

Product Costing in Practice
The Experience of *MicroSave*

David Cracknell and Henry Sempangi

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Acronyms

ABC	Activity Based Costing
ARP	Action Research Partner
ASA	Association for Social Advancement
CGAP	Consultative Group to Assist the Poorest
CERUDEB	Centenary Rural Development Bank
CI	Credit Indemnity
Equity	Equity Building Society
FINCA	Foundation for International Community Assistance
KPOSB	Kenya Post Office Savings Bank
MFI	Microfinance Institution
TPB	Tanzania Postal Bank
UMU	Uganda Microfinance Union

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Executive Summary

MicroSave's work with its nine Action Research Partners in Eastern and Southern Africa informs this study. The study will be supplemented or updated at a later date as *MicroSave*'s experience with allocation and activity based costing systems develops.

Whilst many microfinance programmes justify high interest rates on the basis that rural financial intermediation is very expensive, less attention has been directed towards ensuring that microfinance programmes operate efficiently. It is particularly noteworthy that although several of the Action Research Partners already had costing systems in place, none fully costed their products until *MicroSave* started working with them. Whilst costing products, and specifically processes, is a key step in driving efficiency improvements, an institutional focus on efficiency is at least as important. For example, ASA in Bangladesh has no product costing system, yet it remains one of the most efficient microfinance providers in the world.

In the right environment, the benefits of product costing can be considerable. Identifying the source of profitability (and losses) allows a financial institution to focus on promoting its winning products, and to redesign those that are less profitable. Moreover, a detailed understanding of cost structures allows the institution to make informed pricing decisions, and an understanding of processes facilitates improvements in efficiency.

MicroSave's work with its Action Research Partners has clearly demonstrated that product costing interacts strategically with a diverse range of business areas, including: pricing, efficiency, outreach, the design of incentive schemes, the identification of the most suitable product mix, marketing, customer service, staffing patterns, profit centre accounting and budgeting. These strategic dimensions of costing have been little recognised to date.

Although activity based costing (ABC) allows a microfinance provider to assess the cost of key processes, which allocation based costing cannot do, this is not the only consideration. The choice of which method to introduce should also consider institutional capability and a range of other institutional factors. Introducing product costing, requires access to training and technical support, which are both expensive and in very limited supply in East Africa. The requirements for training and support are considerably greater for ABC as it is technically more demanding than allocation based costing.

For *MicroSave*'s Action Research Partners, the identification of loss-making products had a significant and immediate impact. Once a loss-making product was identified, further investigation proved necessary – especially in the case of allocation based costing. These investigations revealed a range of issues behind the losses, including: poor investment efficiency, inappropriate pricing, an unwillingness to decrease rates to depositors when Treasury Bill rates fell, inappropriate allocation of staff, and expensive processes as well as expensive internal control procedures.

With declining Treasury Bill rates and greater pressure on the net interest margin, fee based products (e.g. money transfer products) were found to be consistently amongst the most profitable products. Fees charged for the provision of specific services within individual products (e.g. withdrawal fees, within savings accounts) contributed significantly to the profitability of those products.

Whilst costing was the major focus of investigation, it is clear that few of *MicroSave*'s Action Research Partners coherently relate the price of a product with its cost of provision. More research is required to understand their pricing strategies fully, but the most common pricing strategy appears to be to perform a cursory review of the interest rates of the competition.

In order to determine the profitability of savings products, Action Research Partners first had to make transfer price adjustments to account for the use of internally generated savings to finance loan portfolios. Even with these adjustments, a number of savings based products proved to be losing significant amounts of money. In several instances it appeared that the savings product was priced too competitively. Other cases require more process level analysis to determine causality.

Aside from the key results of costing, what has *MicroSave* learned about the costing process?

1. A costing exercise has more chance of being successfully completed and the results integrated into decision-making processes in institutions with management commitment, trained and capable staff, careful preparation of the costing exercise, and sufficient resources allocated to complete the costing.
2. When *MicroSave* started working on product costing, it underestimated the challenges it would face in institutionalising costing within its partner organisations. Costing may be considered "institutionalised" only when there is evidence that the process is being repeated, that the results of the costing exercises are used strategically, and that additional investigations are being performed.

More sophisticated and capable institutions are able to take the process further; they use allocation based costing as the foundation of profit centre accounting, they apply costing information in financial modelling, and some move from allocation based costing to the more complex ABC. This "process of evolution" is occurring in several of our Action Research Partners, but at very different speeds and to differing extents.

3. Whilst product costing provides information for the development of new products, the information generated by either method is an imperfect estimation. Therefore, product costing must be reviewed regularly and reviewed against a financial model during the pilot-test phase.
4. Particularly in the case of allocation based costing, additional investigations are required to understand the nature of certain costs. The required areas of investigation are focused and targeted by the costing exercise itself. Initial investigations have addressed, or are currently investigating, areas such as investment efficiency, mobile banking operations, decreasing the cost of particular processes, and improving the allocation of staff. Where detailed investigation is required, a process audit can be used to unpack a particular process.

Product Costing in Practice

The Experience of *MicroSave*

David Cracknell and Henry Sempangi¹

***MicroSave*'s Action Research Partners Programme**

MicroSave's goal is to promote the development of high-quality financial services for poor people. It does this through the following four key outputs:

1. "Increased knowledge and understanding of product development related issues amongst key stakeholders, through research, curriculum development and dissemination".
2. "Increased capacity of selected MFIs (Action Research Partners) in East and Southern Africa to deliver secure, high-quality financial services for poor people".
3. "Increased capacity of local service providers and international networks to deliver technical assistance and training on market research".
4. "Effective project management and outputs quality control maintained".

Under the Action Research Programme (Output 2 above), *MicroSave* is identifying and disseminating lessons related to product development and the product development process. This paper on product costing seeks to draw lessons from *MicroSave*'s work with its Action Research Partners on introducing (primarily) allocation based costing systems. Currently, *MicroSave* works with eight institutions in four countries:

- Kenya – Kenya Post Office Savings Bank (KPOSB) and Equity Building Society (Equity);
- Tanzania – Tanzania Postal Bank (TPB);
- Uganda – Centenary Rural Development Bank (CERUDEB), FINCA Uganda, and Uganda Microfinance Union (UMU); and
- South Africa – Credit Indemnity (CI) and TEBA Bank.

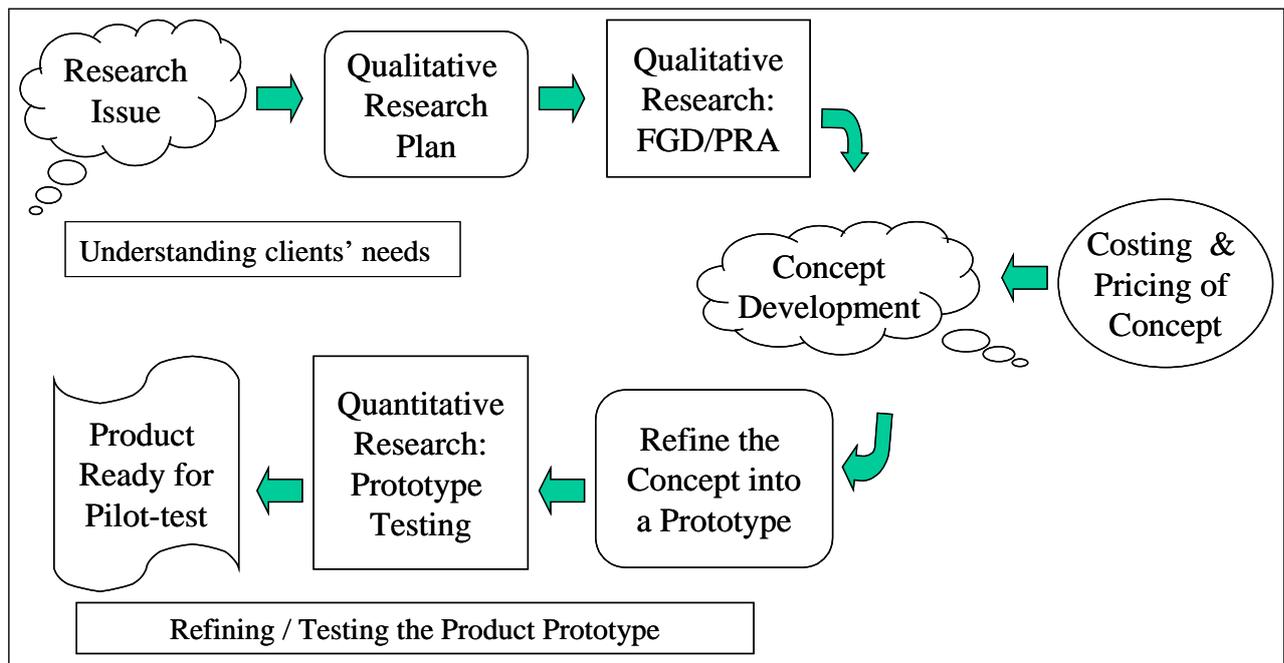
This costing paper draws primarily on the experience of costing in Equity, KPOSB, FINCA Uganda, TEBA Bank and TPB. Costing is ongoing at Uganda Microfinance Union and Centenary Rural Development Bank, and it has yet to start in Credit Indemnity, which is the newest Action Research Partner.

Product Costing and the Product Development Process

MicroSave's goal is to promote high quality financial services for poor people. High quality, sustainable financial services must make a profit if they are to attain significant outreach unsupported by donors or institutional goodwill. This is particularly important given the dilemmas posed to African financial institutions in reaching more remote rural communities.

MicroSave's product prototype development process is outlined in Figure 1. Once a research issue is specified, qualitative market research leads to the development of a product concept, which is then developed, refined, *costed and priced*. The Action Research Partner uses its understanding of the costs of its existing products to develop expectations relating to the costs of its new product and to build a financial model of the product against which its progress can be tracked.

¹ The authors would like to thank Brigit Helms and Lorna Grace for their insightful inputs to this paper. Opinions expressed remain those of the authors.



FGD: focus group discussion

PRA: participatory rapid appraisal

Why Perform Product Costing?

Advocates of product costing generally agree that implementing either costing system can bring a range of benefits to a financial institution. Whether an institution uses the simpler allocation based costing or the more complex activity based costing (ABC) method, product costing has the potential to do the following:

- Identify the full costs of delivering products.
- Identify hidden costs.
- Determine the profitability or contribution to profits of different products.
- Help management to better plan the mix of products offered.
- Improve business planning and investment decisions.
- Assist in budgeting and in understanding the variances between budget and actual costs.
- Help determine the viability of new products.
- Assist financial institutions in making decisions on outsourcing services.
- Facilitate the pricing of current and new products.
- Instil greater cost consciousness in staff (provided the process has senior management's support).

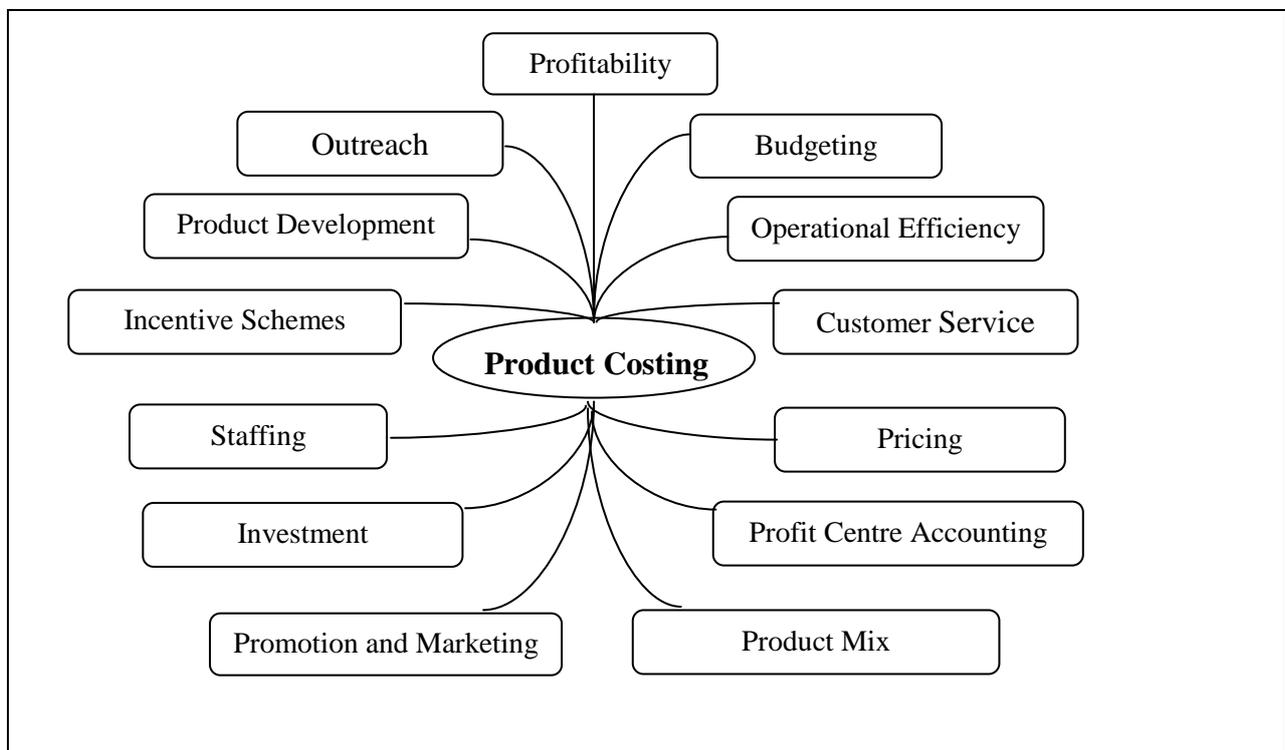
Box 1: An Unresolved Question

If costing products is so advantageous, why is it that none of *MicroSave's* Action Research Partners – some of the strongest microfinance providers in East and South Africa – had implemented a full product costing system before participating in the Action Research Programme?

The Strategic Context of Product Costing

For all of these stated benefits, the significance of product costing is only apparent when you consider its strategic context. Figure 2 indicates the range of strategic issues that can be influenced by knowledge of product costs and profitability.

Figure 2: The Strategic Context of Product Costing



Budgeting: Once product costing has been completed, the next logical step is to create budgets for individual products and to set targets and expectations – measuring, for instance, the impact that allocating increased resources to marketing has on the profitability of the product.

Operational Efficiency: Particularly in the case of ABC, the financial institution has the ability to increase its operational efficiency through the close examination of the product's processes. In the case of allocation based costing, this entails an additional step of process auditing a particular product or the routine/system to deliver that product.

Customer Service: An improved understanding of products and processes is a significant step in improving customer service, especially when combined with *MicroSave's* "Market Research for MicroFinance" tools.

Pricing: Allocation based costing enables the institution to directly relate the pricing of a product to the costs of providing the product. ABC goes a stage further; it allows institutions to set charges for particular services according to the costs of an individual process, See *MicroSave's* "Costing and Pricing of Financial Services Toolkit".

Profit Centre Accounting: Using allocation based costing it is a simple matter to extend the costing analysis to allocate costs to profit centres. Understanding the profitability of different locations or head office departments enables strategic decisions to be made.

Product Mix: Once the profitability of individual products has been determined, the institution can work to promote its profitable products and either remove the less profitable products, remodel them or improve the efficiency of their delivery.

Promotion and Marketing: Promotion and marketing is strategically tied to developing the institution's ideal product mix, which is established with the help of the product costing process. See *MicroSave's* "Product Marketing Strategy Toolkit".

Investments: When appropriate, the product costing process can lead to an examination of the efficiency of an institution's investment process, as in the case of two Action Research Partners.

Staffing: The product costing process supports an examination of staff allocations against activity levels. Such an examination may reveal, for example, differences in staff performance in different locations and thereby offer considerable opportunities for saving costs.

Incentive Schemes: Having a better picture of optimal performance, together with the tools to measure this performance, allows the institution to design and implement more appropriate staff incentive schemes. See *MicroSave's* "Designing and Implementing Staff Incentive Systems" toolkit.

Product Development: Product costing facilitates product development in a number of ways; firstly, detailed knowledge of existing product costs and processes facilitates the design of new more efficient approaches; secondly it assists in the development of pricing strategies for new products; thirdly it allows a more realistic forecasting model to be built for the new products. For products under pilot test, a marginal costing approach which looks at direct costs against direct income is the most appropriate measure of profitability as fully absorbing institutional overheads at an early stage may give misleading signals about the product's underlying profitability.

Outreach: Having efficient processes, high investment efficiency, the correct product mix, and the optimal allocation of staff – all potential benefits from the costing process may enable a microfinance programme to significantly extend the outreach of its programmes through delivering appropriate financial services efficiently.

Profitability: Product costing can help an institution increase efficiency, improve staffing levels and staff allocation, rationalise product pricing, target promotion to profitable products, and improve the design of staff incentive schemes – all of which should positively reflect in the institution's profitability.

Product Costing Methodologies

There are two product-costing methodologies, allocation based costing and activity based costing (ABC). This section introduces the concepts briefly. More information can be found in *MicroSave's* "Costing and Pricing of Financial Services, A Toolkit Manual for MFIs", and in CGAP's "CGAP Product Costing Tool". An illustrative example of allocation based costing is provided in Annex 1.

Allocation Based Costing

In allocation based costing, each line of the profit and loss account is assigned to different financial products on the basis of a logical criterion called an allocation basis. In Figure 3, staff costs are passed on to Loan Product 1, to Loan Product 2 and to the savings product using the allocation based time taken. Non-staff costs are allocated using the allocation base of the relative volume of each product.

Steps in Allocation Based Costing

1. Plan for the costing exercise.
2. Identify products for costing.
3. Choose allocation units, which are the items of income and expenditure that the institution proposes to allocate to different products.
4. Decide on allocation bases – determine the means by which the items of income and expenditure are to be allocated to different products.
5. Quantify allocation bases – apply the allocation bases to the different allocation units.
6. Make a transfer price adjustment as necessary to account for the use of internally generated savings to finance the loan portfolio.
7. Finalise products' costs – review results for reasonableness.
8. Apply marginal cost analysis as necessary.

Activity Based Costing

Activity based costing traces costs to products by costing the product's significant processes. Product delivery comprises a number of separate processes, for example, loan application processing, loan disbursement, loan monitoring and loan recovery. Following Figure 3, staff costs and non-staff costs are allocated to core processes upon the basis of staff time spent. Where members of staff do not directly spend time on core processes but rather provide support functions, this time is booked to a general category called “sustaining activities”. In most cases a significant proportion of head office costs fall under this category.

Once a cost for a particular core process has been determined based on staff time, these costs are then applied to the products on the basis of a logical cost driver. To take a simple example, once you have determined the cost for processing one loan application – the logical cost driver would be the number of loan applications. Each product then absorbs costs for processing loan applications in proportion to the number of loan applications made by each loan product. Different processes will have different cost drivers.

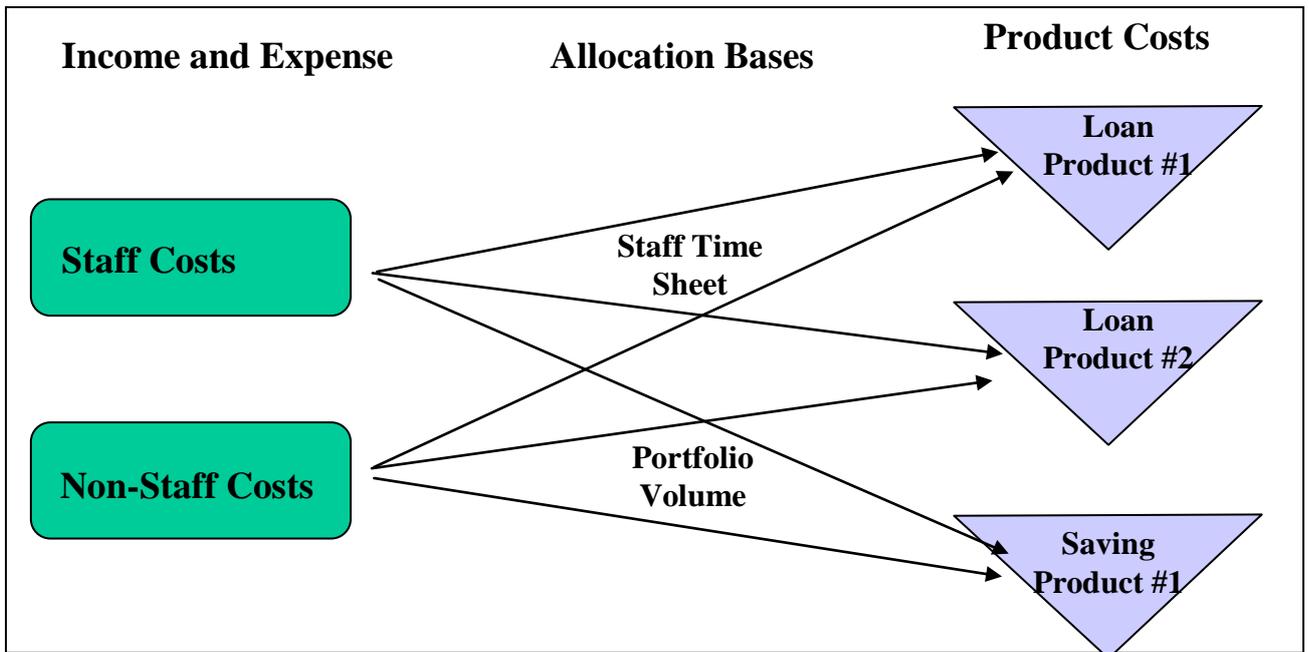
However, sustaining activities cannot be applied directly to particular products. The costs of sustaining activities need to be allocated to the different loan and savings products using allocation based costing techniques described in detail in Annex 1. More details about ABC can be found in CGAP's "Product Costing Tool".

Steps in Activity Based Costing

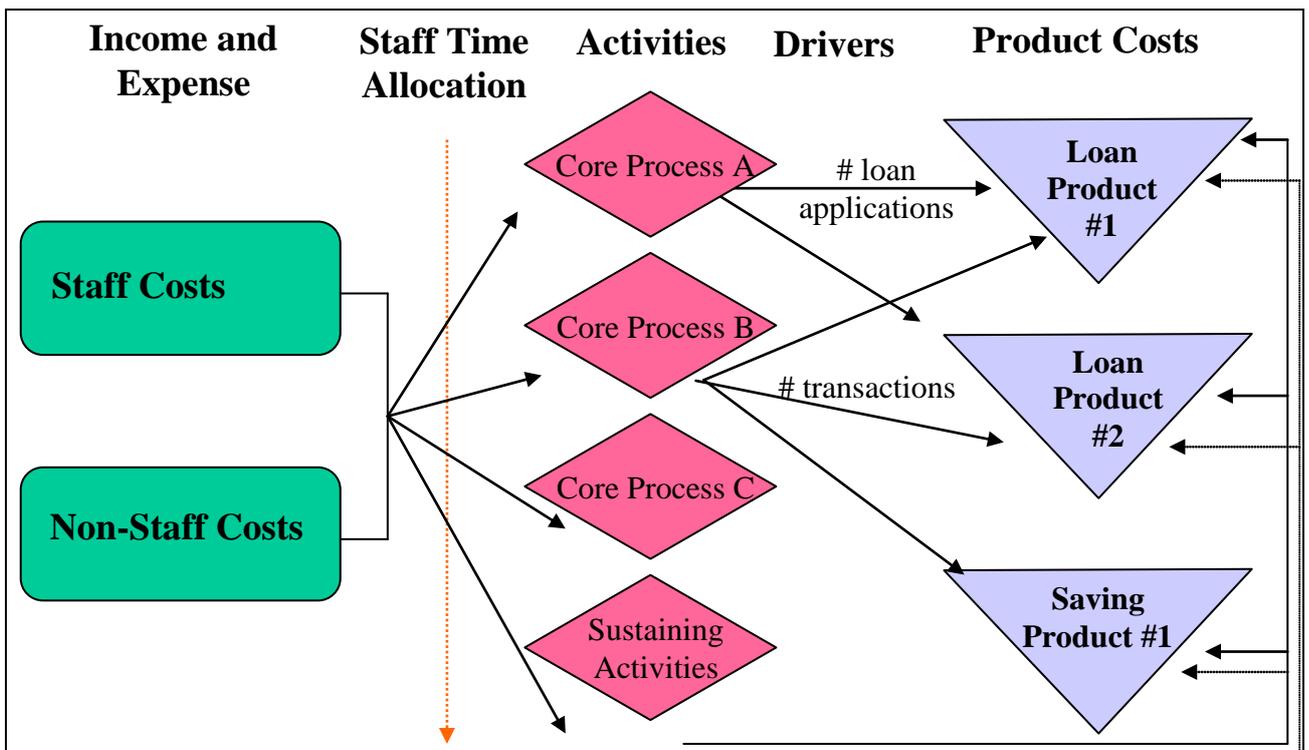
1. Plan for the costing exercise.
2. Identify products for costing.
3. Ascertain core processes and activities - identify sustaining activities. An activities register or dictionary is created that summarises the activities taking up staff time. These activities are categorised into core processes.
4. Estimate staff time required for each activity, through timesheets, interviews and observation of processes and activities.
5. Calculate costs per activity – costs are allocated to activities using staff times.
6. Assign cost drivers and determine unit activity costs – a cost driver is a logical criterion that is used to allocate an activity cost to individual products, for example the number of loan applications.
7. Apply activity costs to products – the unit cost per activity is multiplied by the cost driver volume per product. For example, the cost of processing loan applications for a particular product is (a) the unit cost of processing a loan application multiplied by (b) the number of loan applications.
8. Allocate sustaining activity costs to products using allocation based costing.

Figure 3: Allocation and Activity Based Costing

Allocation Based Costing



Activity Based Costing



Source: "CGAP Product Costing Tool"

Which Costing Method: Allocation or Activity Based Costing?

Choosing between allocation based costing and ABC is not an automatic choice. Whilst allocation based costing is simpler and easier to implement, ABC is technically superior and provides a wealth of process-based information not offered by allocation based costing.

MicroSave does not see a conflict in selecting one method over the other. Allocation based costing is a quick and relatively simple introduction to costing and offers a range of benefits. ABC is a more in-depth approach that examines core processes, but it requires greater time, skills, and institutional commitment. It is entirely possible for an institution to start with allocation based costing and graduate to ABC.

Table 1: Advantages and Disadvantages of the Two Costing Methods

	Allocation Based Costing	Activity Based Costing
Pros	<ul style="list-style-type: none"> • Fewer steps • Quicker, simpler and less expensive • Consistent with income statement • Can be powerful when used to target additional investigations 	<ul style="list-style-type: none"> • Traces (rather than allocates) costs in a cause and effect relationship • Allows management to understand how and why costs are incurred • Focuses on activities that are meaningful to staff and management • Identifies drivers of costs and the circumstances or requirements that cause an activity to take more time • Allows management to focus on where to reduce costs by identifying key points in the process and expensive activities • Helps management better understand business processes
Cons	<ul style="list-style-type: none"> • Relies on subjective input • Simplistically allocates costs • Volume-related allocation bases fail to account for product diversity and overburden “large” products 	<ul style="list-style-type: none"> • Incorporates an additional step of allocating costs to activities • Is more complex, time consuming and expensive to implement • Less reliant on subjective input

Source: Adapted from "CGAP Product Costing Tool"

Simply weighing the pros and cons of a particular costing method fails to adequately recognise that the institutional environment is also a critical consideration in deciding which costing method to adopt.

Different circumstances within the institutional environment may favour one method over the other. Of course, the overall institutional environment is a web of various circumstances, some of which may indicate a preference for allocation based costing, whilst others indicate a preference for ABC. Table 2 presents the issues an institution should consider when making its selection.

Table 2: Considerations for Adopting Either Allocation or Activity Based Product Costing

Consideration	Allocation Based Costing	Activity Based Costing
Management information systems	Requires moderate to strong information systems	Requires strong information systems
Administrative burden	Moderate. Some tracking of staff time may be required but generally less than under ABC	Higher burden due to tracking staff time for each activity and validating timesheets
Staff capabilities	Appropriate where staff capabilities are limited	Appropriate where there are a number of capable staff. It is also important to train several members of staff in ABC to ensure that institutional knowledge of the ABC process remain on departure of staff
Experience	Possibly more appropriate where there is no prior experience of costing	Probably more appropriate when there is already institutional experience in costing
Head office costs	No difference between the systems. A significant portion of these costs is likely to be considered sustaining overheads under ABC, and therefore they must be directly allocated	
Number of products	Not appropriate for single product institutions	Particularly appropriate when there is one dominant process to understand
Outputs	Provides a quick overview and enables some “quick wins”	Provides a detailed picture of core processes and activities
Requirement for training	Less	More
Requirement for technical assistance	Less	More
Need for additional investigation	Targeted investigations required as follow-up – often looking into the processes within loss-making products	Less direct investigation required afterwards due to the extensive investigation required to complete the ABC process

MicroSave’s Approach to Allocation Based Product Costing

MicroSave has worked with seven of its eight Action Research Partners as well as BURO, Tangail in Bangladesh to introduce product-costing systems. Table 3 gives an indication of the process required for implementing an allocation based costing system. Indicative times are provided for each step, both for the first time an institution establishes the product costing system and for performing a repeat costing. In the case of very large or bureaucratic organisations, the time required may be significantly longer. *MicroSave* does not yet have sufficient experience in introducing ABC within its Action Research Partners to create representative times for ABC. Therefore, ABC is not included here.

Table 3: MicroSave's Approach to Allocation Based Costing

Step	Action	Indicative Time for First Costing*	Indicative Time For Repeat Costing	Responsibility for First Costing**
1	Brief the management of the Action Research Partner on the product costing process	2 hours	Not required	<i>MicroSave</i>
2	Choose a costing team leader and assemble the team	Time varies	As before	Action Research Partner (ARP)
3	Choose a representative branch site	Time varies	Time varies	ARP
4	Gather relevant background information	Over the course of one week	Data collection exercise built into normal reporting cycle.	ARP
5	Train / Expose the product costing team to allocation based costing; normally conducted in a workshop environment	1 day	Not required	<i>MicroSave</i> and ARP
6	Train the product costing team in direct observation to track staff time and collect the data	1-2 days	1 day validation	<i>MicroSave</i> and ARP
7	Complete time sheets for allocation based costing (where necessary)	3-5 days	1 day validation (if necessary)	<i>MicroSave</i> input into drawing up timesheets. ARP completes timesheets.
8	Work with the product costing team to collect data, complete allocation bases, allocate costs and summarise results - includes the creation of costing spreadsheets	2-4 days	1-2 days (costing spreadsheets are already created)	<i>MicroSave</i> and ARP
9	Document the process and analyse results	1-2 days	4 hours (less extensive analysis required)	ARP, reviewed by <i>MicroSave</i>
10	Prepare a report for senior management, highlighting the assumptions used, the bases of allocations made, the key results and suggestions for follow up	1 day	4 hours (it is possible to build on earlier reports)	ARP
11	Make a presentation to senior management; draw up list of action points, noting areas in which the costing process can be improved and strengthened	2 hours	2 hours	ARP Costing Team with <i>MicroSave</i>
12	Perform follow up activities	As required	As required	ARP
13	After 3-6 months perform the costing exercise again		As given here	ARP
14	Consider making changes to your accounting and budgeting system to enable most of the product costing to be produced automatically. This will significantly reduce the time taken for collecting data on repeat costings	Time varies	Time varies depending on additional modifications required.	ARP

* Indicative times are based on the elapsed time for a relatively competent, average sized MFI to implement allocation based costing.

**Most ARPs required support from *MicroSave* on the first round of costing and when there are staff changes, but they have been able to handle subsequent costing exercises by themselves.

Key Results

MicroSave's experience with its Action Research Partners indicates a range of common results. These include the prevalence of loss-making products, the stability and profitability of fee-based products, the importance of accounting for the subsidy implicit in using deposits to finance the loan portfolio, and a lack of coherent pricing strategies. Examining each of these in turn

Almost Every Institution Has a Loss-making Product: Most Action Resource Partners have at least one loss-making product. Sometimes the loss-maker is even one of an institution's well-established products. Reasons for loss-making products have included inefficient systems, inappropriate pricing, sticky pricing, an over-reliance on interest rate margin, high head office overheads, and the expense of introducing new products.

Inefficient Systems: KPOSB recognised that if it improved its systems it could make significant savings on the costs of operating salary accounts. An investigation, which costed salary transactions within the OSS product, revealed that the cost to the Bank of a single deposit transaction was Ksh.52 – 58% more than the cost of a deposit under the *Bidii* product. As a result KPOSB is now considering transferring some salary accounts to the more efficient, computerised *Bidii* product.

Sticky / Inappropriate Pricing: TPB's Domicile Quick Account appeared to be very successful; it was attracting significant deposits from the public. A review at the Arusha branch revealed that a small number of depositors held 55% of outstanding deposits by value. On review it was discovered that for higher savings balances the interest rate margin on the product was actually negative! Treasury Bill rates were falling but TPB did not make a corresponding shift in the interest it paid to depositors as rates had already reached historically low levels.

Equity had just achieved the highest rating of any financial institution under the GIRAFE rating methodology. It was growing rapidly and was popular amongst its clients. Amongst its product range was a fixed deposit offered at highly competitive interest rates negotiated on a deal by deal basis. When costing showed fixed deposits to be losing money, Equity tied the fixed deposit interest rate to the rate prevailing on Treasury Bills.

KPOSB noted that its Premium Bonds prize pool was greater than the income being generated from investing the premium bonds. The product costing made the problem more transparent. KPOSB responded with a new promotional campaign, a new needs assessment, and a new prize structure.

High Head Office Overheads: Without careful cost control, there is a tendency for head office costs to escalate. In the case of one Action Research partner, the majority of its costs relate to the head office. A highly centralised structure, generous travel and educational allowances and a large number of support staff were all contributory factors. The development of a costing system is assisting the bank to take corrective action.

Single-minded Pursuit of Core Objectives: This occurs when an MFI prioritises a goal without attaching the caveat "subject to cost". There are numerous examples of this, such as serving a particularly remote rural community, opening mobile banking operations in areas where there is insufficient demand, or paying overly-generous interest rates on deposits.

FINCA Uganda's ABC exercise revealed that field officers spend considerable time travelling to groups rather than performing more productive activities. Using the information generated by the ABC exercise, FINCA Uganda is better able to estimate how far its field staff should travel from the office.

Expensive, Centralised Procedures or Internal Control Systems: Internal control should enhance the profitability of products by reducing risk. However, controls grow and change over time, particularly in manual accounting systems. These changes can increase costs. Examples of inappropriate controls within the Action Research Partners include:

- Retention of manual controls which recent computerisation had made redundant
- Policies encouraging rapid staff movement enhanced internal control but increased costs

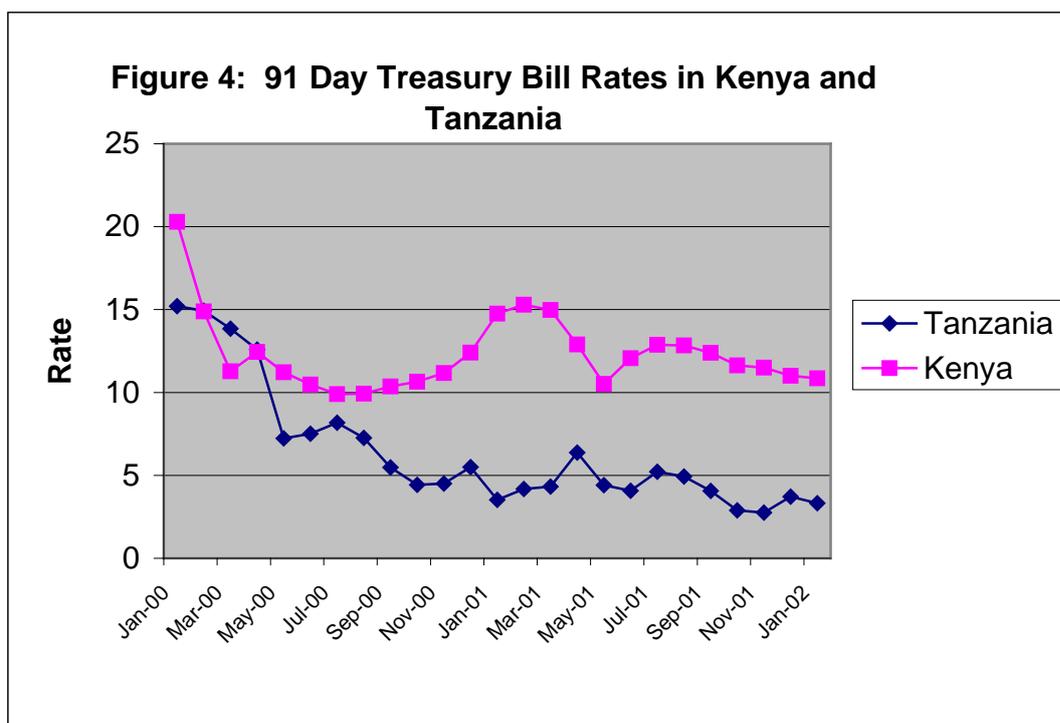
- Lengthy back office approval procedures for relatively small withdrawals
- Lengthy account opening procedures, which discouraged applications
- Unnecessary production of supporting documentation and records

Allocation based costing is less able to identify specific expensive procedures or internal control systems than ABC is. However, allocation based costing can rapidly identify areas of high costs for further, more detailed investigation. Either costing system can be the starting point for an investigation into processes and procedures.

New Products: New products make losses in the beginning. In the months after launching its Grow With Us product, TEBA Bank had incurred losses of more than \$70,000 due to up-front investments in information technology, in promotion, training etc., and the time taken to build a customer base. Product costing enables institutions with loss-making new products to see whether the loss is in line with projections. It also provides an opportunity to track variances, and to take early corrective action. The interactions of costing and new product development are explored later in this paper.

Stability and Profitability of Fee Based Products: Historically, East African net interest margins have been very high, allowing inefficient banks to operate profitably. However, with globalisation of financial services, free-floating exchange rates, and more international competition, East African Banks must become more efficient.

There is significant surplus liquidity in the financial system. The average liquidity reported by the Central Bank of Kenya is around 45%, with many institutions holding even higher liquid reserves. This liquidity is a response to economic instability, high Treasury Bill rates, uncertain foreign exchange cash flows and conservative banking practices. Figure 4 shows that Treasury Bill rates have fallen dramatically, particularly in Tanzania.



Sources: Central Bank of Kenya website; Bank of Tanzania website

Falling Treasury Bill rates have renewed the impetus to design and develop fee based products, which are an important hedge against interest rate risk. Fee based products have proven consistently profitable for the Action Research Partners; of particular note are TEBA's credit bureau service, and money transfer products at both KPOSB and TPB.

Fees are commonly charged for the provision of services within a product. Fees for withdrawals, for processing transactions, and for statements are examples. However, there is no evidence that these fees have been established scientifically on the basis of the bank's costs for providing that service. The ABC method is particularly useful in establishing the fee rates for particular services.

Profitability and the Role of Transfer Pricing: *MicroSave* has found the profitability of particular products to be especially powerful in driving change within its Action Research Partners. One challenge in deriving the profitability of individual products is accounting for the implicit cross-subsidy between deposit and loan products where deposits are a source of capital for lending.

Large commercial banks generally recognise the need to account for “hidden” cross subsidisation through transfer pricing (Joseph F. Sinkey, Jr, 1992). For example, Standard Bank in South Africa eliminated cross subsidies when it introduced its ABC system (Putter et al., undated).

“Standard Bank ... implemented a sophisticated transfer pricing system (also based on costing information) to eliminate unseen cross-subsidisation between different areas of the bank”

The Bank noted that:

“No reliable information was available regarding product or customer profitability, or even to the profitability of individual branches, and therefore no reliable performance measures could be put in place.”

Standard Bank now credits a notional income to branches based on the number of accounts opened, the costs of account maintenance and a transaction fee.

MicroSave has adopted a simple transfer pricing approach in its costing exercises where deposit products finance loan products. In the example below, the profitability of the business loan is overstated prior to making a transfer price adjustment, as it assumes a zero cost of funds. When this institution used its long-term investment rate to calculate the transfer price, it discovered that business savings and short-term loans underpin the bank's profitability.

Table 4: Sample Transfer Price Adjustment

	Before Transfer Price Adjustment	Transfer Price Adjustment	After Transfer Price Adjustment
Ordinary Savings	-44.6	16.6	-28
Business Savings	14.9	22.8	37.7
Fixed Deposit	-20.5	21.9	1.4
Short Term Loans	47.2	-10.0	37.2
Business Loans	68.2	-45.8	22.4
Other	12.0	-5.5	6.5

The transfer price adjustment is calculated on the basis of (a) the average outstanding loans whose funds have been sourced from deposits multiplied by (b) a notional interest rate. The notional interest is allocated back to savings products in proportion to their contribution to the source of funds. The question becomes what rate of interest should be applied as a transfer price:

The marginal rate at which an institution can borrow funds – This approach argues that institutions should charge the full opportunity cost of capital (the cost at which an institution would have to borrow funds in order to finance its loan portfolio were deposits not being used). This approach is appropriate in markets where either subsidised funds are available, as in the case of many donor supported MFIs, or where funds are rationed internally.

MicroSave - Market-led solutions for financial services

The long-term investment rate – This approach argues that the long-term interest forgone on deposits invested short-term should be charged to loan products. This is the rate *MicroSave* normally applies.

The senior management or board should set the transfer price according to the circumstances of the MFI or bank.

Lack of Coherent Pricing Strategies

Few of *MicroSave*'s East African Action Research Partners have consistent and coherent pricing strategies; almost none have priced their products or services in relation to the cost of providing that service. Instead the price of an individual product tends to reflect one of the these external considerations:

- The pricing on similar products from close competitors, though even this approach has been handled without a systematic and detailed competition analysis;
- The price charged on other savings or loan products by the institution (often in an attempt to prevent cannibalisation between products);
- An institutional mission to provide a service at a low price or to provide high returns to customers; or
- A desire to generate returns for shareholders, resulting in relatively high prices being set.

If product pricing is inconsistent, the pricing for services appears even more so – to the extent that customers sometimes complain bitterly. During market research performed with *MicroSave*, Equity learned that clients felt a range of fees and charges were unrelated to the value of the services they received. Customers objected to paying KSh.20 for Equity to make photocopies of documents for opening an account, when the customer would pay Ksh.5 to make the same photocopy elsewhere. Customers also objected to fees that were high in relation to the payment being processed. When Equity rationalised its fee structure for certain products, customers responded very quickly. Before the changes were made, Equity was losing 300 salary accounts per month – two months after the change Equity was gaining 300 accounts per month. Financial projections indicate that over time the increased demand will more than compensate for rationalising the fee structure.

Key Lessons

What Does it Take for a Costing Exercise to be Successful?

Management Commitment: Management must be fully involved and committed at all stages of the costing process. James Mwangi, the Finance Director at Equity, says that his heavy involvement in the costing process allowed him to take the process further and faster than he would otherwise have been able to do (See Box 2). Conversely, at Centenary Rural Development Bank significant changes occurring within the Bank have meant insufficient support from management on the costing exercise, which still has not been completed.

Trained and Capable Staff: Allocation based costing is not a difficult exercise. However, the successful creation of a costing system calls for exposure to the principles of allocation based costing in a workshop, combined with technical assistance (See Table 3 on *MicroSave* approach). In the case of ABC, which is conceptually more difficult, the training and mentoring approach becomes even more important. Amongst our partners, those institutions with better-trained, more competent and capable staff found the introduction of either costing system to be much easier than the other institutions did.

Graham Muller, of Graham Muller and Associates based in South Africa, has practical experience in both allocation based costing and ABC. He says that in order to institutionalise costing, the process requires both a costing champion and a designated deputy, who would take over future costing exercises should the costing champion leave.

Careful Preparation: Although costing as a process differs in every organisation and between costing methods, the initial preparation for the costing exercise is in practice very similar. Careful preparation significantly reduces the time and effort involved in developing a product costing system. This usually entails:

1. Training the costing team in allocation based costing and / or ABC.
2. Ensuring technical support is available should the institution require it.
3. Providing sufficient time from other responsibilities for staff to complete the costing process – in the case of ABC this includes time to produce and analyse time sheets, interview staff and perform detailed observations.
4. Gathering key information, such as:
 - a. Product policies,
 - b. Procedure manuals,
 - c. Detailed accounts,
 - d. Trail balance,
 - e. Transaction levels by product,
 - f. Staffing by location and type, and
 - g. Details of investment income.

Resources: Where sufficient resources were allocated to the process, costing processes were introduced quickly and efficiently. For allocation based costing, the resource requirement is modest. A small team of two to four people can normally produce an allocation based costing system within a week in an institution with a good management information system. ABC is a more complex, longer process; it requires greater data gathering and absorbs correspondingly greater resources. For example, FINCA Uganda committed five staff members for ten days to gather and process the data for ABC. The team leader then spent several days analysing the data.

From *MicroSave*'s experience, institutions with limited experience or skills in costing require short term technical assistance to introduce allocation based costing, and they require greater technical assistance to introduce ABC. Unfortunately, in East Africa technical assistance to support the introduction of product costing systems is both limited and expensive.

Costing as a Process

When *MicroSave* started working on product costing, it underestimated the challenges it would face in institutionalising costing within the Action Research Partners. Signposts that costing is being institutionalised might include these indicators:

- a. The Action Research Partner continues to perform product costing regularly with less frequent involvement of *MicroSave* or other technical assistance providers.
- b. The institution has increased its capacity to perform, understand and utilise the results of product costing.
- c. There is management demand for the costing information.
- d. Strategic and ongoing use is made of the information generated.
- e. The product costing process is built into the accounting and management information system; as much of the process as possible is automated.
- f. More resources are devoted to understanding product and institutional costs.
- g. The costing information is integrated into financial models.
- h. Product costing information is being used as a determinant or co-determinant of product pricing.
- i. There is increased use of responsibility and/or profit centre accounting.
- j. Costing information is fed into the institution's budgeting process.
- k. There is a greater knowledge and understanding of key processes.
- l. There is evidence of increasing cost consciousness within the institution; this could include the adoption of ABC.
- m. Processes within the financial institution become more efficient.

Several key issues come out of this analysis. These issues may be self-evident but nevertheless deserve emphasis:

Costing as a process *evolves* as a function of the institution's capacity and commitment to the process. In institutions where there is clear capacity and institutional commitment, progress can be very rapid indeed. In the case of Equity, the Finance Director, James Mwangi, could see the value of the information generated from the product costing process. During the space of ten weeks, Mr. Mwangi enacted a range

of “quick wins” – ways to enhance efficiency, profitability, staff performance measurement, and even customer satisfaction (see Box 2 for full details). Mr. Mwangi expects to see additional benefits as his management team becomes accustomed to using the information generated by the costing system. He expects more benefits later as he develops an ABC system.

Secondly, to consider costing as an evolutionary process is particularly appropriate in a country or institutional context where skill-sets and understanding take time to mature and develop. Allocation based costing does not provide as much information about products and processes as ABC, but it is much simpler and as Box 2 shows, it can produce significant results.

Thirdly, although ABC is a better tool for examining core product processes, the advantage to allocation based costing is that it fits within the existing financial reporting structure of a bank or MFI. Once performed, it can be easily adopted within the institution's existing budgetary and monthly reporting processes. There is a risk that ABC's more involved and time consuming nature will lead ABC to be used as a special purpose exercise – valuable but occasional.

Box 2 - Costing at Equity Building Society

Equity Building Society (Equity) adopted allocation based costing in November 2001. Although a product costing team created most of the original allocations, the costing process and the lessons that were being extracted from it fascinated the Finance Director, James Mwangi. Mwangi completed the costing exercise himself with support from *MicroSave*

Less than three months after the costing exercise, Equity reported the following changes and tangible benefits:

1. Management is taking greater advantage of the strategic data now available. Activity rates are being tracked daily, by branch and by cashier. Performance amongst cashiers in the same branch was noted to vary considerably. In one branch, some cashiers achieved only 80 transactions per day while others completed more than 200. This led to the establishment of performance benchmarks that set daily transaction standards for cashiers, and may lead over time to additional performance-based incentives.
2. After the costing exercise noted that different members of staff coded expenditures in different ways, Equity increased standardisation in accounting for costs.
3. The method of appraising staff performance was changed to include tracking activity rates.
4. Resources have been reallocated – now resources and attention are directed towards high value products, and branches are rewarded not on the number of new accounts they open, but the number of accounts of a particular type. Secondly, some branch cashiers have been reallocated according to workload.
5. Decreased fixed deposits interest rates are now tracked against available Treasury Bill rates on a weekly basis.
6. Fee structures on salary accounts were changed to decrease client's fees. While decreasing fees reduced income in the short term, it had a dramatic impact on the number of people opening new accounts. Equity now confidently projects increased income from these salary accounts based on a significant increase in the volume of business.
7. Equity studied the costs of the mobile banking operation, calculating the break-even point of different mobile banks. This is likely to lead to closing some mobile banks and opening others.
8. The chart of accounts was adjusted to reflect direct income and direct costs on a product-by-product basis. This allows Equity to track direct income in relation to direct costs of provision on a branch-by-branch basis. This in turn allows Equity to manage product mix and to respond to changes in the margin very quickly.
9. Now an increased range of direct costs – such as staff training – are attributed to branches instead of being absorbed centrally. Equity is looking at the implications of fully allocating costs to branches.
10. Management's attitude towards costs and cost control has changed.

Although the Finance Director is driving the process, staff throughout the organisation have noted many of the changes above.

Comments from the James Mwangi, Equity Building Society's Finance Director:

“Allocation based costing allowed Equity Building Society to obtain a range of 'quick wins'. ABC will provide returns over a longer period, but it requires additional resources and commitment from the part of the society. Costing has already become an indispensable tool of management to the extent that I wonder how we survived before the costing was undertaken. The costing we have performed so far has enabled us to identify some of the factors that are driving costs within the institution. Already after only three months it is impacting upon many of the strategic decisions being made within the organisation. Costing does create some tensions; it is the cause of some anxiety – 'How am I to package certain costs to the staff? Are they going to accept these costs?' Until now there has been little effective cost control on senior management. Making costs more transparent is key in controlling these costs.”

In the future Equity plans to:

1. Develop an ABC system to build on the allocation based costing system already developed.
2. Increase awareness of costs and cost control amongst branch managers. Training and exposure to costing and process analysis will back up changes to staff appraisal systems and increased booking of overheads at the branch level.
3. Instigate a branch costing system.

Why Analysing Profitability Matters

Except when dealing with certain microfinance interventions such as serving the very poor and working in disasters or in post conflict situations, organisations providing microfinance must become fully financially sustainable in the longer term. This should include making a profit after sustainability adjustments have been included as calculated in the “Micro-Banking Bulletin”. Much has been made of the need for MFIs to charge high interest rates to cover the costs of providing rural financial services; less emphasis has been placed upon the need for the same institutions to control their costs and to work in an efficient manner. A product costing system is not a pre-requisite for efficiency, as the case of ASA in Bangladesh clearly demonstrates: ASA is one of the world's largest and lowest cost providers of microfinance services even though it has no product costing system. Nevertheless product costing is a significant tool.

In practice, measuring the profitability of products is important because it stimulates targeted action. Profit has long been used as an indicator of success. As a concept it needs no explanation to the management, the board or the staff of a financial institution.

Profitability as an indicator facilitates short, medium and even long-term decisions. Falling Treasury Bill rates in Tanzania had a less immediate impact on management than seeing the financial implications that a decreasing net interest margin has on the bottom line. For Equity, seeing that its fixed deposit product loses money through over-competitive interest rates stimulated an immediate response: Equity re-priced the product. In the case of KPOSB, the heavy losses on the premium bond product stimulated a marketing campaign to promote the product. Even without the benefit of ABC's detailed investigation into product processes, the allocation based costing exercises identified important problem areas for these institutions. This let both Equity and KPOSB respond rapidly, making significant changes.

Knowing which products are the most profitable enables management to make rational decisions on the product-mix over the short and medium term. In the very short-term, promotion campaigns can focus on particularly profitable products. Over a longer time scale, investigations can target the design, pricing and efficiency of less profitable products, and modifications can be made to the design of incentive schemes and staff appraisal systems.

Implications of Product Costing for Developing New Products

Almost without exception, new products make a loss. It takes time for products to generate sufficient demand to repay the costs of market research, design, information technology, promotion, etc., let alone contribute to head office overheads or sustaining activities.

The cost of developing new products can be considerable, particularly where information technology costs are concerned. *MicroSave* recommends that financial institutions control costs by adopting a pilot testing approach to new product development. This pilot test is designed not only (or even primarily) to test the system supporting the product, but also to test for the financial viability of the product before it is launched system-wide. This involves closely modelling costs, examining marginal costs and carefully setting price levels.

Under ABC, wherever a new product follows the same processes as other products, an approximate cost can be assumed from costing a related product.

Under either method, a marginal costing approach will give the earliest indications of product profitability. The marginal costing approach essentially answers the questions, “What additional costs has this product incurred and what additional revenue has been generated?” thereby allowing the financial institution to see whether the product has generated a positive contribution to the institution's profitability.

Ideally an institution develops a financial model to measure these incremental costs, even before the start of the pilot test. Actual performance is then measured against projections, and adjustments are made to the model as necessary. *MicroSave* is building the results of product costing into pilot tests and financial models that are currently being designed.

Understanding the costs of a new product is essential for correctly pricing the product. In the absence of either a product costing system or a detailed understanding of the processes that comprise a product, pricing a product becomes more of an art than a science. *MicroSave* intends to explore product pricing in more detail in a future paper.

Until the product goes to scale and rolls out across the system, it is difficult to finalise the costing of a new product under either method of product costing.

- Under allocation based costing – the first challenge is that without volume, a new product tends to under-absorb costs, especially those allocated on the basis of transactions; secondly, a new product calls disproportionately on head office support services.
- Under ABC – the challenge is in the changing nature of a new product and its processes. Firstly, staff may not properly understand the core processes of a new product; secondly, the core processes themselves are likely to change; thirdly, the balance between activities changes rapidly, from marketing to portfolio building, to portfolio maintenance – all leading to rapid change in staff time allocations.

Clearly regular review of either costing system is required if the costing system itself is to provide accurate information. In practice this review does not always take place. In this case, the product costing system provides at best an estimate of new products' costs rather than an accurate picture.

Information Systems

Good information systems make introducing product costing much easier. The draft “CGAP Product Costing Tool” notes:

“For all the benefits ABC also has its drawbacks. A full ABC model requires a significant amount of detailed process level information and probably is beyond the scope of many MFIs information systems.”

As processes become more complex, ABC costing becomes potentially more valuable, but the information gathering process also becomes more challenging. The requirement to integrate activity levels with general ledger information can become a real bottleneck.

For FINCA Uganda, which has one dominant product, tracking how staff time is spent took a team of five people an elapsed time of more than five days. In larger, more complex institutions with more varied staffing patterns, the process can take much longer.

At Centenary Rural Development Bank, the current information system does not support the level of detail required to assign the activity costs to the ten products that the bank is offering at the moment. The Bank can only ascertain the costs of each of the activities and core processes. The Bank expects to introduce an updated information system during 2002.

Taking Product Costing Forward: Additional Investigation

A product costing exercise is not an end in itself – it will raise a significant number of questions, to which the product costing team will not have answers at the time. Taking the costing forward through additional targeted investigation adds value to the process. Within *MicroSave's* Action Research Partners, the following investigations have been carried out or are proposed.

Measuring the Efficiency of Treasury Investments:

After learning that it was earning low levels of investment income, TPB analysed actual versus potential yields from investments. The investigation underscored the implications of falling Treasury Bill rates on the profitability of the institution.

Increasing the Profitability of Mobile Banking Operations:

One Action Research Partner performed break-even and sensitivity analysis on mobile banking operations to redesign mobile banking routes. Break-even analysis calculated the volume of business required for the mobile banking operation to break even, whilst sensitivity analysis calculated the impact on profitability of adding additional accounts, and in changing fee rates.

Decreasing the Cost of Following Up On Delinquent Loans: FINCA Uganda has just completed an ABC exercise that identified following up on delinquent loans and the weekly group meeting as its most expensive processes. Calculating the cost of following up delinquent loans will allow FINCA Uganda to price a number of alternative collection strategies, such as providing incentives to loan collection committees or paying a debt collection agency.

Improving the Allocation of Staff: Both TPB and Equity examined staff activity levels for different products and at different locations. This helped both institutions to deploy staff more efficiently.

Reducing the Cost of Agency Procedures: TEBA Bank will use a process audit to examine areas in which TEBA Bank's agency procedures might be streamlined.

Process Audit: The chief advantage of ABC over allocation based costing is that it relates costs to processes. However, where allocation based costing has revealed the requirement for additional research, a process-audit can be undertaken on a specific product. A process audit will not relate costs directly to a product process, but it does allow efficiency to be improved. Under a process audit, every process within the delivery of a product is identified, mapped out and timed. An example of part of a process audit associated with ASA's lending methodology is presented in Annex 2.

Box 3: Improving the Process at Tanzania Postal Bank (TPB)

MicroSave carried out a process audit of TPB's Domicile Quick Account Product in the Arusha pilot test site. The process audit revealed that Internal Audit had added an additional manual control, which had limited value, and added 30-45 minutes per day to the cashiers' closing routines.

Annex 1: Allocation Based Costing — an Illustrative Example

This illustrative example provides an easy introduction to costing products using allocation based costing. In the example, Costly Bank's costs are allocated to products by working down the profit and loss account line-by-line, deciding on what basis each line or allocation unit should be assigned. The allocation bases are quantified and used to allocate costs to different products. Next a notional charge or transfer price is levied on loans and applied to savings products, reflecting the fact that capital for lending is mobilised from savings. Lastly, marginal costing analysis is used to assist Costly Bank's management in making decisions related to loss-making products.

This example picks up with Costly Bank after it has already completed the first two steps of the allocation based costing process. Costly Bank has planned for the costing exercise and identified the products for costing. The stages covered here are as follows:

- Choosing allocation units.
- Deciding on allocation bases.
- Quantifying allocation bases.
- Making a transfer price adjustment.
- Final costing of products.
- Marginal costing.

Choosing Allocation Units

Allocation units are the items of income and expenditure that are going to be allocated across Costly Bank's different products. In most cases, as in the case below, this follows the institution's chart of accounts.

Figure 1: Choosing Allocation Units - Costly Bank

Allocation Unit	Allocation Basis	Amount in accounts	Savings Product		Loan Product	
			%	Kshs. Million	%	Kshs. Million
Interest Income - Loan Product	Direct	316.0	0%	0.0	100%	316.0
Interest Income – Investments	Portfolio	50.0	100%	50.0	0%	-
Transfer Price Adjustment				25.0		(25.0)
TOTAL INCOME		366.0		75.0		291.0
Interest Expense	Direct	35.0	100%	35.0	0%	-
Staff Salaries Etc.	Staff Time	115.0	35%	40.3	65%	74.7
Rent	Area	75.0	20%	15.0	80%	60.0
Motor Vehicles	Staff Time	25.0	35%	8.8	65%	16.2
Insurance	Transaction	10.0	45%	4.5	55%	5.5
Communications	Actual	6.0	5%	0.3	95%	5.7
TOTAL EXPENSES		266.0		103.9		162.1
Net Result		100.0		(28.9)		128.9

Deciding on Allocation Bases

Allocation basis refers to the method by which the allocation units are spread between different products. Descriptions of different allocation bases are provided in Table 1.

Figure 2: Deciding on Allocation Bases - Costly Bank

Allocation Unit	Allocation Basis	Amount in Accounts	Savings Product		Loan Product	
			%	Kshs. Million	%	Kshs. Million
Interest Income - Loan Product	Direct	316.0	0%	0.0	100%	316.0
Interest Income – Investments	Portfolio	50.0	100%	50.0	0%	-
Transfer Pricing Adjustment				25.0		(25.0)
TOTAL INCOME		366.0		75.0		291.0
Interest Expense	Direct	35.0	100%	35.0	0%	-
Staff Salaries Etc.	Staff Time	115.0	35%	40.3	65%	74.8
Rent	Area	75.0	20%	15.0	80%	60.0
Motor Vehicles	Staff Time	25.0	35%	8.8	65%	16.3
Insurance	Transaction	10.0	45%	4.5	55%	5.5
Communications	Actual	6.0	5%	0.3	95%	5.7
TOTAL EXPENSES		266.0		103.9		162.2
Net Result		100.0		(28.9)		128.8

Table 1: Examples of Allocation Bases

Basis	Application
Direct	Where the expenditure or income item relates solely and entirely to one product, and it would normally vary directly with transaction activity or value on that product. E.g. loan loss provisions, interest paid on savings products or (in some cases) transport.
Staff time	Where staff are involved in transactions at a detailed or direct level, the estimated split of their time across the different products. E.g. office stationery or utilities such as electricity.
Direct staff numbers	Based on the actual number of staff positions allocated directly to a product. E.g. when some staff are specifically responsible for specific products or for utilities such as water, the consumption of which is unlikely to vary with differing staff levels.
Direct staff cost	Based on the salary costs of staff positions allocated directly to a product. E.g. when different levels/salary structures of staff deal with different products.
Transaction	The total number of transactions per product over a defined period as a percentage of all transactions. E.g. computer systems costs.
Actual	For account lines consisting of ad hoc individual items which need to be allocated on an actual transaction-by-transaction basis, rather than in total. E.g. accounts entitled “sundries”.
Portfolio – deposit base	The relative average proportions of the product portfolios over a defined period of time, using amounts on deposit and/or amounts loaned (i.e. balance sheet basis). E.g. the costs of the CEO’s office to the products of the organisation.
Portfolio – investment income base	The relative average proportions of the product portfolios over a defined period of time in terms of direct income or expense by product. This is particularly useful when products do not result in balance sheet assets/ liabilities. E.g. money transfer services/remittance products. E.g. the costs of the CEO’s office to the products of the organisation.
Area	Based on the actual office space consumed by the product or department in terms of area allocated. E.g. rent or depreciation charge for buildings.
Equal	Where each product is given an equal share of an item of income or expenditure. E.g. for generic institutional advertising.

Basis	Application
Absorption	Where the costs of a department are first absorbed into other departments or cost lines before then being allocated using another basis, i.e. a two-step process.
“Core product”	Where a fixed, high proportion of any item is allocated to the core (or primary) product and a small residual element is split across the other products - mainly used in marginal costing.
Fixed	Where a cost or income item is taken to be fixed and therefore independent of product performance, and it is allocated to the core product under the marginal costing.

In choosing which allocation basis to use it is important to consider what makes the most sense for your institution. This will depend in part on your access to information about the exact nature of the expense incurred and about particular allocation bases. What information can your information system provide? What information can be gathered relatively easily using a manual process?

Quantifying Allocation Bases

Information related to the allocation bases is gathered and then applied to the different products.

In the Costly Bank example, it is possible to separately identify all of the interest income from the loan product, so this is allocated 100% to the loan product using the "direct basis". The direct basis relates costs specifically to a particular product.

Similarly, since investment income is earned by investing the savings of depositors, this income is allocated to the savings product. If there were two savings products, Costly Bank would use the "portfolio basis" to apportion investment income to each product in the ratio at which each product contributed to the funds being invested.

Figure 3: Quantifying Allocation Bases - Costly Bank

Allocation Unit	Allocation Basis	Amount in accounts	Savings Product		Loan Product	
			%	Kshs. Million	%	Kshs. Million
Interest Income - Loan Product	Direct	316.0	0%	0.0	100%	316.0
Interest Income - Investments	Portfolio	50.0	100%	50.0	0%	-
Transfer Price Adjustment				25.0		(25.0)
TOTAL INCOME		366.0		75.0		291.0
Interest Expense	Direct	35.0	100%	35.0	0%	-
Staff Salaries Etc.	Staff Time	115.0	35%	40.3	65%	74.7
Rent	Area	75.0	20%	15.0	80%	60.0
Motor Vehicles	Staff Time	25.0	35%	8.8	65%	16.2
Insurance	Transaction	10.0	45%	4.5	55%	5.5
Communications	Actual	6.0	5%	0.3	95%	5.7
TOTAL EXPENSES		266.0		103.9		162.1
Net Result		100.0		(28.9)		128.9

In Figure 3, staff salaries are divided between the savings and loan product. Costly Bank measures the amount of time that the staffs spend on each product and determine that 35% of staff time is spent on the savings product and 65% of time is spent on the loan product. In practice this step takes time, as each grade of staff needs to be considered separately. Normally different allocation bases are used for allocating the costs of front line staff and senior management.

In this example the space that each product takes up within each branch is used as a proxy to determine how much of the rental income should be allocated to each product. Where this information is available, area is frequently used as the basis for allocating rental costs.

At this stage the costing exercise becomes more subjective. On what basis should motor vehicle expenses be allocated between the savings and loan products? It is not at all obvious. The basis will differ from institution to institution, but should be *based on logical and defensible* criteria. In the Costly Bank example, vehicles are used predominantly by loans officers to follow up on defaulting clients and by savings officers to market the savings product; hence "staff time" becomes a reasonable proxy for the products use of motor vehicles.

Making a Transfer Price Adjustment

Financial institutions make money from accumulating the savings of their depositors and lending a proportion of these funds to their borrowers. A transfer price adjustment reflects the fact that funds for lending have been generated by mobilising deposits. The adjustment makes a notional interest charge against loan products and credits this to deposit products. In this example, Costly Bank's loan product is "charged" Kshs.25 million for the money it has effectively borrowed from depositors' savings, and the Kshs.25 million is credited back to the savings product.

Figure 4: Making a Transfer Price Adjustment - Costly Bank

Allocation Unit	Allocation Basis	Amount in accounts		Savings Product		Loan Product	
		Kshs. Million	%	Kshs.M illion	%	Kshs. Million	%
Interest Income - Loan product	Direct	316.0	0%	0.0	100%	316.0	
Interest Income – Investments	Portfolio	50.0	100%	50.0	0%	-	
Transfer Price Adjustment				25.0		(25.0)	
TOTAL INCOME		366.0		75.0		291.0	
Interest Expense	Direct	35.0	100%	35.0	0%	-	
Staff Salaries Etc.	Staff Time	115.0	35%	40.3	65%	74.8	
Rent	Area	75.0	20%	15.0	80%	60.0	
Motor Vehicles	Staff Time	25.0	35%	8.8	65%	16.3	
Insurance	Transaction	10.0	45%	4.5	55%	5.5	
Communications	Actual	6.0	5%	0.3	95%	5.7	
TOTAL EXPENSES		266.0		103.8		162.2	
Net Result		100.0		(28.8)		128.8	

The transfer price adjustment is calculated on the basis of (a) the average outstanding loans whose funds have been sourced from deposits multiplied by (b) a notional interest rate. The notional interest is allocated back to savings products in proportion to their contribution to the source of funds. The question becomes what rate of interest should be applied as a transfer price. Two rates to consider are:

The marginal rate at which an institution can borrow funds – This approach argues that institutions should charge the full opportunity cost of capital (the cost at which an institution would have to borrow funds in order to finance its loan portfolio were deposits not being used). This approach is appropriate in markets where either subsidised funds are available, as in the case of many donor supported MFIs, or where funds are rationed internally.

The long-term investment rate – This approach argues that the long-term interest forgone on deposits that are instead used to finance loans should be charged to loan products. It is the rate *MicroSave* normally applies.

Final Costing of Products

After applying the allocation bases, Costly Bank finds that the savings product is making a loss! The first step should be to review the allocation exercise to see if some mistakes have been made and to reconsider some of the more subjective indicators, such as motor vehicles costs and insurance. Assuming this has been done, Costly Bank now has a dilemma: what should it do?

Marginal Costing

One of the things that Costly Bank should consider is the contribution that the savings product makes towards covering the costs of the institution. Looking at each line of income and expenditure, the questions Costly Bank needs to ask are “What income would we forgo if we did not have the savings product?” and “What costs would we save if we did not have the savings product?”

In this case, Costly Bank would save only 10% of its total salary bill. Although Costly Bank will be able to save the salary of a few cashiers management costs would largely remain the same. The costing is revised so only the element that can be saved is attributed to the savings product.

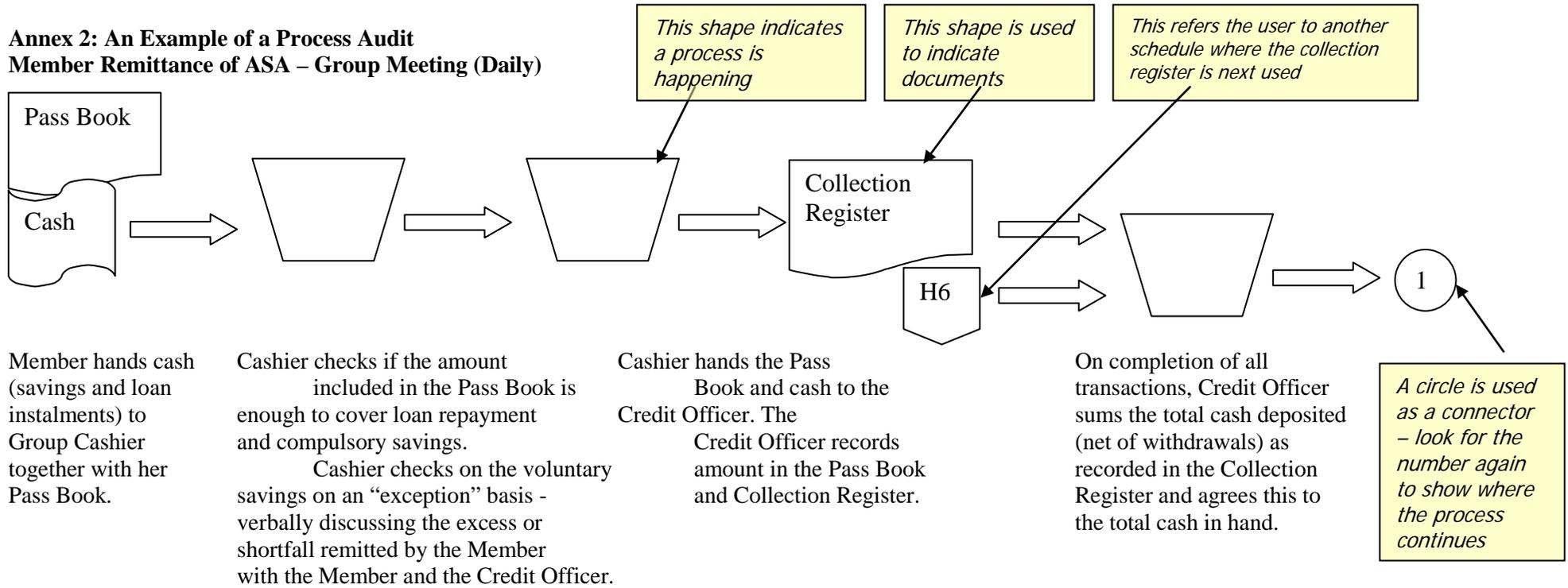
Moreover, if the savings product were closed down, Costly Bank would not make any savings on rent (at least in the short to medium term). In terms of motor vehicles, some running costs would be saved, but probably Costly Bank would still require the same number of vehicles.

Figure 5: Marginal Costing - Costly Bank

Allocation Unit	Allocation Basis	Amount in accounts		Savings Product		Loan Product	
		Kshs	Million	%	Kshs Million	%	Kshs Million
Interest Income - Loan Product	Direct	316.0		0%	0.0	100%	316.0
Interest Income – Investments	Portfolio	50.0		100%	50.0	0%	-
Transfer Price Adjustment					25.0		(25.0)
TOTAL INCOME		366.0			75.0		291.0
Interest Expense	Direct	35.0		100%	35.0	0%	-
Staff Salaries Etc.	Core	115.0		10%	11.5	90%	103.5
Rent	Fixed	75.0		0%	0.0	100%	75.0
Motor Vehicles	Core	25.0		15%	3.8	85%	21.3
Insurance	Core	10.0		35%	3.5	65%	6.5
Communications	Actual	6.0		5%	0.3	95%	5.7
TOTAL EXPENSES		266.0			54.1		212.0
Net Result		100.0			21.0		79.1

Completing the exercise, Costly Bank can see that although the savings product is losing money as a product, it should be kept on as a product in the short term because it is contributing Kshs.21 million to the net income of the organisation as a whole.

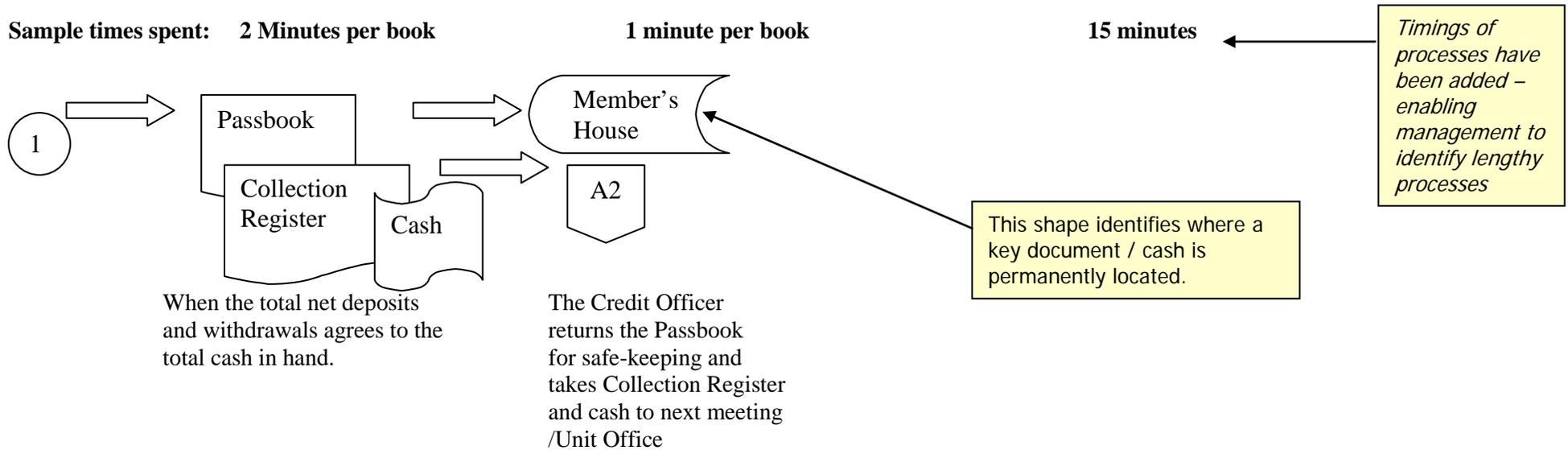
**Annex 2: An Example of a Process Audit
Member Remittance of ASA – Group Meeting (Daily)**



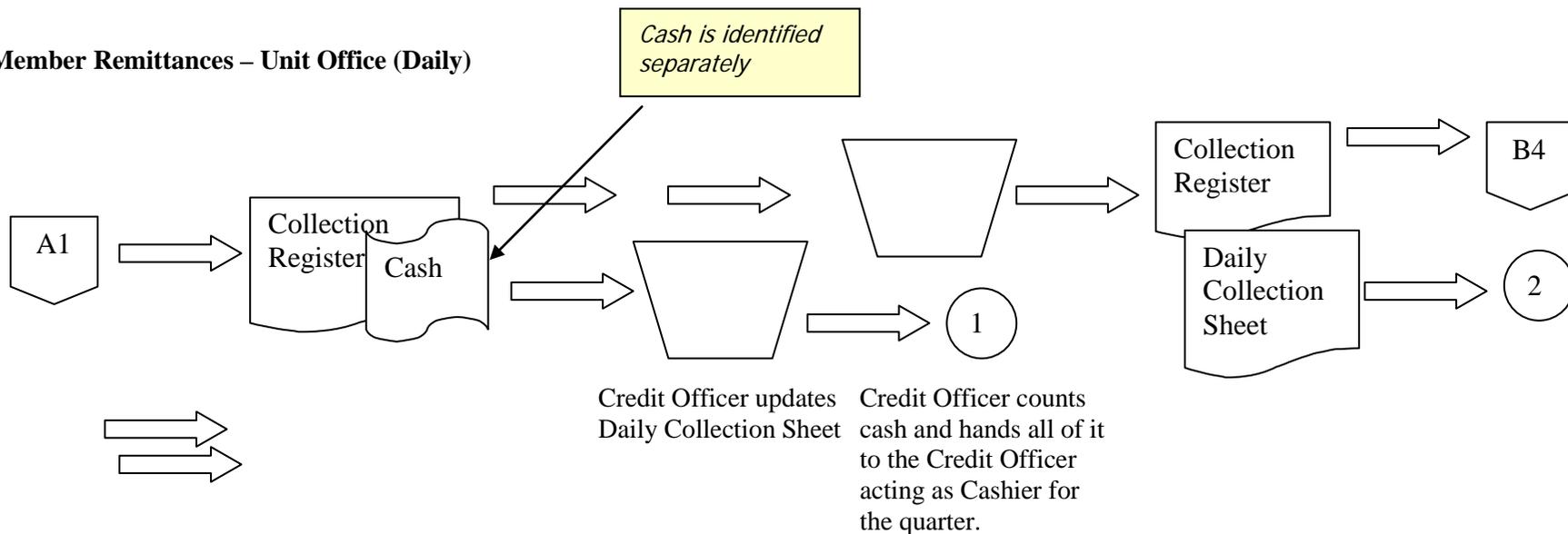
Sample times spent: 2 Minutes per book

1 minute per book

15 minutes

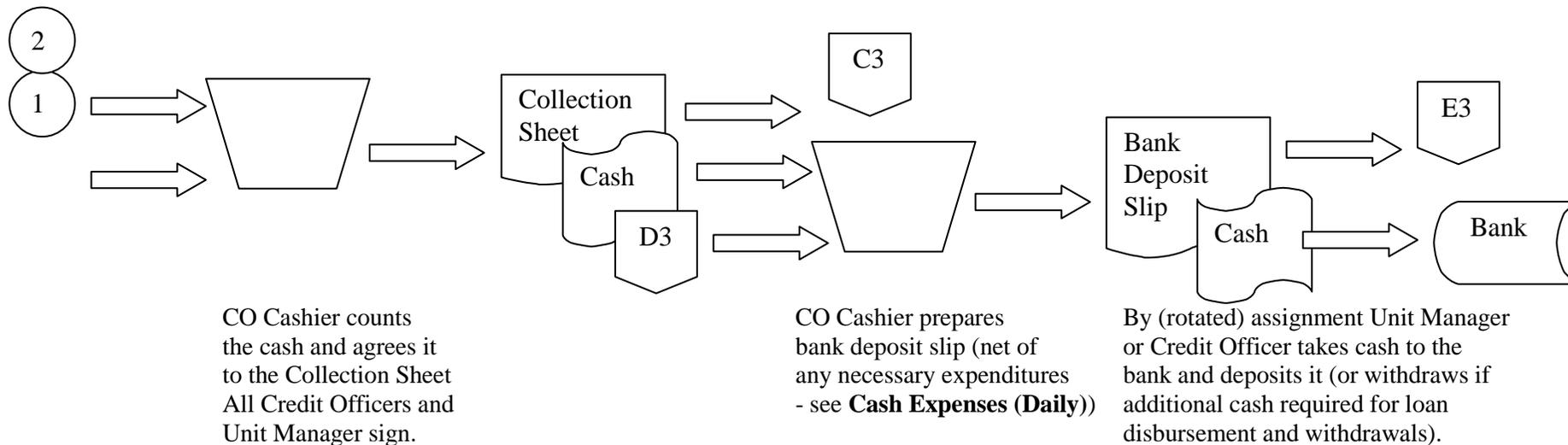


Member Remittances – Unit Office (Daily)



Sample times spent:

15 minutes per group 10 minutes per group



**Sample Times Spent: 10 minutes where correct
25 minutes where not correct**

3 minutes

30 minutes on average

References:

Please Note: All of the *MicroSave* publications quoted here, with the exception of unpublished draft documents, are available on the internet, on www.MicroSave.net. The CGAP Toolkit is available from www.cgap.org.

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Acronyms

ABC	Activity Based Costing
ARP	Action Research Partner
ASA	Association for Social Advancement
CGAP	Consultative Group to Assist the Poorest
CERUDEB	Centenary Rural Development Bank
CI	Credit Indemnity
Equity	Equity Building Society
FINCA	Foundation for International Community Assistance
KPOSB	Kenya Post Office Savings Bank
MFI	Microfinance Institution
TPB	Tanzania Postal Bank
UMU	Uganda Microfinance Union