per hour. Assets should then be allocated to products in the same way as the relevant primary plant groups.	Access Network, Core Network
	Network management systems	Allocate to primary plant of the different networks provided on the basis of the use of the systems to support each plant - e.g. time spent to control local exchanges, tandem exchanges and international exchanges. Costs should be attributed to products and services in the same way as the related primary plant group.	Core Network
Non-network fixed assets	Land and buildings	Allocate to products, services and network components on the basis of the space occupied (i.e. floor space) to support each product, service or network component.	All
	General computers	Allocate to the applications run by the operator on the basis of the use of the computers to support each application. Costs allocated to applications can then be attributed to those products and services that they support.	All
	Motor vehicles	Allocate to the products and network components based on usage.	All
	Furniture and office equipment	Allocate to the products and network components based on usage.	All
Intangible fixed assets	Intangible fixed assets	Direct to products where possible. Any residual or unattributable assets will need to be allocated on an arbitrary basis, to be agreed with the Authority.	All

Category of assets and liabilities	Description	Method of Allocation	Main Business Units
Working capital	Pure financial investments	Direct to "Other Activities".	Other Activities
	Investments in unrelated Activities	Direct to "Other Activities".	Other Activities
	Other investments	Direct to the services to which the investments are related, otherwise allocate based on usage.	All
	Short-term investments (including cash at bank and in hand)	Direct to businesses where possible, otherwise allocate based on the operational requirements of each business.	All
	Stocks	Stocks should be allocated directly to products and services.	All
	Debtors/receivables should be analyzed by type and sub analyzed where appropriate	Allocated to products and services based on billing system information where possible. Unattributable balances will need to be allocated on an arbitrary basis, to be agreed with the Authority.	All
	Other debtors/receivables analyzed by type and sub analyzed where appropriate	Other debtors/receivables should be apportioned to products and services if possible. Unattributable balances will need to be allocated on an arbitrary basis, to be agreed with the Authority.	All
	Creditors analyzed by type.	Creditors should be allocated directly to products and services if possible. Unattributable trade creditors will need to be allocated on an arbitrary basis, to be agreed with the Authority.	All
	Long term provisions	Direct to the activities that give rise to the provisions in question,	All
	Liabilities for taxation and Dividends	No allocation required. Instead average liabilities should be taken into account when considering the operational cash requirements of each business	All