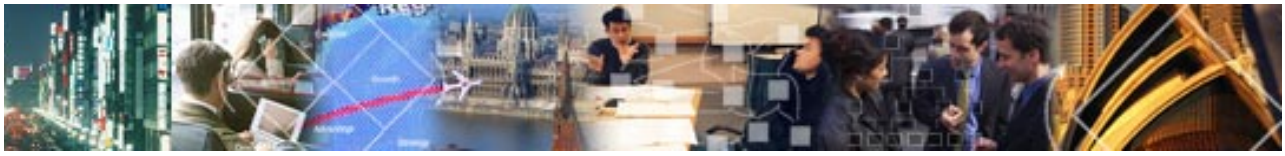
Banking, Investment & Financial Services: Costing and Profit Measurement



Prepared by Ernest Glad, CEO Cortell International

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Why is Banking Unique?

Costing and profitability measurement in the banking environment is unique for a number of reasons, namely:

- The intangible nature of the product and sometimes the difficulty of defining the product. Different people may also have different perspectives on what the product definition is, as the definition of a product for one unit may simply be a component of a product for another unit
- Banks are typically complex organisations with large transaction volumes, large customer bases and a large number of products used by multiple business units
- Shared services are used across the whole organisation and the nature and impact of high IT costs, particularly, are not easily understood throughout the organisation
- Many diverse delivery channels, each with its own cost structures, are normally interwoven with the rest of the bank's infrastructure
- The allocation of revenue in terms of products, business units, branches and channels are complicated as a result of "account ownership" being vague, multiple entities claiming the revenue stream and playing a role in delivering services

The objective of this document is to set out the philosophy for measuring costs and its consequent profitability in the banking environment. Costing is this context is done specifically to support a multi-dimensional view of the Bank's profitability by business units, channels, products, etc.

The cost measurement system embodies the policies and procedures for measuring the cost of the following:

- Activities and processes
- Transactions
- Products and product components
- Customers

Profitability measurement is designed to deliver profitability in terms of:

- Business units and segments
- Customers
- Accounts
- Products
- Delivery Channels

The long-term objective of a costing system is its evolution from a pure cost measurement system to a sound cost management philosophy, whereby organisational strategies are interpreted and translated into operational objectives. These are normally measured in terms of the cost structure of cost objects, performance measures such as productivity, quality measures and the identification of waste. The Activity-Based Costing perspective is then replaced by an Activity-Based Management philosophy, which closely supports Business Unit strategies such as segmentation, benchmarking, transfer pricing, etc.

Costing Philosophy

The underlying philosophy for the calculation of cost and profitability is an Activity-Based Costing system that calculates the costs of all activities performed in the Bank and specifically differentiates between the cost structures of:

- Branches
- Delivery channels, such as ATM or the branch network
- Support structures (shared services) and primary activities
- Individual transactions or product components

The system is designed to be a fully absorbed costing system that transfers all costs to the final cost objects, such as customers and products. Interim "profits" are not permitted and all profits ultimately reside with the Business Units (unless the transfer pricing system is used).

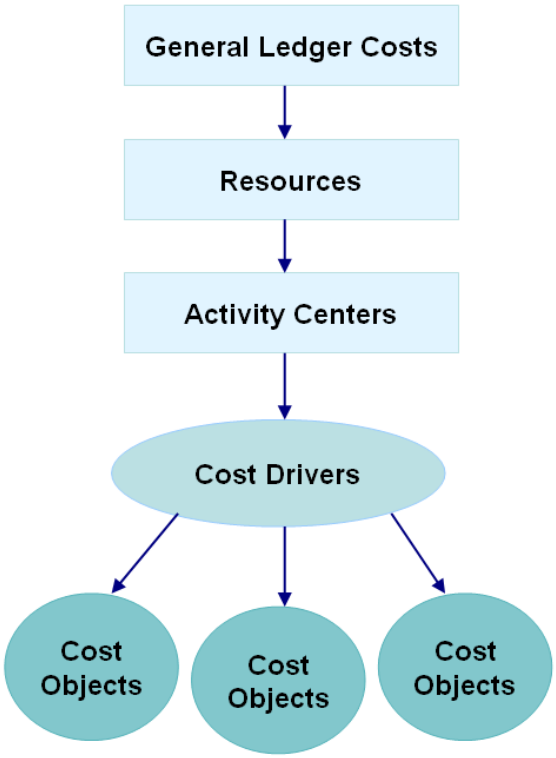
Once a "transfer pricing" regime has been established, the cost system may also be run by utilising defined transfer prices. The costing system is not a "cost recovery" system that recovers costs from various entities based on a few convenient bases, but is rather designed to measure cost of activities and relate this to cost objects as scientifically and accurately as possible.

The ABC philosophy is depicted in the following diagram:

The full general ledger of the Bank is imported into the costing system and costs from individual costs centres are linked to Resources such as People, Machines and Systems and then to activity centres. Through the use of cost drivers, costs are traced to individual cost objects such as transactions or products. Support costs are traced from support activities to primary activities to reflect the full cost of its products and services in the organisational operations. Costs of components of products are calculated to provide cost perspectives, such as:

- Opening accounts
- Maintaining accounts
- Transactions on accounts
- Closing accounts

These product components can again be broken down into subcomponents (similar to a bill-of-material structure) and costed as appropriate for the user.



Fully absorbed costs

Costs traced to cost objects also include full support costs and reflect a fully absorbed cost of the entity. This requires that the costing system must balance to the full general ledger. The cost of support services is reflected in the cost rates of activities allocated to products, yet the cost of support services are kept separate. A small percentage of costs may not be allocable on a cost driver basis and these costs will be allocated on the same basis as other costs. For example, cost of transformation may not be considered a specific product cost and may thus be allocated to products on the basis of "other costs".

Cost drivers

The system uses cost drivers to trace costs to cost objects or products, such as cheque payments or ATM enquiries as accurately as possible. Cost drivers depict the underlying cause and effect of costs. The system is thus not merely a cost recovery system, but finds an acceptable basis for recovering cost.

Cost driver quantities must be updated regularly, preferably monthly, to reflect the dynamics of the organisation and understand the impact of varying volumes.

Variability of cost and marginal costing

The costing system has been developed with long term cost management as its objective and to manage costs trends over the longer term. The principle of marginal costing is inappropriate as this is merely a short-term view. Furthermore, the definition of fixed and variable costs in a large organisation is extremely subjective and the view may vary, depending from which cost centre the costs are viewed. Yet, for the organisation that wishes to classify its costs along fixed and variable cost lines, a fixed/variable costing should be run.

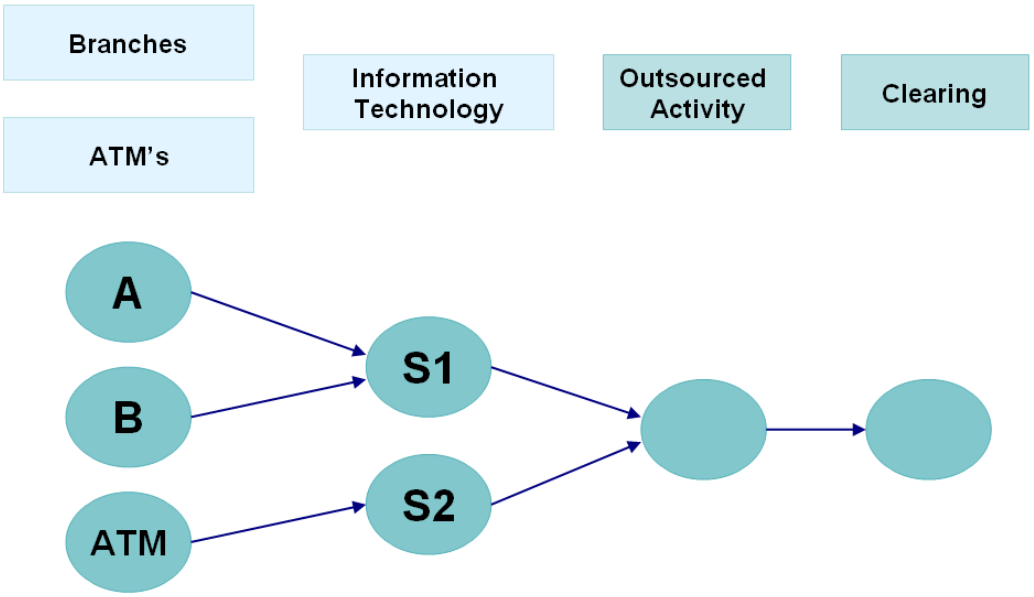
Robert Kaplan, one of the people who originally conceptualised Activity-Based Costing, states in his book, "Cost and Effect", that the notion of long term variable costs is far more precise and operational with ABC. Firstly, ABC provides an understanding of the reasons why costs vary by analysing variability factors, such as unit variable costs, batch variable costs, customer sustaining costs, etc. In banking terms this implies understanding which costs vary, for example by transaction, by account, by customer or any other factor.

Secondly, ABC forces an understanding of the capacity created by an infrastructure of resources and especially the excess capacity that may exist. Few costs can be considered fixed, and therefore unmanageable, and managers who adopt the fixed cost view could easily feel defeated in their approach to cost management and may not show any inclination for managing costs down. ABC provides managers with the information to make almost all costs variable, either up or down the hierarchy. Management affects the level of spending on a resource by increasing or decreasing the demand for the resource and by their spending on the resource. Variability, thus, is not inherent in the resource and a simplistic "classification" of costs as either fixed or variable will probably lead to wrong business decisions.

The underlying cost management philosophy, therefore, is to manage total cost and to force cost trends (downward) rather than arbitrarily addressing only so-called variable costs.

Value Chain Approach

The “value chain” approach has been followed in the analysis and development of the costing system. This implies that products are traced through their full cycle of development until delivery to the customer and includes all costs incurred during the value chain, such as branch costs, IT costs and support cost, or whatever is included in the cost of the “product”. Alternative delivery channels are also costed separately.



Logically trace the product through the organisation.

Profitability Measurement

Customers, SBU's and Products

The profitability measurement system of the Bank measures profitability by business unit through a definition of customer account ownership. Product profitability is measured in terms of the income that is earned through the customers. The assumption is that multiple business units could market a product. Profits by product would thus equate profits by customers, other than customer specific costs that cannot be traced to products. Delivery of product, however, may be via different delivery channels and a certain amount of revenue could thus be attributed to the distribution channel. This is normally managed through transfer prices or benchmarked costs. Profit measurement is done in terms of the following income and cost structure:

- Interest earned or paid
- Cost or worth of funds
- Non-interest revenues, such as deposit fees, commissions, etc.
- Cost of financial and non-financial transactions used by the account, as determined on activity-based costing principles and typically provided by multiple delivery channels.
- Customer specific costs

Channel profitability

Channel profitability must be measured for the following channels:

- Branch network
- ATM network
- On-line or electronic banking (Internet)
- Telephone banking (Direct Line), Call Centres.

For this profitability measurement to be calculated accurately, the principle of transfer pricing needs to be applied between channel service providers and business units. (The costing system is designed to apply transfer pricing when rates and principles have been decided.)

The measurement of channel profitability must take the following into account:

- "Products" delivered or serviced by delivery channels are "manufactured" in different stages in the channel and costs may be incurred in the branch, in the IT division, in processing centres, etc. The cost of the product should thus reflect the cost components during the different stages.
- Profitability for the channel could be measured in two ways:
- By dividing the profit (difference between cost and income on the product) between the SBU and the different service providers in an agreed manner This is termed the "revenue" approach and implies that service providers share in the profitability (or lack of it) of the final product, or
- By agreeing a transfer cost for each stage in the service channel (typically based on the costs incurred by each party). This is referred to as the "cost" approach and rewards service providers based on their cost structure. This may be based on economic value added principles or by agreeing on a reasonable return on investment to channels.

Terminology

A description of the following terms is necessary to clarify issues in this document.

Resource

A resource represents a Unit that produces outputs such as Staff, Machines, Systems, etc. These resources represent a significant portion of costs consumed in any organisation. Staff resources, for example would not only attract their direct remuneration but also support costs such as offices, networks, HR costs etc. This provides a measurement of the "true" cost of a resource and also how this resource is used in the organization. Resources such as systems would attract their development cost, maintenance, licence fees, hardware, share of networks , etc to make such a system function, Thus the true cost of a system is shown as well as how this "resource" is deployed in an organization.

Activity

Activities represent the work performed by organisations in the form of tasks. A homogenous group of tasks with similar outputs and cost structures are aggregated in an activity centre. Costs are collected for the activity centre and traced to the outputs utilising the cost driver for the activity. Activities could be defined from a physical, logical or cost perspective. In most cases, the physical perspective is used to define activities. For example, the tellers in a branch represent an activity centre, as this forms one physical location and, although many outputs are delivered, these are essentially all processed transactions.

Activities can be divided into primary and secondary activities. Primary activities relate to the delivery of products and services, while secondary activities provide services for other activities in the organisation. The cost of secondary activities must be transferred to the activities that are serviced (i.e. the internal customers).

Cost drivers

The cost driver is a significant determinant of cost. An increase or decrease in the volume of the cost driver normally results in a consequent increase or decrease in the cost of the activity centre. Good cost drivers normally show high statistical correlation between the cost driver and the level of cost. For example, the more transactions a teller operation processes, the higher the cost will be. (More tellers, more machines, more space, etc.) The cost driver for a canteen would be the number of meals prepared (more ingredients, more energy, and more staff relative to the number of meals that have to be delivered).

Cost drivers are measured dynamically, that is every period, to reflect the impact of the changes on cost during that period.

Resource drivers

Resource drivers are allocation bases used by the activity-based costing system to allocate costs to entities. CPU-time by transaction by branch could, for example, be a resource driver to allocate certain computer costs to branches. Square meters could be used for allocating costs of a certain premises to activities performed on those premises.

Resource drivers could be static or dynamic. Static resource drivers would not necessarily change from period to period (square meters will only change if an operation is restructured). Dynamic resource drivers imply the existence of a quantity relating to the use of a resource during a specific period. The transactions processed during any period will be different from other periods and will thus impact on resources consumed.

Resource drivers are normally used for simplistic cost allocations, such as costs within a branch.

Measures

All volumetric measures in the costing system, including cost drivers, allocation bases, productivity measures, etc. are collected as measures in the costing system. Measures are held by specific period to enable costing to be done by specific period. For example, the transactions (cheques, deposits, etc) processed in a branch are all measures for that branch.

Measures are classified as production measures, productivity measures, quality measures, waste measures, or other classifications that may be required from the system. Measures do not necessarily carry the same weight. Outputs from tellers (cheques, deposits, enquiries) may all be measures, but the time spent on each output may differ dramatically, thus necessitating a weighting of the measures or outputs.

Cost objects

In the case of most Banks, few physical products exist and all objects for which costs are accumulated are referred to as cost objects. Cost objects could be ultimate "products", such as a cheque account, but may also be intermediate products or "product components", such as a payment by a cheque. Intermediate cost objects are measured in order to provide an understanding of the cost of the components of the final product or where the intermediate product undergoes transformation before being transferred to final cost objects. Transactions (financial and non-financial) are some of the most important cost objects in the Bank and a summary view of this is equally important. Transactions may be summarised in the following groups for example:

- Account opening transactions
- Account maintenance transactions
- Account closing transactions
- Processed transactions

Bill-of-Activities

The Bill-of-Activity is a description of the routing the cost object (or product) takes through the activities in its path towards the customer. This enables a calculation of the cost at each step in the "production" of a cost object and is vital for cost management purposes. A cheque, for example, could be processed by the tellers, in the proof department, by the clearinghouse, through the IT system and even by an external party such as EDS. The Bill-of-Activities will reflect the costs that the cost object accumulates from all these activities.

Customer account

A customer account is managed and "owned" by a business unit (or branch) and indicates a specific sub-product, such as a DDA01 "minimum monthly balance" product. This unit determines the ownership of the interest spread on the account as well as the non-interest revenue, such as deposit fees and commissions. Service providers, such as branches, ATM networks, etc, must be refunded for the cost of providing the service, either through a share of the profit on the account or a transfer cost for the services provided.

Customer

Banks have become customer centric organizations and various customer views are thus made available within the customer profitability system. Besides financial information gathered in terms of its customers, several other metrics, indicators and information is also gathered by customer in order to manage the relationship with the customer. These would include cross-sell ratios, share of wallet calculations, etc.

A customer is a collection of a number of accounts, such as cheque accounts, mortgages, savings, etc. The customer is not "owned" by a specific business unit because of the diversity of products that may exist. Profitability can be summarised by customer, but not by customer within the SBU (unless business rules dictate such "ownership").

Customer portfolio

A customer portfolio comprises a number of customer accounts that are "managed" together or seen as a group such as a business group. This is simply a summary view of a number of customer accounts.

Customer segment

For marketing purposes customers may be segmented, depending on various criteria, such as:

- Size (ie. balance of the account)
- Financial relationship (ie. profitability)
- Behaviour patterns (ie. volumes of transactions)
- Demographics (age groups, professions, etc)

The customer profitability system would provide management with the means to classify customers into respective segments and rank customers within such segments (for example in terms of profitability or size).

Product

A product forms a collection of a group of accounts with similar characteristics, such as all cheque accounts (the DDA product) and may be differentiated at sub-product level according to the specific type of cheque account. Products could be managed by a business unit, but are normally not used exclusively by a SBU.

Strategic Business Unit (SBU)

An SBU manages a group of customer accounts that are defined by a set of business rules and that are dependent on:

- Customer type
- Sub-products and their combinations
- Branch
- Segment

Accrual principle

No further accrual of cost, other than that done in the accounting system, is done in the costing system. Thus, incorrect accruals in the general ledger will also find their way to the calculation of product costs and customer profitability. A strict accrual policy in the accounting system will improve the period accuracy of all costs.

Life cycle of cost objects

The costs of cost objects are calculated by single period only and currently no calculation is done to establish the cost of a cost object over its entire life cycle. An example would be a mortgage bond with a life cycle of many years. The system provides views on the mortgage, period by period, but no life cycle view is prepared. And yet this view is important for products such as term loans, hire purchase agreements, etc.

Matching costs with revenue

Matching costs with revenue as viewed from two perspectives:

- Income recognition of interest streams

The income credited or debited to accounts from operational systems is not changed in the costing system. Cost of funds (or worth of funds) is calculated on the same balance as that used for calculating the interest based on the average market rate that applies to the specific period. Income is traced to the entity that "owns" the account relationship.

- Non-interest revenue and associated costs

Non-interest revenues are recognized as and when charged to customer accounts. Costs for these transactions or services are calculated in the costing system for the same volume of transactions, based on the expense structure for the month under consideration. No lagging or leading of cost structure is currently undertaking.

Materiality

In analysing costs a pragmatic approach is taken. Here materiality is an important factor in determining the extent and detail of the cost analysis. In this regard the objective is to analyse 85% of costs in a cost centre as accurately as possible and to improve this ratio with cost elements that are analysed cost effectively. In most cases this includes a detailed analysis of the following cost groups:

- Payroll costs
- Premises costs
- IT costs
- Asset costs

Cost of idle capacity

Cost of idle capacity may be costed into products where capacity of activities is not currently measured. The system is structured in such a manner that the cost of idle capacity may be calculated should measures be available and that the waste resulting from capacity could then be reported on.

Waste

Cost of other forms of waste is not costed in the system and is included in the cost of products. The system, however, is set up to accommodate the calculation of waste costs and its reporting.

Method of Calculation

Costing

The following describes the method by which the cost calculation takes place.

Step 1 -Linking of General Ledger

The general ledger is linked to the costing system and to the profitability measurement system. Costs are essentially linked to the costing system and revenues to the profitability system. The following type of costs are found in the general ledger:

Direct costs

These costs may be directly associated with a resource, cost object or activity and should be traced accordingly. For example, charges from a clearinghouse can be traced directly to cheques (cost object) processed.

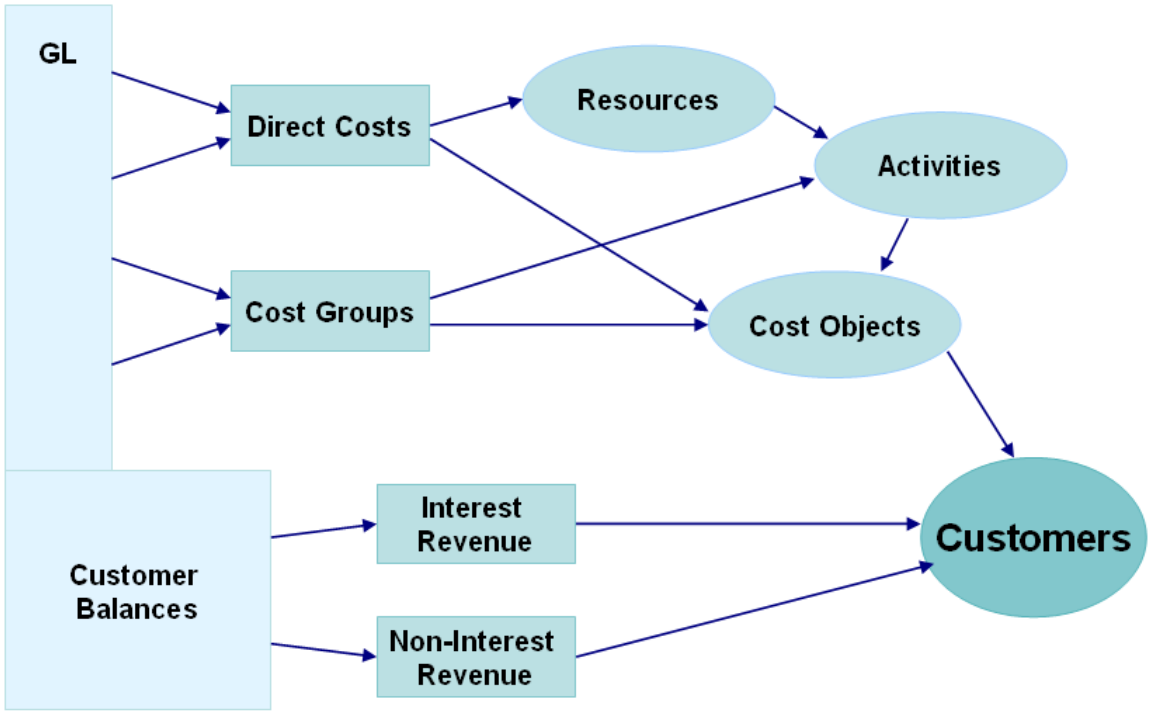
Cost groups

These costs cannot be traced directly to a cost object or activity but can be related to a group of costs that can be traced to activities or cost objects using a resource driver. For example, cost of premises (Rates, electricity and water) cannot be traced to an activity directly, but using a resource driver such as square meters, is allocable to individual activities.

Unallocated costs

Certain costs cannot be traced to activities or cost objects and will be allocated as a percentage of other costs already allocated. Examples are certain strategic expenses that will not have an immediate effect on customers or products or perhaps the cost of an affirmative action programme.

This can be depicted as follows;



Step 2 - Accounting integrity

As a first step in ensuring accounting integrity, the links of the general ledger to the costing system must be ensured. This is achieved by balancing linked costs to the GL inputs.

Step 3 – Transferring support costs to primary activities

Support costs (or shared services) account for approximately 25-40% of all costs in a Bank and the impact of this cost on other activities (or resources) must be accurately measured. This is done by determining cost drivers for support activities and tracing the support costs to other activities (or internal customers). In this way, the cost of primary activities also includes the cost of secondary activities and is a further step in the full cost absorption process. Upward transparency of support cost is an essential element in a sound cost management system.

Step 4 – Costing of cost objects

Once costs of all activities have been determined and costs from secondary activities have been transferred to primary activities, the costs of activities are then traced to cost objects or products and customers.

The system also allows movement of costs between cost objects, as some cost objects (intermediate products) need to be transferred to other cost objects (final products).

Costing of cost objects is based on time studies performed in order to measure the time taken for each cost object. These times are then multiplied by actual volumes for a specific period to calculate the actual cost of the cost object for that period.

Costs are normally based on actual throughput and not on theoretical capacity. As more experience is gained in the determination of capacity, cost calculations are based on capacity and for indicating capacity waste. This will require the introduction of capacity ratings and "waste" measures. A separate calculation could be performed for this.

An example of such a calculation is as follows:

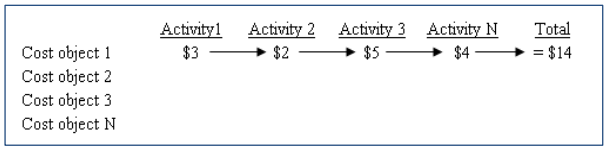
Activity Cost Calculation (eg. tellers)

Direct costs:	GL-1	(Salaries)	$ 2,000	
	GL-2	(Stationary)	$ 3,000	
Cost groups:	CG1	(Premises)	$ 1,000	
	CG2	(Depreciation)	$ 5,000	
Transferred in costs:	T1	(Supervision)	$ 4,000	
	T2	(Systems)	$ 2,000	
Total activity cost				$ 17,000
Output total:				5000 Hrs
Cost object or Product 1:	1000 units x 2 hrs = 2000 hrs			
Cost object or Product 2:	500 units x 3 hrs = 1500 hrs			
Cost object or Product 3:	1500 units x 1 hrs = 1500 hrs			
Activity Rate per hour	($17000/5000)			$3.40 per hour

Cost Object Cost Calculation (eg. a cheque)

Direct costs:	GL-7	(Paper)	$ 5,000	
	GL-9	(Stamp duty)	$ 2,000	
Transferred in costs:	T1	(Supervision)	$ 5,000	
	T2	(CPU time)	$ 1,000	
Bill-of-Activity costs:				
Activity 1 (Tellers):	1000 units x 2 hrs = 2000 hrs @ $3,40		$ 6,800	
Activity 2 (Proof):	1000 units x 4 hrs = 8000 hrs @ 90c		$ 7,200	
Total cost for cost object				$ 27,000
Cost per unit	($27000/1000)			$27.00 per unit

The costing system represents a multidimensional matrix of the organisation where cost objects "move" through the organisation to pick up costs. This can simplistically be viewed as follows:



This cost is then traced to the customer, based on the number of these transactions that the particular customer has used.

Step 5 - System integrity

System integrity must be rechecked to ensure that all costs have been allocated accurately to cost objects and that they balance to the general ledger inputs.

Step 6 - Set-up of cost rate table

Once the cost calculations have been done, a cost rate table designed per transaction (per branch category), which is then linked to the profitability measurement system. Examples of the rates that are calculated are:

Branch category	Product	Transaction	Source	Rate
Large Commercial	Savings	Payment	Branch	$2.30
Medium Retail	Cheque	Deposit	ATM	$4.86

Profit Measurement

The method for calculating profitability is as follows:

Step 1 – Read all customer transactions into a volume database

Every month, all customer financial transactions conducted in the Bank are processed in the Customer Profitability system and summarised in a multidimensional format to the following attributes:

- Transacting branch
- Account owning branch
- Account number
- Sub-product
- Transaction number
- Source of transaction
- Period (month and year)

It must be stressed that it is not the function of the costing system to ensure the integrity of the transactions and balances received by the costing system. This must be ensured by systems such as the data warehouse providing the information.

Step 2 – Read all customer balances into the customer profitability system

Every month all customer balances, including revenue, are updated on the customer account held in the customer profitability system. All transactions from the volume table are also linked to customers.

Revenues consist of two groups, namely:

- Interest revenue

All interest revenues are linked to individual customer accounts and are balanced back to total interest income according to the general ledger.

- Non-interest revenue

All service fees, commissions and other non-interest revenues are also linked to individual customer accounts and balanced back to the general ledger system. In some cases fees, such as cash deposit fees, may be traced to the delivery channel rather than the business unit owning the account relationship.

Step 3 – Integrity checking

Integrity checking is done to ensure that all transactions have been received and populated in the customer profitability system. Integrity of revenue streams is achieved by balancing it to the general ledger system.

Step 4 – Import and create non-financial transactions

Every month transaction accounts representing non-financial transactions are imported into the customer profitability system. Certain "transactions" are generated from information held in the data warehouse.

Step 5 – Apply cost rates

Cost rates calculated in the ABC system are applied to the transactions held in the customer profitability system to update profitability by account, by product, etc.

Step 6 – Integrity checking to costing system

Costs calculated in the customer profitability system are balanced back to the costing system to determine under or over charges. Cost rates of tested branches are applied to transactions of non-tested branches to benchmark these branches against tested branches. Under or over recoveries of non-tested branches are used to recalculate the transaction cost rates for these branches. The new cost rates are then re-applied to the customer profitability system.

An alternative method is to use the cost rates of the tested branches for all transaction charges to customers. This will, however, result in over or under recoveries in branches.

Step 7 – Populate Data Mart

Once the customer profitability system has been balanced, the final figures are populated in the Customer Data Mart.

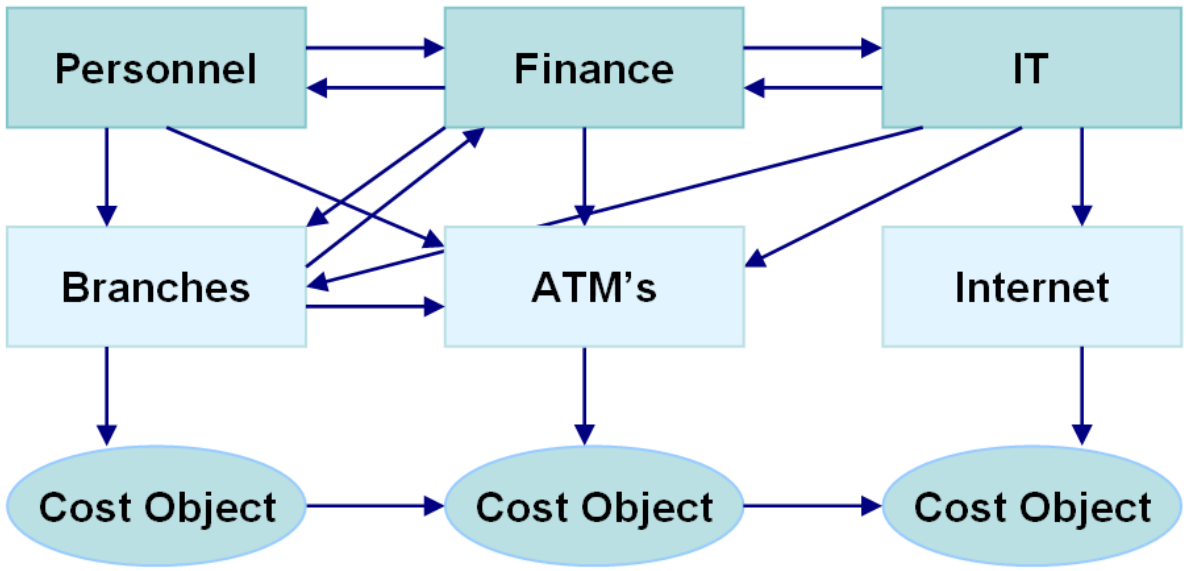
Simultaneous cost transfers for shared services

The nature of a Bank is such that a large number of entities deliver work or products for each other. These interrelationships require that the system solve these as simultaneous cost transfers in the costing system. Thousands of these simultaneous equations exist in the Bank and are often referred to as the “spaghetti” network.

The solution of these equations provides the only comprehensive perspective of the total cost structure of the entire Bank and all its operating units as well as their collective impact on each other. The system, nevertheless, retains the “picture” on an individual business entity.

The following diagram, resembling a “spaghetti” network, illustrates this concept.

Example of a cost flow diagram;



Funds transfer pricing

Cost of funds supplied to customers or cost for the use of funds from customers is calculated in the customer profitability system. This calculation is based on an average market rate supplied by product, irrespective of risk category (risk differentiation could also be applied, should this be required to meet Basel II requirements). This rate is then applied to average balances by account for the particular product to determine the interest margin or spread on accounts or products. If a more sophisticated funds transfer pricing mechanism is required, the business rules to achieve this need to be identified.

Periodic recalculation of cost

Costings need to be calculated regularly in order to feed the result of cost improvement actions back to management and to monitor cost trends for comparison with pricing. The cost system recalculates cost results on a monthly basis. For this purpose the costing system is designed to recalculate costs by importing costs from the general ledger and volumes from the operational systems on a monthly basis.

It is also able to compare results between different periods. The system is therefore designed to conveniently import values from every period. This includes the import of financial as well as non-financial or volumetric information.

All financial measures are imported monthly. Frequency of importation of volumetric needs to be indicated such as monthly, quarterly, six monthly, yearly, or as and when required.

The Bank is able to decide whether it wishes to use monthly, quarterly or six-month average costs to charge costs to customers.

Electronic linking of information

Because of the vast volumes processed by a Bank, it is essential that all costs and the bulk of measure is electronically imported or linked to the costing system. These costs and measures should preferably be sourced from the data warehouse

Profiling of Branches

Branches are typically analysed into 20-35 activity centres and approximately 200 financial and non-financial products or cost objects. The costs of these cost objects, for which volumetric information has to be provided, are analysed in great detail on a monthly basis. Time standards must also be reviewed regularly for all cost objects.

Because of the extensive detail in which a branch is analysed and the number of inputs involved, it is not practical to do this analysis for all the branches in the entire Bank. Branch costs could thus be based on a sample of branches to represent the branch component of costs. These are referred to as “tested” branches.

Costs of non-tested branches are still linked to the branch, but not at the level of detail described above. All support costs are traced to the non-tested branches to reflect the total cost of a branch.

Branch costs could also vary dramatically between branches, which could reflect on the costs charged to customers for using a specific branch. For this reason branches are categorised into a number of branch categories and costs are transferred to customers at the average of a category. This provides a powerful benchmarking capability within the Bank. Branches are categorized according to:

- Types of business (Personal Bank, Commercial, etc.)
- Size of branch (small, medium, large)

All branches (tested and non-tested) are linked to the categories in order to benchmark similar branch cost structures. The profiled cost of transactions (based on the category) is applied to the non-tested branch’s transactions to compare this “recovery” with the actual costs of the branch in order to determine whether the branch is operating at a higher or lower cost structure than the category of branch it falls into. The resulting variance or over/under-recovery could either be retained in the branch, reflecting a productivity factor, or it could be an indication of the branch’s effectiveness, or all costs may be fully charged out by an appropriate adjustment to the transaction rates.

Branches could be categorized into any number of categories.

Although the current time standards loaded into the ABC system are based on the Productivity Measurement Systems and accept uniform work methods between branches, the ABC system provides flexibility to introduce branch specific standards.

Channel differentiation

The costing system is based on the principle of differentiation of costs between the different distribution channels. In this regard the costs of a cost object (such as a transaction) indicates differential costs, for example for a transaction processed through the branch network as opposed to the ATM network.

Costs are differentiated for the following channels:

- Branch network
- ATM network
- Internet or electronic banking

Channel differentiation also includes cost differentials for IT and other costs.

Non-Financial Transactions

Non-financial transactions represent a significant proportion of cost, especially in the branches. The cost of these transactions, although they do not result in a charge to a customer's account, must still be costed and the resultant cost transferred to the customer's account.

Volumes of non-financial transactions are also fed into the costing system for calculating the cost of non-financials. Currently, not all the volumes are available for non-financial transactions and non-financial transaction costs are traced to customers, assuming that these non-financial transactions are "consumed" in the same fashion as financial transactions.

Linking branch cost objects with transactions

The cost objects defined at branches do not necessarily agree with financial transactions and an automatic link between branch costs and the ultimate transaction is thus not possible. A linking table is therefore created and maintained to indicate the relationship between branch cost objects and financial (and other) transactions.

Resource analysis

Certain cost elements represent a major proportion of the cost structure of a Bank and these costs should be analysed in great detail to measure costs of activities as accurately as possible. These costs could be:

- Payroll costs
- Premises costs
- Fixed asset costs
- IT costs

These costs are linked to activities using multidimensional cubes or resource driver analyses in the costing system. For example, all staff is linked to activities that they perform, or assets are linked to where they are employed. By performing a resource analysis a picture of the use of resource is provided.

Measurement of time standards

Determining the costs of cost objects is based on time standards for the cost object in a number of cases. This is typically the time taken for activities performed at branches, such as processing transactions in the various departments. These time standards are determined for the productivity measurement system and are updated quarterly. These times units are multiplied with actual transactions processed per period and the resultant factor is used to calculate costs of the cost objects. Where time "consumed" differs drastically from available time, a productivity investigation of the branch can be instigated or the time standards changed.

A close relationship thus exists between the productivity measurement system and the costing system. The costing system provides the cost link for outputs performed per branch and the measurement of actual available time, while the productivity measurement system provides the time standards. The costing system draws attention to standards that may be out of line or productivity that may be suspect.

Multidimensionality

Cost results calculated by the costing system are displayed in a multidimensional database format in order to facilitate easy cost comparisons between branches, products, activities, channels, etc. The large number of calculations performed necessitates this and these results require display – the complexity and size of a Bank makes conventional paper based reporting impractical.

Simulation

The costing system does allow for a certain level of cost simulation, as it can calculate the cost of various scenarios based on alternative inputs. This, nevertheless, implies that the full costing is calculated and that the simulation is subject to the same integrity requirements as a full costing. The disadvantage of using the costing system as a simulation system is simply speed, but the advantage is that it contains all the business relationships required to understand the full impact of a particular scenario. (Used intelligently, the costing system could thus play a vital role in cost simulation).

Reporting

Costing system

The costing system provides reports that illustrate the cost of cost objects and activities in three principal areas. These are:

Cost object reports

These reports include all cost movements into and out of cost objects. An example is attached.

Activity cost reports

These reports include all cost movements into and out of activities. An example is attached.

Cost transfers

These reports indicate the movement of costs between activities and cost objects and act as an audit trail of all costing transactions.

Cubes

All information produced by the costing system is populated in multidimensional databases for extraction and comparisons of costs among:

- Branches
- Activities
- Cost objects
- Periods
- Business units

Customer Profitability System

The Customer Profitability System provides profitability reports for the following:

- Products
- Customers and accounts
- SBU's
- By any period

These reports can be viewed on-line or via the Web browser. Other ad-hoc reports extracted include rankings of customers and products.

Conclusion

Measuring customer account profitability is virtually unique for every bank. In the above an indication has been given of the methods and philosophies that should be considered in formulating a policy for a specific bank. Systems and procedures obviously have to be tailored for specific bank use and reflecting unique characteristics of the entity.