Beyond Financial Services
Marketing Solar Lamps through Savings Groups: Emerging Lessons from Uganda

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Learning Initiative Objectives

This research study is one of a series of studies sponsored by the Aga Khan Foundation’s Beyond Financial Services initiative funded by the Aga Khan Foundation Canada and The MasterCard Foundation. The initiative examines how SGs are used as a platform for development activities and how linkages to other services take place and with what benefits to group members. It considers how financial services combined with other development activities add value for individual members of the groups, for the groups as entities in themselves, for the agencies facilitating SG development and offering the linked activities, and for the wider community. The initiative also explores the sustainability and replicability of SGs, thus examining long-term access to financial services for the poor.

Abstract

This case study tests the proposition that organisations promoting Savings Groups can facilitate the development of new market channels for socially useful products in rural areas by linking existing networks of Savings Groups to commercial providers of these products. Social marketing through Savings Groups can create efficiencies and cost advantages without compromising the autonomy or performance of the groups.
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<th>Description</th>
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<tbody>
<tr>
<td>ABT</td>
<td>Advanced Business Training</td>
</tr>
<tr>
<td>ACORD</td>
<td>Association for Cooperative Operations Research and Development, a donor supporting CREAM’s Savings Groups</td>
</tr>
<tr>
<td>ASCA</td>
<td>Accumulating Savings and Credit Association, a group of usually self-selected people who meet regularly to save and borrow collectively</td>
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<td>BEC</td>
<td>Branch Executive Committee, a volunteer structure created by UWESO to oversee programme activities in a district</td>
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<tr>
<td>BRAC</td>
<td>Bangladesh Rural Advancement Committee, an NGO that has in recent years expanded into East Africa, including a rapidly growing microfinance programme in Uganda</td>
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<tr>
<td>CBT</td>
<td>Community-based Trainer</td>
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<tr>
<td>CEFORD</td>
<td>Community Empowerment for Rural Development, a donor supporting CREAM’s Savings Groups</td>
</tr>
<tr>
<td>CGAP</td>
<td>Consultative Group to Assist the Poor, a multi-donor microfinance support institution</td>
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<td>CREAM</td>
<td>Community Organisation for Rural Enterprise Activity Management</td>
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<td>CRS</td>
<td>Catholic Relief Services</td>
</tr>
<tr>
<td>DFID</td>
<td>Department for International Development, the British foreign assistance programme</td>
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<tr>
<td>FSDU</td>
<td>Financial Sector Deepening Uganda, a DFID-funded programme active in Uganda from August 2011 to September 2007 and an early supporter of both UWESO and CREAM</td>
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<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
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<td>JENGA</td>
<td>Joint Encouragement of New Gainful Activities project of CARE</td>
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<td>LED</td>
<td>Light-emitting diode</td>
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<tr>
<td>MFI</td>
<td>Microfinance Institution</td>
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<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>NAADS</td>
<td>National Agricultural Advisory Services, the public sector agricultural extension programme in Uganda</td>
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<td>OVC</td>
<td>Orphans and Vulnerable Children</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
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<tr>
<td>ROSCA</td>
<td>Rotating Savings and Credit Association, where a group of people who meet periodically to distribute a lump sum, made up of fixed equal contributions from all the members, to each of the members in turn</td>
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<tr>
<td>SACCO</td>
<td>Savings and Credit Cooperative</td>
</tr>
<tr>
<td>SEEP</td>
<td>Small Enterprise Education and Promotion</td>
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<tr>
<td>SG</td>
<td>Savings Group, the generic term selected by the SEEP Savings-led Financial Services Working Group to include all types of distributing ASCAs</td>
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<td>SHG</td>
<td>Self-Help Group</td>
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<td>SMS</td>
<td>Success Microfinance Services, an MFI spun off by UWESO</td>
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<tr>
<td>SPM</td>
<td>Selection, Planning and Management of income-generating activities, a series of training modules used by CARE to encourage and support group members in launching small enterprises</td>
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<tr>
<td>TASO</td>
<td>The AIDS Support Organisation, an Ugandan HIV/AIDS service organisation</td>
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<tr>
<td>USh</td>
<td>Ugandan Shilling</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>USD</td>
<td>United States dollar</td>
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<tr>
<td>UWESO</td>
<td>Uganda Women’s Effort to Save Orphans</td>
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<tr>
<td>VSLA</td>
<td>Village Savings and Loan Association</td>
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Executive Summary

This case examines how two Ugandan NGOs have used Savings Groups (SGs) as a platform for social marketing, using three separate models. Uganda Women’s Effort to Save Orphans (UWESO) and Community Organisation for Rural Enterprise Activity Management (CREAM) are among the leading facilitating agencies of SGs in the country; both are innovative practitioners that have positioned SGs at the core of their development efforts, because as organised networks of rural residents they provide a good entry point for service delivery and are thus attractive to public and private entities.

UWESO was formed in 1986 to assist orphans and other vulnerable children and maintains a nationwide programme in four core areas: food security and nutrition, health, education, and socio-economic empowerment. Although SGs come under its socio-economic empowerment programme, UWESO has positioned them as the foundation and point of entry for all four core areas. Of the 38 districts where UWESO operates, 27 have active, funded SG projects that serve over 50,000 members.

CREAM, operating in the remote West Nile region, began as a CARE project in 2000 and registered as a local NGO in 2002. It was the first Ugandan promoter of SGs. From 2006 to 2010, CREAM has launched 2,100 SGs counting over 63,000 members.

Both UWESO and CREAM are selling solar lamps imported by BASE Technologies, a Uganda-based subsidiary of the solar products company, Barefoot Power Limited. Its principal product is a kit consisting of a standalone lamp with rechargeable batteries in the base and an accompanying solar panel. The kit, which sells for approximately USD 25, can also charge a mobile telephone. Consumers are unanimous in their preference for solar lamps over the ubiquitous paraffin (kerosene) lamp used by 90 percent of rural households in Uganda. With its open flame, the smoky paraffin lamp poses health and safety risks while providing little light.

Both UWESO and CREAM have used their SG networks as platforms to sell lamps; their community-based trainers have assumed the role of sales agents marketing to SG members as well as non-members, who represent a growing market as word of the lamps spreads.

UWESO originally followed a microfranchise model, in which one of its staff served as the link between BASE, the lamp wholesaler, and the UWESO field staff/sale agents. The microfranchisee controlled the supply, distribution and commissions paid to the field agents.

In contrast, CREAM has adopted a model where the NGO inserts itself as an active intermediary between the wholesaler and its community-based trainers (CBTs) who sell the products. CREAM supervises lamp sales, wholesale orders, delivery, and sales commissions.

Finally, in 2010 CREAM initiated a third model that relies on village agents. These are ex-CBTs whose contracts with CREAM expired at the end of the project under which they were employed. Selected for their strong performance, these independent agents now earn their living by selling lamps and organizing new SGs. CREAM pays them commission for lamp sales and SG members pay them a fee for their training services.
The study documents the advantages available to facilitating agencies through the use of SGs as platforms for social marketing, including:

- Access to a large rural market that is not easily reached by other means;
- The ability to reach groups of people who meet regularly at known times and places;
- Familiarity with and trust of the CBT or village agent, who lends credibility to the product; and
- Access to lump sums to finance a lamp purchase.

The study also revealed several methods by which group members finance lamp purchases, including: cash out of pocket, loans from the group, and funds from the annual share-out. Researchers also found two unexpected methods: loans from the group’s social fund and the creation of a Rotating Savings and Credit Association (ROSCA), wherein all members contribute a set amount which is combined to cover the cost of one lamp. As per the ROSCA format, all members contribute according to the predetermined time and amount, and the funds collected are given to one member, continuing until all members have purchased a lamp.

Determining the sustainability of these three marketing models (the microfranchise model, the NGO as intermediary to the CBTs, and the village agent model) is complicated. Two of the three marketing models were only possible because of on-going support from donors, most notably in the case of the NGO intermediary-CBT model, wherein the costs of the CBT’s time and transport to reach the groups is covered by donor funds. The third model, relying on village agents, shows some promise of sustainability.

Both CREAM and UWESO conceive of their own sustainability largely in terms of their ability to attract donor support indefinitely. In their respective strategic visions, SGs are assets to be cultivated; the NGOs can market themselves largely because they have access to a large network of rural people who are otherwise difficult to reach. To this end, both institutions follow a ‘train and retain’ model of group creation; that is, they seek to maintain relationships with their SGs indefinitely. Likewise, retaining the loyalty and occasional services of their CBTs is a priority, even in periods when there is no external funding to cover their salaries. The ‘train and retain’ approach to group formation does not necessarily undermine SG sustainability or independence. Both organisations aim to enable SGs to learn how to collect savings and manage loans within months and thereafter respect the autonomy of the groups. However, there are situations that many groups only encounter after several years of operation – examples include investments, officer rotation, and linkages to external capital - where the support made possible by the on-going organisational relationship can be useful. The purpose of the additional training and visits could be described as helping groups move from competency to mastery. Marketing solar lamps, especially using the village agent model, may allow CREAM and UWESO to pursue their train and retain approach, maintain their most effective CBTs irrespective of donor funding, and use effective CBTs to cultivate their most strategic asset: networks of organised groups.

While the marketing of solar lamps in Uganda is promising, it requires CREAM and UWESO to enter into a commercial arena in which they have little previous experience. The sale of affordable solar-powered technology is a business with both growth potential and positive development impact. However, to operate effectively in what will inevitably become a more competitive market, the local
NGOs will have to consider and address all the elements required for a new business to succeed, including finance, inventory management, sales and service. The importance of a comprehensive approach to the sale of solar lamps is evident in the problems faced by UWESO and CREAM, as both NGOs focused on sales without developing after-sales service and repair.

Ultimately, this case study highlights lessons learned about the use of SGs as a platform for social marketing. First, there is no substitute for clarity and transparency; the microfranchise model suffered from the lack of both. Second, the legal status and organisation of the agency selling a product (whether non-profit, commercial, or cooperative) is less important than that institution’s ability to develop a sustainable business model, capitalise on its competitive advantages, understand the elements of the marketing chain, and execute its business plan effectively. Third, it is impossible to disassociate the product from the marketing channel. Solar lamps have such clear and exceptional benefits over paraffin lanterns that it is likely that everyone will benefit from their sale. But caution is urged about generalising from the case of solar lamps to other products with more complicated impacts on the consumer.
I. Context of the Study

1. Background and country context

Uganda is a landlocked East African country of 33 million people, about the same geographic size as the United Kingdom, Uttar Pradesh, or Oregon. Its post-colonial history has been marred by long periods of misrule, the HIV/AIDS pandemic and the resulting high numbers of orphans in some regions. Uganda now has one of the fastest population growth rates in the world at 3.4 percent, and half of the population is aged 14 or under. While the country is endowed with rich soil and good rainfall, it remains a strikingly poor country.

Uganda is perhaps the largest recipient of per capita development assistance for financial services in Africa. From the late 1990s until about 2008, the country hosted a series of major development projects devoted to strengthening the microfinance sector (Goodwin-Groen, 2004). These projects, as well as a favourable policy environment, led to a proliferation of various types of microfinance institutions (MFIs); a 2007 study identified 1,271 retail outlets of legally registered financial services companies, most of which purported to serve poor people (MOFPED, 2007).

Despite the growth in the number of financial service outlets, use of registered financial institutions remains quite limited. Another recent study showed that while about half of all Ugandans report that they are saving money somewhere, only about 19 percent of the population is saving with any sort of registered institution – the remainder are all saving either at home or in informal groups. The same study showed that in terms of credit, the results of a decade of assistance are even less...
impressive: only about five percent of Ugandans are borrowing from a bank, a savings and credit cooperative (SACCO), or MFI (Steadman Associates, 2007).

By 2005, many donors began to believe that the limits of assistance to MFIs and banks had been reached and that further growth would depend on new initiatives coming from organisations that could reach people at the bottom of the economic pyramid. With this objective in mind, the UK Department for International Development (DFID) offered earmarked funding via the Financial Sector Deepening Uganda (FSDU) programme; FSDU made grants to CARE to form SGs and over an 18-month period ending in September 2007, the membership in CARE’s SGs grew to about 120,000 members, which at the time was considered to be exceptional growth (Musoke, 2007).

Under the DFID grant, CARE made sub-grants to fifteen local organisations to promote, establish and train SGs. CARE selected their local partners through a formal and transparent competition among hundreds of applicants; two of these partners include UWESO and CREAM, which are the focus of this study.

In addition to providing grants for operations, CARE’s staff provided technical assistance, encouraged harmonisation of approaches, and insisted on standardised reporting systems. A number of the partners, including UWESO and CREAM, have gone on to obtain funding from other donors to expand their outreach.

The result of the on-going activity of local NGOs is a plethora of SG programmes. CARE’s Access Africa project reports that it was difficult to locate districts untouched by SG implementers to use for a control group for a randomised control test in Uganda; in some cases, CARE thought they had located such districts for the control group, only to find that previously unknown implementers were already forming groups there (S. Chidiac, personal communication, 4 Nov. 2009). The total number of groups in Uganda is unknown; CARE claims that its partners have formed groups with over 310,000 members, but the results of other group formation efforts are not reported to any centralised body. Regardless, this preliminary information can still help one grasp the scope of SG outreach in Uganda: there are likely about half a million SG members in the country. To put this in context, there are approximately six million households in Uganda, or 15 million people over the age of 15; based on these rough estimates, approximately three percent of the adults in the country are members of SGs. While the national market is far from saturated, the outreach achieved so far by SGs is impressive. It should also be noted that, as in other East African countries, SGs only complement a vast number of other informal institutions, including ROSCAs, the gifting circle, burial societies, investment clubs, non-distributing ASCAs, and many hybrid structures.

Uganda has an impressive number of strong NGOs that operate within its borders. West Nile, where CREAM is located, is one of the most isolated parts of Uganda, sandwiched between Sudan and the Democratic Republic of the Congo; despite its remoteness, it is the site of the West Nile Private Enterprise Support Programme, which is an SG implementing organisation. UWESO, which works across the country, frequently finds itself working next to other SG implementers; these NGOs compete for donor grants and they are also beginning to compete for group members in some areas.

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1 A popular Ugandan variant, in which members do not bring cash to each meeting, but rather household goods.
This is a case study of social marketing through SGs and it addresses a specific product: the small solar lamp. This product has unusual characteristics that should be taken into account before one begins to generalise from the findings presented here. The solar lamp is in high demand, it has significant advantages in both quality and price over competing products, and it can usually be financed through savings on other lighting sources. In this way it differs from other aspirational products; for instance, consumers may have to make trade-offs in order to buy a mobile phone but they only have to give up paraffin lamps to buy a solar lamp. The main constraints to its adoption so far have been unfamiliarity and a lack of availability. These conditions have thus far allowed solar lamps to be sold with considerable mark ups in price. Available rural lighting in Uganda and the recent history of solar lighting technology explain why this is the case.

In 2005, only four percent of rural Ugandan households had electricity. Seventy-nine percent of rural households reported using an open flame paraffin candle for lighting, while another twelve percent used a paraffin lantern with a glass chimney. The remaining five percent use a variety of lighting devices from solar to firewood, or they have no light sources at all (Uganda Bureau of Statistics, 2005/2006).

Paraffin lamps give off soot and smoke and the indoor air pollution they create is known to contribute to respiratory illnesses. They are also the source of numerous fires, as their open flame occasionally comes into contact with mosquito nets or grass roofs. If they tip and spill paraffin, they can cause both fires and burns; accidents involving paraffin lamps tend to frequently involve children. Finally, they give little light and are barely adequate for reading, a high priority for Ugandan parents who are strongly committed to the education of their children.

Until recently, solar lighting was too expensive to be considered an alternative to paraffin for poor rural households. To light a home with solar energy required large panels installed on the roof; a lead acid battery as large as an automobile battery, but more expensive because it would be designed to withstand daily charging and discharging; and various regulators, transformers, switches and cables. The least expensive home system cost hundreds of dollars. Around the turn of the century, an important technological breakthrough - low cost light emitting diodes (LEDs) - made lighting products much more affordable. LEDs turn almost all of the energy they use into light and their efficiency means that the entire system can be smaller; their electricity usage only requires a small battery, which in turn needs only a small panel. Engineers saw the possibility of creating standalone lamps that are purpose-built for conditions in the developing world and selling them to large numbers of people at the bottom of the pyramid. A number of small start-up companies started manufacturing such lamps; most of them were looking for financing to go to scale while improving the design and circuitry and finding suppliers, manufacturers and channels to sell the lamps.

2. A summary of the institutions involved

2.1 Uganda Women’s Effort to Save Orphans (UWESO)

UWESO was formed in 1986 to assist orphans and vulnerable children (OVC), a burgeoning segment of the youth population resulting from the wars to overthrow dictators Idi Amin and Milton Obote; after the wars ended, the HIV pandemic created additional surges of orphans. While UWESO’s
headquarters are in Kampala, it has six field offices, each of which covers three to six districts. Each office has a manager, an accountant and a team of CBTs. In 2006, the UWESO Board developed a five-year strategic plan with the goal of improving the quality of life of OVCs. The institution has four core programme areas: food security and nutrition; health (HIV/AIDS, reproductive health, and malaria); education (payment of school fees); and social and economic empowerment (financial services and business training). UWESO also has a non-programme area of capacity building, through which its staff occasionally consults with other institutions, including local governments.

UWESO had initially offered its members a Credit and Savings Scheme – a credit programme using an adapted version of the Grameen methodology. Since dealing with loan repayments, defaults, and other aspects of financial services management was taking an inordinate amount of staff time, UWESO decided to create a spinoff, a for-profit MFI called Success Microfinance Services (SMS). In its search for financial viability, SMS concentrated on urban areas and a less poor population; in the process, the new mandate omitted many UWESO members. Seeking to ensure that its members had continued access to financial services, UWESO embarked on a study tour to CREAM in West Nile to learn about SGs. It was attracted to Savings Groups not only because of their low operational costs but also because they enable the organisation to move from the role of provider – making loans and collecting deposits – to one of facilitator – teaching members how to provide themselves with financial services. Whereas the former Credit and Savings Scheme required UWESO staff to provide financial services indefinitely, SGs held the potential of enabling the organisation to empower its members to organise into groups and manage their own savings and loans.

After the visit to West Nile, CARE invited some UWESO staff to sit in on a short SG in-service training. With no further technical assistance or training, except for a manual on SG procedures from the website of VSL Associates,2 UWESO launched a programme in April 2006. It quickly formed 420 groups, relying only on their internal resources. In 2007, FSDU made a grant to UWESO to allow it to expand its programme.

Although SGs fall under its Social and Economic Empowerment programme area, UWESO has positioned them as the foundation and point of entry for all of its four programme areas. UWESO offers its members a mix of services that varies according to donor priorities and available funding; however, the mix now always includes SGs and UWESO looks for ways to include SGs in new projects when negotiating with donors for financial support.

At present, UWESO has funding from the following sources:

- International Fund for Agricultural Development (IFAD), to support SGs in 21 districts;
- DFID through CARE in three districts;
- Barclays Bank in one district;3
- Africare in one district; and

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2 Founded by Hugh Allen, VSL Associates Ltd. was formally incorporated as a limited liability company in the UK in January 2007 to promote the adoption of VSLA model. VSL Associates has developed a generic programme guide for VSLA available for free download at www.vsla.net in Arabic, English, French, Portuguese and Spanish.

3 Barclays and the Guardian newspaper in the UK are supporting a multi-faceted development effort in the Katine sub-county of Soroti District. One of the elements of the programme is SGs, which UWESO is forming. This activity is the object of frequent articles in the Guardian newspaper, and is perhaps the best-documented SG promotion effort anywhere. CARE is usually mentioned as the implementing agency because the funds destined to UWESO are being channelled through CARE.
• The Civil Society Fund\(^4\) in another district.

UWESO considers SGs to be ‘active’ when there is donor funding available to support them; active, therefore, refers to the activity of UWESO and not that of the groups. Of the 38 districts where UWESO operates, 27 have active funded SG projects that serve over 50,000 members.

As is described below in the discussion on sustainability, UWESO practices a ‘train and retain’ approach to its groups, continuing to stay in contact with them indefinitely and to provide them with various services, either directly or through partner agencies. UWESO has created Branch Executive Committees (BECs) made up of members and in some cases sub-BECs, which report to a National Executive Committee. Some BECs are active volunteer bodies that take a great deal of responsibility for programme oversight. In regions where SGs are not considered active, the BEC will often work with the existing groups through unpaid trainers who continue to provide the groups with some services (see section IV: Sustainability). The BECs are not SG federations, but rather volunteer committees that support all areas of UWESO’s work.

Many of UWESO’s SG members previously participated in the UWESO Savings and Credit Scheme and some borrowed from other MFIs before joining SGs. In the Teso region, the majority of members are new to microfinance. In the northern and western regions, UWESO estimates that about half of the SG members had some prior experience with microfinance; in the central region, where Masaka is located, about 40 percent of members were previously in the UWESO Savings and Credit Scheme. The district of Masaka is home to the solar lamp initiative examined here.

UWESO initially became involved in solar lamps almost by accident. In 2008, the American NGO ACCION, through a project called Energy Links, wanted to conduct a test of consumer acceptance of solar lamps and arranged for the free distribution of 31 solar lamps to the clients of two Ugandan organisations. Sixteen lamps were given to BRAC Uganda clients in a peri-urban area near Kampala, and 15 to UWESO clients in Masaka District. In both cases, the lamps were highly appreciated by the families that received them and requests from non-recipient households were generated. One of the UWESO staff contacted the solar lamp distributor that had imported the lamps, BASE Technologies, and the approach that was developed as a result of that contact is described below.

### 2.2 Community Organisation for Rural Enterprise Activity Management (CREAM)

CREAM is a Ugandan NGO, founded as Consultancy for Rural Enterprise Activity Management and renamed in 2009 as the Community Organisation for Rural Enterprise Activity Management.

CREAM was organised in 2000 by trainers who had lost their jobs at the end of CARE’s Joint Encouragement of New Gainful Activities project (JENGA). CREAM was incorporated as a company limited by guarantee in December 2001 and continued to receive small amounts of support from CARE until 2003. Around that time, the DFID-funded FSDU project was exploring the option of supporting SGs nationwide; to learn more, it sent a team of two consultants to evaluate CREAM and its work with SGs. The consultants found a great amount of innovation, or what could alternatively be viewed as a lack of consistency in the methodology used by CREAM to create groups. JENGA had

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\(^4\) Basket funding from Irish AID, DFID and USAID
created SGs, but with a few exceptions, they did not conduct the annual distribution that is common to SGs today (Mutesasira, 2003). Nevertheless, the early years of CREAM were particularly notable because with little external funding, the staff tried to make a living by charging groups for training. CREAM CBTs both formed new groups and continued training the JENGA groups for years, offering them a variety of add-on products including the CARE course on Selection, Planning, and Management of income-generating activities (SPM) designed to help group members invest their savings successfully, and the Advanced Business Training (ABT) course developed for growing micro-businesses.

Significantly, CREAM has continued the tradition of charging groups for training; even under donor funded programmes CREAM charges an additional fee for cash boxes which is strategically important because, as will be seen below, the profits from box sales supplemented by incentives for selling lamps may enable CREAM to keep many of its CBTs in the field after donor funding is exhausted.

In 2003, FSDU initiated a partnership with CREAM to carry out a pilot SG programme. Representatives of CREAM and FSDU visited a successful CARE SG programme in Zanzibar and, in 2004, hosted a CARE trainer who helped CREAM launch a small project in Moyo and Yumbe, two districts of West Nile that were largely untouched by CREAM’s previous activities (Mutesasira, 2003). As a condition of the partnership with FSDU, CREAM was required to make improvements to its management, and CREAM responded by restructuring and by hiring a new general manager, who remains in that position as of June 2010. The organisation is governed by a General Assembly of 36 members that chooses a Board of Directors including both some of the founders and outside directors. It is managed by the salaried executive director, a programme manager and a finance manager in the head office; CREAM also has six District Offices, each with a coordinator, and 82 CBTs.

On the basis of the successful Moyo–Yumbe experiment, FSDU had sufficient confidence in SGs to want to disseminate them widely in Uganda; in 2006 FSDU made a large grant to CARE Uganda to spread SGs across the country. CREAM was among the 15 agencies to receive a CARE sub-grant.

The history of CREAM is important because it illustrates the entrepreneurial spirit that pervades the institution and the importance that SGs have played in its development. Having grown into a strong NGO while promoting SGs, it now operates in all nine districts of West Nile region and has attracted multiple donors to support its activities.

May 2010 marked the end of a three-year CARE grant to CREAM to form SGs. In all, with the support of CARE, CREAM established 1,473 SGs with a total membership of 37,000. In addition, CREAM has funding from Oxfam Novib and the Stromme Foundation for SGs and has also created 510 groups under these programmes to date.

CREAM’s decision to partner with BASE Technologies to sell solar lamps to SG members is rooted in one of the goals stated in its strategic plan, which is environmental protection. Previously, CREAM pursued this goal by marketing shea nuts; it was anticipated that adding value to this traditional crop – collected and processed primarily by women and children - would give villagers an incentive to stop cutting shea trees for firewood. In 2008 CREAM purchased 1.5 tonnes of shea nuts from SG members to sell to a buyer in Kampala and sold twice that amount in 2009. However, it lost its buyer for unknown reasons in 2010 and the shea nut project was subsequently suspended.
Having learned about solar lamps from BASE in 2009, CREAM’s executive director saw another opportunity to pursue the organisation’s environmental mandate. Moreover, the lamps offered a business opportunity that could support field staff. In February 2010, CREAM developed an arrangement with BASE technologies to train 14 of its CBTs as solar lamp salespeople.

2.3 BASE Technologies

BASE Technologies is a Ugandan firm, wholly owned by Barefoot Power, a for-profit, socially oriented business founded by two young Australians. Barefoot is registered in Australia and has a substantial presence in China, where it negotiates with suppliers, oversees manufacturing, and follows the introduction of new technologies to help it design new lighting products as well as improvements to its existing product line. Barefoot came to Uganda and initially established its African headquarters there in 2007. In November 2008, it moved to Nairobi, Kenya, and rented a large warehouse that now serves as its African distribution centre, supplying Uganda and a growing number of other countries.

Barefoot considered Nairobi a more strategic choice for its headquarters; before its relocation to Kenya, however, it created a subsidiary based in Kampala in November 2008 called BASE Technologies; BASE has a three-person expatriate staff and a growing number of Ugandan employees, and continues to view Uganda as an important market for its products.

3. A summary of the institutions involved

Both CREAM and UWESO closely follow internationally recommended practices in SG formation and functioning. However, there are some key differences in the approach promoted by the two NGOs.

3.1 Savings Group procedures

The CREAM groups created with assistance from CARE to follow the Village Savings and Loan Association (VSLA) approach with no significant deviations. Those groups formed with assistance from Stromme Foundation and Oxfam Novib follow a slightly different model that CREAM calls the Self-Help Group (SHG) approach and describes as a ‘credit-plus’ model. The primary differences between the two approaches are summarised below:

<table>
<thead>
<tr>
<th></th>
<th>VSLA Approach</th>
<th>SHG Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training offered</td>
<td>Financial group procedures</td>
<td>Financial group procedures, business skills training, HIV/AIDS awareness, adult education, domestic violence counselling, and advocacy training</td>
</tr>
<tr>
<td>Record keeping</td>
<td>Stamps in passbooks</td>
<td>Saving amounts recorded numerically</td>
</tr>
<tr>
<td>Annual distribution</td>
<td>Share-out of entire savings fund and accumulated interest</td>
<td>Groups are encouraged to leave substantial money in the group fund so it will grow from year to year</td>
</tr>
</tbody>
</table>

UWESO follows the VSLA approach for all of its groups, whether funded by CARE or another donor; however, UWESO utilises the innovation of group clustering, as described in the following section.
3.2 Clustering

Under the previous Savings and Credit Scheme, UWESO members were organised into groups of approximately 60 members called clusters, which facilitated financial transactions as well as the provision of non-financial services. After UWESO’s transition to savings groups, the cluster model evolved further; clusters were divided into two SGs (since SGs should generally not exceed 30 members per group). The SGs making up a cluster meet at the same time and place. After SG business has been conducted, the cluster members remain to discuss social issues – births, deaths and so on – or community-wide concerns. They may also meet to participate in other activities offered by UWESO or other agencies, which can include health education, agricultural promotion, or other services. However, there is no requirement that an individual has to belong to both the SG and the cluster; some people join SGs without coming to cluster meetings and some people remain members of clusters without joining SGs. In general, SGs have attracted new members, leading to an increase in both the total membership of UWESO and the size of the clusters. Many clusters now have 100 or more members and as many as eight SGs.

Clusters clearly create efficiencies in the use of a trainer’s time and may allow groups to learn from each other directly. Also, as will be seen below, clusters provide a particularly efficient platform for reaching large numbers of rural people with other services, including the sale of solar lamps. However, some fear that as the size of a group increases, there is a corresponding decrease in the quality of training delivered. Moreover, large clusters require people to come to a central location that is less convenient than having separate meetings in the villages or neighbourhoods where people live. Whatever the relative merits of clusters, they are a magnet for other assistance agencies; the opportunity to interact with a hundred or more organised people at one time in one place is an attractive one to trainers or organisations marketing goods or ideas.

CREAM has a contrasting attitude towards clustering; it believes that clusters would violate the privacy of individual groups and reduce the quality of training. Staff members refer to the concern for privacy in terms of “protecting people’s secrets”. In the one case where researchers observed a CREAM cluster, three groups met at the same time but were physically separated so that they could not observe or listen in on each other’s meetings.
3.3 Bank linkages and security

In the case of its groups in Soroti District, which were founded with assistance from Barclays Bank, UWESO is being encouraged to link groups to financial institutions. UWESO is supporting this initiative while insisting that linkages be voluntary and primarily for savings rather than borrowing from the bank. CREAM reports that many of its groups also opened bank accounts due to worries about security in the remote West Nile region; in 2009, three groups lost their boxes, two to theft and one to fire.

3.4 The use of groups as platforms

Both UWESO and CREAM believe that SGs can be useful for other social interventions offered by both the facilitating agency and others. While it is likely that UWESO and CREAM’s SGs independently initiate various social activities, given the plethora of NGOs and projects in Uganda, these groups are more often platforms for receiving external development assistance. While this appears to be more the case with UWESO groups than with those of CREAM, the difference is likely one of opportunity; CREAM only operates in the West Nile region, where simply due to its remoteness and distance from the capital, there are fewer NGOs and social services than in other parts of Uganda. Conversely, UWESO covers most of the country and has opportunities to network with a vast number of other projects and programmes.

UWESO’s four programme areas (Food Security and Nutrition, Health, Education and Social and Economic empowerment) are sufficiently broad to include practically any social intervention that an NGO or government programme wishes to implement. Furthermore, UWESO freely makes its groups available to other actors. As a result, UWESO groups receive a variety of programmes, inputs and trainings both from UWESO and from other agencies. In Masaka alone, UWESO reports that the following agencies are working with their groups:

- The AIDS Support Organisation (TASO), which receives referrals from UWESO on cluster members that require assistance;
- The National Agricultural Advisory Services Program (NAADS), which provides training, planting materials and loans to cluster members;
- Kitovu Mobile (the AIDS service unit of Catholic hospital) provides support to AIDS patients, food security, bed nets, seed distribution, and support to children’s education;
- World Vision provides housing for OVC and food security, visits clusters to identify beneficiaries;
- Medical Research Council identifies patients and conducts research, especially in HIV and meningitis;
- Masaka Hospital offers training in reproductive health and prevention of mother-to-child transmission of HIV; and
- Uganda Cares, which provides training on HIV/AIDS, including voluntary counselling and testing.
Other projects are working with groups directly through UWESO, whose activities include: training for biomass briquettes production, monitoring of children participating in the government’s Universal Primary Education programme, tree planting, and the provision of water catchment tanks (from UN Habitat), bed nets (from Africare), cattle (from Send a Cow), and of course, the marketing of solar lamps.

Most of these donor and implementing organisations participate in periodic meetings of the District Forum for NGOs and the District HIV Network in order to coordinate their activities. The UWESO SGs are widely perceived as a community resource and groups could receive visits from multiple organisations in a day. In principle, UWESO has priority in visiting its groups, but in reality, UWESO management is not confident that they are even aware of all the agencies that visit UWESO groups. In this environment, it is not unusual or surprising for the institution to add one more service, the sale of solar lamps. However, lamp sales differ from other interventions in that one of the partners, BASE Technologies, is a for-profit institution.

CREAM SGs also participate in other activities beyond savings and lending, but not to the extent of UWESO SGs. CREAM delivers the CARE SPM course to its SGs after they have mastered the savings and credit procedures. Moreover, NAADS and the Association for Cooperative Operations Research and Development (ACORD) provide agricultural extension services, and Community Empowerment for Rural Development (CEFORD) has provided functional adult literacy training. The executive director of CREAM, William Draa, echoed the sentiments of his colleagues at UWESO, stating that, “VSLAs brings people together. It is easier to bring other components to people when they have the group. All our services come through VSLAs.” In the cases of CREAM and UWESO, SGs have thus far proven to be an effective platform for a variety of other services.
II. Using Savings Groups as a Platform to Market Solar Lamps

This study was designed to test the proposition that SG implementers can make their existing networks of trainers and groups available to commercial interests, in order to bring socially useful products to rural markets with efficiency and cost advantages over other sales channels and without compromising the autonomy or performance of the SGs or the facilitating agency.

This case examines efforts to bring a new product to rural markets through three different channels or marketing models. The product, small solar lamps, can improve the lives of millions without electricity who struggle with poor quality light from unhealthy sources such as candles and paraffin lamps. Members of SGs and other rural residents – those who are not connected to the national electrical grid and are likely to remain so indefinitely – are the target market. Organised groups have been widely recognised and used as efficient channels to deliver products and services such as training, agricultural extension, and microfinance to rural customers. SGs offer an additional advantage: the opportunity for their members to finance their product purchases. Given the benefits of the solar lamp, SGs have the potential to serve as a robust platform for social marketing, here defined as the use of modern marketing techniques to achieve socially desirable ends.

In Uganda, both UWESO and CREAM have signed memoranda of understanding with BASE Technologies to promote and sell solar lamps to SG members. Although efforts are still nascent, two distinct approaches to marketing have been pursued and a third marketing model was to be introduced in June 2010, which is also documented here. These experiences all offer helpful lessons about using SGs as platforms for social marketing. Solar lamps have the potential to reach millions of households across the continent via the estimated three million SG members in Africa, as well as their friends and families. However, using SGs as a marketing channel is still a novel initiative; getting it right will require continued experimentation and innovation.

1. The product

The solar lamp being marketed to SGs is the Firefly, a boxed kit consisting of two elements: 1) an LED lamp with a plastic base containing batteries and electronics, and an array of LED bulbs on the end of a flexible gooseneck and 2) a small solar panel measuring approximately 13 by 18 centimetres (5 by 7 inches) with a cable to connect it to the lamp for charging during the day. Two versions are now marketed: 1) a small lamp with five LEDs called the Firefly 5 and 2) a larger, brighter lamp named the Firefly 12 Mobile that also contains adapters so that the panel can be used for charging mobile
phones. Given the popularity of mobile phones and the costs that rural Ugandans incur to have their phones charged, the Firefly 12 mobile greatly outsells its smaller counterpart. The retail prices range from USh 30,000 (USD 13.64) for the less expensive Firefly 5 to USh 47,000 (USD 21.36) for the Firefly 12 Mobile.\textsuperscript{5} The acquisition cost of a Firefly lamp is high compared to that of a traditional paraffin lamp, but because the former has no operating costs, it can pay for itself quickly through the savings it enables in fuel.

Aside from the relative affordability, the Firefly products offer clear financial, health and educational benefits, including:

- Decreased or eliminated expenditures on paraffin and phone charging;
- Elimination of paraffin fumes, reducing indoor air pollution;
- A three to ten times improvement in brightness over a typical paraffin lamp, with the specific benefit of making it easier for school children to read in the evenings;
- Reduced risk of accidental fire; and
- Opportunities for new and expanded business (e.g. phone charging services and lighting to extend work and business hours).

The lamp is highly popular among users who were interviewed during this study. For the first time, they had light without the odour, smoke and risk associated with the more ubiquitous paraffin lamp. In focus groups, SG members typically reported spending about USh 1,000 per week on paraffin, although reported expenditures varied widely. The 29 members of a UWESO cluster who were interviewed reported expenditures that ranged from USh 500 to USh 7,500 a week; only two respondents said they spent less than USh 1,000 and the average was USh 1,548. Respondents mentioned a similar amount as their savings on phone charging and every individual interviewed who had purchased a lamp observed either saving money on phone charging, earning money by charging other people’s phones, or both.

Table 2: Indicative purchase and payback budget for solar lamps

<table>
<thead>
<tr>
<th></th>
<th>USh</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamp Cost (Firefly 12 Mobile)</td>
<td>47,000</td>
<td>21.36</td>
</tr>
<tr>
<td>Annual replacement parts/repair</td>
<td>10,000</td>
<td>4.55</td>
</tr>
<tr>
<td>Income from phone charging (USh 5,000/week x 52 weeks)</td>
<td>260,000</td>
<td>118.18</td>
</tr>
<tr>
<td>Savings on paraffin (USh 1,000/week x 52 weeks)</td>
<td>52,000</td>
<td>23.64</td>
</tr>
<tr>
<td>Savings on phone charging (USh 1,000/week x 52 weeks)</td>
<td>52,000</td>
<td>23.64</td>
</tr>
</tbody>
</table>

Conservative estimates of savings at USh 1,000 (USD 0.45) per week enable a customer to recover the price of a lamp plus possible repair charges in 57 weeks. Lamp owners who have a mobile phone reported additional savings of USh 1,000 (USD 0.45) on charging services and savings on both kerosene and phone charging will cut the recovery period in half. Those who charge other people’s

\textsuperscript{5} The product line from Barefoot Power includes larger more expensive systems that can light larger spaces and multiple rooms. Currently, demand from SGs is concentrated on the smaller, less expensive products, but Barefoot and the local NGOs envision introducing the larger products in the foreseeable future.
phones can earn USh 5,000 per week, enabling them to recover the initial investment in only 12 weeks.\(^6\)

2. The players

2.1 Base Technologies

BASE Technologies is building four distinct marketing channels through which it distributes solar products in Uganda:

1. **Microfranchises**: BASE supports individuals who are motivated to build a solar products business with training, supplier credit, business advice and other incentives (e.g., top sellers receive a free radio spot in their area). To date it has trained 45 people, some of whom are employees of NGOs with access to networks of organised groups. In addition, community health volunteers working with BRAC have been trained to promote lamps through this channel.

2. **Retail dealers (existing solar businesses)**: As a participant in the Dutch government’s efforts to improve lighting in Africa, the Rural Energy Foundation is a Dutch NGO that supports retailers of solar products. BASE has placed some of its products with these dealers, who require minimal technical and business training.

3. **NGO promoters of SGs**: The CREAM model described below is the pilot for this channel in which an NGO serves as an intermediary between BASE and its field staff who sell lamps to organised groups. This channel is new and is still considered experimental.

4. **Corporate**: Companies purchase lamps as staff gifts or as promotional items for customers; BASE also markets directly to employees of large firms such as Kakira Sugar Works.

In addition, BASE has sold directly to development agencies for free distribution or sale below cost; this is particularly common in Northern Uganda, a region still recovering from civil war.

This case study focuses on the experiences of the microfranchise and NGO channels because each of these specifically targets the low-income rural market through SGs; the other two channels have minimal interaction with rural populations. UWESO originally started promoting lamps to SG members through one of its lead CBTs who became a BASE microfranchisee. CREAM, on the other hand, has signed a memorandum of understanding (MoU) with BASE in which it serves as an intermediary between the supplier and its CBTs who are sales agents. UWESO recently followed in CREAM’s footsteps and signed a similar MoU. Finally, CREAM is making an important transition to a third marketing model; as of June 1, 2010, its CBTs who have operated as sales agents for lamps since February 2010 no longer receive a salary from CREAM. The organisation is converting the status of these personnel to ‘village agents’, private sector entrepreneurs who earn commissions on lamp sales and fees from forming and training SGs. As will be seen, the third model described in this

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\(^6\) Charging phones is surprisingly lucrative and several respondents asked about the availability of products capable of charging multiple phones at a time. However, at the rate lamps are selling and given the still modest penetration of phones among the rural population, the price of charging will fall as more people purchase lamps. The market will disappear as soon as every phone owner has a lamp.
study is the village agent approach adopted by CREAM after June 2010 and is a hybrid containing elements of both the microfranchise and the NGO intermediary models.

### 2.2 UWESO and the microfranchise model

In 2008, representatives of ACCION International’s Energy Links programme introduced BASE Technologies to UWESO; BASE then trained 15 UWESO CBTs in its Masaka branch to sell solar lamps. A lead CBT for UWESO - here referred to as J.K. - emerged as an entrepreneur and evolved into one of BASE’s first microfranchisees, while simultaneously carrying out his duties with UWESO. Eventually he left UWESO and focused exclusively on selling lamps, where his responsibilities included:

- Ordering and collecting lamps from BASE in Kampala;
- Handling the finances, paying 50 percent for the lamps he received from BASE, followed by the remaining 50 percent 14 days later;
- Recruiting UWESO’s CBTs to sell lamps to their SGs, paying them a commission for each lamp sold;
- Delivering lamps to CBTs; and
- Stocking replacement batteries and handling repair issues.

In the microfranchise model, BASE sets the wholesale prices for each lighting product and also attempts to set a minimum sales price to protect its retailers from too much competition. The microfranchisee, J.K., controls the supply, distribution and commissions paid to the CBTs. CBTs who are employed by UWESO to promote SGs also sell lamps as independent agents working on commission for the microfranchisee. There are no written contracts between BASE and the microfranchisee or between the microfranchisee and the CBT sales agents. Due to the lack of documentation across the board, the researchers were unable to locate any reliable records of sales. BASE was willing to work with J.K. without an enforceable contract because they determined that he would be reliable as the prominent employee of a large NGO.

Once J.K. left UWESO and dedicated himself to selling lamps, he became the top seller for BASE in Uganda. At one time, there were eight CBTs selling lamps under his authority, although not all are active now. The margins on the lamps are substantial and most of the revenue was absorbed by J.K., in part to cover the considerable expense of buying lamps in Kampala and pre-financing purchases.

| Table 3: Breakdown of the retail price of solar lamps sold in Masaka |
|------------------------|------------------|-----------------|------------------|
|                        | Wholesale price  | Retail price    | Commission paid |
|                        |                  |                 | to CBTs          |                  |
| Firefly 5              | USh 23,000       | USh 30,000      | USh 1,000        | USh 6,000        |
| (USD 10.45)            | (USD 13.64)      |                 | (USD 0.45)       | (USD 2.73)       |
| Firefly Mobile         | USh 33,500       | USh 47,000      | USh 3,000        | USh 11,000       |
| (USD 15.23)            | (USD 21.36)      |                 | (USD 1.36)       | (USD 5.00)       |

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7 A ‘lead’ CBT was a position with a higher salary and lower caseload of SGs to permit support to other CBTs.
8 In the case of lamps being distributed in the north for free or at low cost by development agencies, BASE requires the agency to place a sticker on each lamp, specifying that it is a gift or that the cost has been subsidised.
CBTs have sold lamps mostly to SG members although some have made efforts to sell lamps in other venues, most notably rural trading centres. They take advantage of their presence at SG meetings to explain and demonstrate the lamp, take orders and make deliveries. Due to the slim margins that were paid to the CBTs, these sales were only possible because donor subsidies were bringing them to the meetings in the first place. This experience contrasts with the third model being tested by CREAM, where financial sustainability was achievable through a combination of training fees and revenue from lamp sales.

The CBTs are responsible for transporting lamps from their home - or other collection points mutually agreed upon with J.K. - to the customers, either at their homes or SG meetings. Transportation and mobile phone airtime are the main expenses that CBTs incur in selling lamps. Some complain that these costs consume most of their commission. Cumulative reported sales per CBT vary widely, from USh 20 to USh 1,000, although the size of the last figure should be viewed with some scepticism.

The enthusiastic initial market response to the product and robust sales in 2008 and 2009 have been followed by declining sales, declining motivation of CBTs, challenges to match both supply and demand, and the increasing absence of J.K., who has taken other work in the area and spends less time on the solar lamp business. CBTs seem to perceive lamp sales as an additional responsibility for which they receive insufficient and unreliable payment.

In addition to the apparent breakdown of this informal relationship with the microfranchisee, the lamp market has been marred by repair problems. In the SG cluster of Kyansi, researchers polled 29 people about their lamp’s functionality: 24 of them had purchased 25 lamps in late 2008. Eighteen months later, 17 of 25 lamps had failed, while 8 were still working.

Of greater concern is the absence of redress in the case of failure. The lamps are projected to last for 18 months before the battery and LEDs must be replaced.\(^9\) Beyond these routine replacements, lamps can fail for a variety of reasons, most of which require simple repairs. For instance, wires become detached but can usually be reattached, preferably but not necessarily with a drop of solder. While J.K. has repaired a few lamps and sometimes stocks replacement batteries for sale (at a price of USh 10,000), the majority of customers have had no means to repair their lamps. Not having received training on repairs, the CBTs have been unable to help.

The experience of Kyansi Cluster contrasts with that of Mukukulu Cluster, where a much higher percentage of lamps were working - about 16 out of 20. This was the first group within UWESO to receive lamps in late 2007, a year before Kyansi Cluster, so the percentage still working was remarkable. The secret of the longevity of the lamps was that a local entrepreneur had learned how to repair the lamps despite not having access to replacement parts from BASE Technology. He soldered wires if he could determine where they were detached; he also determined that the original lamp batteries could be replaced with cell phone batteries.

Barefoot Power acknowledged the quality problems with the one series of lamps that was sold in Masaka and stated that they have since addressed that issue. An independent body, the World

\(^9\) The solar panel is expected to last for years, as is the plastic housing
Beyond Financial Services – Marketing Solar Lamps through Savings Groups: Emerging Lessons from Uganda

Bank/International Finance Company Lighting Africa project, largely confirmed Barefoot’s claim: in 2009-2010, they conducted technical and consumer acceptance tests on lamps by many leading manufacturers and awarded product quality prizes at the May 2010 Lighting Africa Trade Fair. Barefoot won first or second prize in all four categories for which prizes were awarded. New model lamps to be phased in during 2011 are promised to have better LEDs and batteries, and may have an average life span of as much as three years, at the same cost to consumers. However, to the researchers’ knowledge, there is still no systematic effort being made by any of the actors mentioned here, including BASE Technologies, to put in place local service centres capable of repairing the lamps which will inevitably fail in any large group.

2.3 Analysis of the microfranchise model

The experience in Masaka remains shrouded in some mystery; there are no written records of sales with UWESO, J.K., the CBTs, or with BASE. Reported sales vary widely by source and in some cases are not credible. The key informant, J.K., did not show up for an additional interview to resolve questions that had developed during field visits and stopped answering his phone. UWESO, BASE and J.K. are all discontinuing this microfranchisee model and adopting the NGO-as-intermediary model used by CREAM, which is discussed below.

The microfranchise model emerged as J.K. moved to capitalise on a business opportunity; it was neither designed and developed by BASE nor governed by formal contracts. It succeeded in getting solar lamps to rural consumers and achieved marketing efficiency by attaching a sales function onto an existing, donor-funded training and technical assistance role played by UWESO CBTs.

The microfranchise model uses CBTs employed by UWESO to sell lamps to SG members. These field agents are paid to meet SGs regularly and earn the trust of the SG members over time. Critical to lamp sales, the CBT’s presence in the field involves expenditures of time and transport that are possible because of UWESO’s grants and contracts.

As an emerging model, it was ad hoc and suffered a myriad of problems – inadequate compensation for the sales agents, challenges in distribution, lack of service – that should have received more attention from the outset. Neither BASE nor J.K. were prepared to handle the routine repair needs that emerged at the projected time in the product life cycle. While J.K. had an intermittent supply of replacement batteries, customers were not adequately prepared for the need to make this periodic investment. Moreover, local repair services for this product were scarce and CBTs were never trained to fulfil this function. As it took shape, the model focused primarily on sales and left a critical gap in the value chain that further inhibited its ability to survive over the long term.

The pricing system was also inadequate; as J.K. was in control of the commission paid to CBTs, he captured most of the margin on lamp sales. This may have been necessary to cover the unsubsidised costs he incurred to finance his lamp purchases and transport them from Kampala. Nevertheless, CBTs complained that their commissions barely covered the additional costs they incurred in communicating with and delivering the product to their customers.

In the microfranchise model that has operated in Masaka, UWESO did not have any control over staffing, remuneration, or customer service. Yet UWESO did not demand any control either; it essentially let J.K. run the operation independently without setting guidelines that determine how
products should be marketed to SG members. Since UWESO staff members are the front line sales staff, the organisation placed its reputation at risk and took minimal steps to protect it.

For its part, BASE did little to stay in contact with its field-based clients and was essentially unaware of the repair problems. BASE also took little responsibility for protecting its brand and seems to have simply sold lamps to J.K. in the hopes that he would somehow resell them. The experiment flourished for about two years but it was clearly in decline at the time of this study.

The following table points to the main shortcomings observed in the implementation of the microfranchise model and how they could have been mitigated so that the model would perform more effectively.

Table 4: Weaknesses and mitigation strategies in the Masaka implementation of the microfranchise model

<table>
<thead>
<tr>
<th>Area</th>
<th>Problem</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection and training</td>
<td>J.K. was apparently not oriented, either by personality or training, towards creating a long-term viable business.</td>
<td>Assisting microfranchisees in the development of a complete business plan, and working with them to adhere to it. If they are unable to do so, replace them.</td>
</tr>
<tr>
<td>Contracts</td>
<td>The absence of any written documentation left the responsibilities of the different actors unclear. Payment to the CBTs by J.K. was at best late and meagre in relation to the work performed.</td>
<td>Use written contracts that clearly articulate the roles and responsibilities of the supplier, the microfranchisee, and the CBTs who will be doing the actual selling. Contracts should also state what commissions will be paid, how, and when. Ensure CBT commissions are high enough to keep them motivated.</td>
</tr>
<tr>
<td>Record Keeping</td>
<td>The total sales amounts are entirely unknown.</td>
<td>Unless it is considered proprietary business information, sales information should be circulated among the microfranchisee, the CBTs, BASE, and UWESO.</td>
</tr>
<tr>
<td>After sales service</td>
<td>The absence of an available service to repair a broken lamp or replace a battery unnecessarily reduced the value of the lamps for many customers. The warranty was of little use to rural customers because it required them to return lamps to the capital city for service or replacement.</td>
<td>Local entrepreneurs who are technically competent should be trained in simple repairs and supplied with spare parts. BASE should make it simpler for customers to have their lamps repaired under warranty.</td>
</tr>
<tr>
<td>Supervision</td>
<td>There was no effective oversight by either BASE or UWESO.</td>
<td>Both BASE and UWESO should protect their brands by providing greater supervision over sales and follow up activities.</td>
</tr>
</tbody>
</table>

Ultimately, the Masaka experience was very ad hoc and informal in nature, which does not allow it to constitute a legitimate test of the microfranchise model. Its failure largely reflects poor execution and not any inherent weakness in the model itself.
2.4 CREAM and the NGO intermediary and village agent models

In early 2010, BASE negotiated with CREAM to set up a distribution system for solar lamps in the West Nile region. Like the microfranchise model that evolved in Masaka to reach SG members, this model also relied on trainers to sell to SGs, taking advantage of an organised network of active groups. The difference between the two approaches, however, lies in the role of the implementing agency. CREAM is an active intermediary between the supplier of lamps (BASE Technologies) and the CREAM trainers who sell the lamps. Under a MoU signed with BASE in March 2010, CREAM supervises and supports its trainers in lamp sales by making wholesale purchases, accepting orders from the trainers, and supplying lamps to the trainers for distribution to group members.

The CREAM case includes two models:

- One which began with the MoU in March 2010 and lasted until May 31st, 2010, in which the sales agents-cum-CBTs are paid by a grant from CARE; and
- A second model, commencing on June 1st, 2010, in which the same CBTs have converted to ‘village agents’ and are no longer on salary.

CREAM was the first SG promoter to sign a MoU with BASE Technologies and was followed by UWESO. In February 2010, BASE trained 13 CREAM CBTs; in the six months that followed, this team of CBTs sold 1,148 lamps and it reports growing demand. Under their agreement, CREAM purchases lamps from BASE, paying 50 percent up front, with the remainder due before they can order more lamps. The MoU with BASE explicitly states that it is a “good faith understanding” but not a legally binding document, to avoid the possibility of litigation. The MoU calls for CREAM to sell a minimum of 120 lamps per month and to date, CREAM has exceeded this target, with sales reaching nearly 200 per month; as will be seen, CREAM has incentives to sell as many lamps as possible, for its groups, its trainers and for the organisation itself.

BASE ships lamps to the CREAM head office in Arua at its expense and CREAM uses public transport to deliver them to its district offices; the CBTs collect lamps a and are responsible for delivering them to customers. CREAM’s CBTs report delivering lamps to each customer’s home, absorbing the cost of their time and transport (and sometimes food) to do so. CBTs collect payment from customers and subtract their commission before delivering the money to CREAM. Both parties prefer this payment arrangement as opposed to having CREAM receive the entire sales price and then reverting the share for the CBTs in a monthly lump sum payment.

While the initial sales training is provided by BASE, CREAM is responsible for the selection and management of salespeople and believes it is also capable of providing subsequent training. CREAM chose the participants from among those who were expected to lose their jobs at the end of the CARE grant on the basis of their performance and, to some extent, geographical distribution; it wanted to assure that each converted CBT had an adequate market area in which to sell lamps.
CREAM has few costs under this model. Although the MoU does not specify which agency should pay for shipping the products from Kampala, BASE is currently paying for transport. To date, there has been no implementation of after-sales and repair services and this could require a substantial investment of time and money. As the programme grows, it will likely require more management time and a dedicated staff person. Such a staff member might cost the programme USh 200,000 per month, or the revenue from approximately two dozen lamp sales. With the present high mark-ups in prices, the programme should easily be sustainable; however, as forecasted previously, margins can be expected to decrease as competition increases.

The CBTs are pleased with the programme; they report new opportunities for SG members to save and invest the income afforded by lamp sales. More importantly, they can envision making a living as village agents. It should be noted that they have also just begun and are motivated by the enthusiastic initial response to the product. They have not yet envisioned their role in customer service, such as dealing with issues related to repair and replacement parts that surfaced in Masaka. Thus far, CREAM is avoiding the mistakes of the Masaka experiment and remaining more involved in controlling pricing, overseeing sales fulfilment and ensuring timely payments to the sales force.

Since the field work was conducted, CREAM reports that the pilot is proceeding well. Of the 26 CBTs whose contracts were coming to an end and who were trained to sell lamps, 18 are active as village agents, selling an average of 10 lamps per month. Not surprisingly, there are individual variations due to differing skills in marketing and in the levels of demand in different areas. Yet, CREAM states that the average village agent is making more money from the income from training new groups than from lamp sales. Normally, they will give the first training session for free and then charge either at the second session or at the moment the cash box is delivered. They require a one-time payment of USh 3000 per group member or USh 60,000 (USD 27.28) for a typical group size of 20 members. From that sum, the village agent must deduct the transportation costs of visiting the group and the amount paid to CREAM for the cash box (W. Draa, personal communication, 30 August 2010).

### Table 5: Cost structure of Firefly lamps sold by CREAM

<table>
<thead>
<tr>
<th></th>
<th>Wholesale price</th>
<th>Retail price</th>
<th>Commission paid to CBTs</th>
<th>CREAM margin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firefly 5</strong></td>
<td>USh 23,000 (USD 10.45)</td>
<td>USh 30,000 (USD 13.64)</td>
<td>USh 3,000 (USD 1.36)</td>
<td>USh 4000 (USD 1.59)</td>
</tr>
<tr>
<td><strong>Firefly Mobile</strong></td>
<td>USh 33,500 (USD 15.23)</td>
<td>USh 47,000 (USD 21.36)</td>
<td>USh 5,000 (USD 2.27)</td>
<td>USh 8,500 (USD 3.86)</td>
</tr>
</tbody>
</table>

### Table 6: Reported income of field agents since the completion of fieldwork

<table>
<thead>
<tr>
<th></th>
<th>Ush</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of 10 lamps at USh 5,000</td>
<td>50,000</td>
<td>22.73</td>
</tr>
<tr>
<td>Sale of 3 boxes at USh 30,000</td>
<td>90,000</td>
<td>40.91</td>
</tr>
<tr>
<td>Total average monthly income</td>
<td>140,000</td>
<td>63.64</td>
</tr>
</tbody>
</table>

10 Email correspondence and post study visit with William Draa.
CREAM reports that both it and BASE are satisfied with the relationship and that they have been able to reduce the waiting time by submitting orders promptly to BASE, by expediting shipment to the village agents, and by keeping some stock of lamps in the district offices.

2.5 Analysis of the NGO intermediary model

When the research team visited the West Nile region in May 2010, CREAM had been implementing this marketing model for only three months. It was observed that the enthusiasm for the product and strong sales were tempered by several challenges, most notably the need to put a reliable product service function in place. Despite having been only recently introduced in West Nile, a few lamps have problems; like UWESO in Masaka, CREAM risks damage to its reputation if it fails to put a service facility in place. Although fully aware of the importance of this function, CREAM had not yet developed a plan for it.

Another significant and current challenge is the inefficiency of the supply chain. The CBTs have to take orders with payment in full before they can submit an order to CREAM. As CREAM has not yet begun to invest its own limited capital to stockpile lamps, it waits until it has collected the money for a month’s orders, deposits it into BASE’s bank account, and then places an order. Delivery from BASE takes an additional two weeks; as a result, customers have expressed dissatisfaction about paying in full and waiting for a long period of time for the product. This is one reason that CBTs are making individual deliveries directly to customers’ homes as soon as lamps are sent to them, instead of waiting for the next group meeting. The home delivery option presents challenges in terms of time, transportation and inconvenience that will only grow as volumes increase. Since the field study, CREAM reports that it has begun to keep a small stock of lamps in the district offices. It is not known whether they will be able to move beyond the pre-payment system to one in which customers receive a lamp as soon as they pay for it; all of the CBTs interviewed believed that that doing so would greatly increase sales.
III. Leveraging Savings Groups as a Platform for Social Marketing

Using SGs as a marketing channel for socially beneficial products offers multiple benefits for all involved: the facilitating agencies, the CBTs as sales agents and the group members. Marketing to groups is efficient for the sellers; for the buyers, membership in a SG provides both access to the product and multiple means of financing. While these benefits have generated enthusiasm for marketing solar lamps in Uganda, questions persist about the long-term prospects for the models and the possible distortions to local markets that they may create. This section explores both the benefits and the risks of using SGs for the purposes of social marketing.

1. Accessing rural markets through Savings Groups

Rural populations that remain off the electricity grid are an obvious market for solar lamps. Yet from the perspective of retailers selling household products, this market has challenges that are well documented: high costs of transportation, a dispersed population, pervasive rural poverty, lack of information, and a frequent cultural and linguistic gap between the potential clients and the businesses who sell products and services. With demand depressed by these significant limitations, retailers hesitate to incur the expenses associated with both reaching out to this market and transporting goods to individual buyers.

Two effective ways of reaching rural residents with product information are by being present on market days and through radio spots in national languages. BASE takes advantage of both, training its microfranchisees to concentrate on selling lamps on market days and awarding top sellers with free radio spots. However, both outreach options are limited because neither is built on trust between the seller and buyer and neither facilitates financing to help cash-strapped customers make discretionary purchases.

UWESO and CREAM CBTs introduce the product to its target market; working through SGs, they are accelerating the introduction of the solar lamp to rural areas. While individual farmers will eventually learn of this product via the radio or see it in retail shops, adoption would take much longer without the product demonstration and recommendation by a trusted trainer known to group members.

BASE has also certified eight dealer-distributors of Firefly lamps. One of these, a solar electronics store that sells a wide range of solar products, is located in Arua, the largest town in the West Nile region, where CREAM is active. The solar shop provides a point of comparison with CREAM’s efforts.
and highlights some of the advantages and challenges in using SGs as marketing outlets. The shop was selling the Firefly at USh 50,000, which compares unfavourably to the USh 47,000 at which CREAM sells the same product. The shop relies on traffic to the store in town and does not reach out specifically to distant rural markets.

Some comparisons of the competitive market advantages of CREAM and the solar shop are noted in the table below.

Table 7: Relative advantages of CREAM and the Arua solar shop

<table>
<thead>
<tr>
<th></th>
<th>CREAM</th>
<th>Solar shop</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financing</strong></td>
<td>CREAM has little capital and depends on donor grants for most of its activities</td>
<td>Not known, but it is likely in Uganda that the shop can access funding through banks catering to Asian-run businesses</td>
</tr>
<tr>
<td><strong>Orientation</strong></td>
<td>CREAM is experienced in acquiring donor grants as well as selling services to villagers</td>
<td>Purely commercial</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td>CREAM has extensive access to rural communities through a network of SGs and CBTs</td>
<td>Sells mostly to urban dwellers, businesses, and projects</td>
</tr>
<tr>
<td><strong>Reputation</strong></td>
<td>Perceived as a community resource</td>
<td>Perceived as a foreign business</td>
</tr>
<tr>
<td><strong>Commercial infrastructure</strong></td>
<td>Has some storage space and three offices outside the regional capital</td>
<td>Has a warehouse and a single office</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Management experience in running and marketing an NGO; no apparent commercial experience</td>
<td>Has management with existing retail business, as well as trained staff</td>
</tr>
<tr>
<td><strong>Fiscal status</strong></td>
<td>Tax exempt</td>
<td>Must pay taxes</td>
</tr>
</tbody>
</table>

### 2. Using Savings Groups to finance the product

In general, firms that have successfully approached rural markets have done so by reducing unit sizes and costs to very low levels and achieving high sales volumes to compensate for small margins. In contrast, acquiring a solar lamp requires a lump sum investment; however, this is the only expense that most families should have to make in the first year of ownership. No costs should be incurred by most users until it is time to replace the bulbs or the battery, usually between 12 to 18 months after purchase. Despite this, the acquisition cost can be a substantial hurdle.

To put the costs into perspective, it is useful to compare the amount of typical savings to the cost of purchasing a lamp. The researchers of this study interviewed 23 members of the Kyansi Cluster in Masaka who had purchased lamps and were asked how much they had saved at the last meeting they attended. The average amount was USh 3,696 (USD 1.68). However, attendance at UWESO meetings is normally between 70 percent and 80 percent; to develop a conservative annual estimate, the amount saved at the last meeting attended could be multiplied by 35 weeks. Doing so
gives an indicative estimate of USh 129,360 (USD 58.80). Therefore, a lamp purchase is just over a third of the typical annual savings in Kyanshi Cluster. Among the CREAM groups, the amounts saved were even less. The average share price among CREAM groups is USh 700 (USD 0.32) compared to USh 1,000 (USD 0.45) to USh 2,000 (USD 0.91) for their UWESO counterparts. Therefore, for most members, a solar lamp is not a casual purchase.

Table 8: Recuperating the cost of a lamp over time with lamp-related savings or income

<table>
<thead>
<tr>
<th></th>
<th>USh</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamp Cost (Firefly 12 Mobile)</td>
<td>47,000</td>
<td>21.36</td>
</tr>
<tr>
<td>Annual replacement Parts/repair</td>
<td>10,000</td>
<td>4.55</td>
</tr>
<tr>
<td>Income from phone charging (USh 5,000 /week x 52 weeks)</td>
<td>260,000</td>
<td>118.18</td>
</tr>
<tr>
<td>Savings on paraffin (USh 1,000/week x 52 weeks)</td>
<td>52,000</td>
<td>23.64</td>
</tr>
<tr>
<td>Savings on phone charging (USh 1,000 week x 52 weeks)</td>
<td>52,000</td>
<td>23.64</td>
</tr>
<tr>
<td>Paying for a lamp with share-out capital:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamp Cost (Firefly 12 Mobile)</td>
<td>47,000</td>
<td>21.36</td>
</tr>
<tr>
<td>Annual savings of USh 1,000 per week(^\text{11})</td>
<td>52,000</td>
<td>23.64</td>
</tr>
<tr>
<td>Annual return on savings estimated at 50%</td>
<td>26,000</td>
<td>11.82</td>
</tr>
<tr>
<td>Value of share-out</td>
<td>78,000</td>
<td>35.45</td>
</tr>
</tbody>
</table>

In addition to serving as the mechanism through which members gain information about as well as access to the solar lamp, the SG often plays a key role in financing its purchase. To date, supplier credit has not been available and buyers must pay in full when they place an order. Financing appears to be a greater barrier to purchase than price; although people are certainly price sensitive, the current cost of the lamps does not significantly dampen demand. Of the two most common lamp models marketed to SGs, demand is much stronger for the Firefly Mobile because it includes phone charging capacity. People are willing to pay the higher price for the product they want, but few have the money available at hand. To assemble the lump sum necessary, they turn to their SG where they can choose from among multiple payment strategies.

In the groups visited, most members who paid cash for their lamps did so at the time of share-out, making the period leading up to the group’s share-out date a time of strong demand. CBTs report that it is easier to sell lamps to mature groups,\(^\text{12}\) which have experienced a share-out and know that on that day they will receive a substantial one time sum.

In the small sample studied, approximately one quarter of lamp owners borrowed from the group fund to purchase a lamp. Most often, they used only a portion of their loan for this purpose and spent or invested the rest. Both the UWESO and CREAM groups limit the terms of small loans to one month and larger loans to three months; while the distinction between large and small loans varies with each group’s constitution, a loan uniquely for the purchase of a solar lamp would be a small loan in almost every case. Members report that the paraffin and mobile phone charging savings realised during the one month period of a small loan are not enough to cover the balloon payment.

\(^{11}\) Estimated savings are conservative, based on a share value of USh 1,000 and a weekly purchase of a single share.

\(^{12}\) Note that the practice of visiting mature groups is only found among programmes which practice a ‘train-and-retain’ approach (like UWESO and CREAM), as described in section IV.
of principal and interest. In most cases where a loan had been used to purchase a lamp, it was a larger loan, with the cost of the lamp being only a small part of the total. In these cases, the loans were for three months, a more appropriate period for paying for the lamp through paraffin savings.

An interesting example was of a group that allowed its members to borrow from the social fund to purchase solar lamps. Groups create and maintain social funds to respond to member crises such as funerals and health emergencies; they make this money available as a grant or a loan on more favourable terms than the standard group loans, including a longer or indefinite term and interest-free status. At least one group has declared that because solar lamps reduce the risk of fire – which is considerable when there is an open flame paraffin lamp burning in a thatched roof hut, often with a mosquito net and almost always in close proximity to children – they qualify as a response to an emergency.

Finally, some groups have found a particularly unique way to finance lamp purchases. They have organised ROSCAs within their groups for the explicit purpose of buying lamps. Members contribute an agreed amount at every meeting and distribute the collected sum to a different member at each gathering, enabling all members to eventually purchase a lamp. One CBT had successfully introduced this system to two of her SGs. This approach has two distinct advantages: it provides predictable sales to the agency and assures that everyone in the group acquires a lamp. Since the field work was completed, CREAM reports that several groups are utilising ROSCAs to finance lamp purchases.

It should be noted that ROSCAs are a well-known tradition in many parts of East Africa and do not require a SG to form or function. ROSCAs could and frequently do offer another marketing channel for a range of products; it is common to find women who have formed a ROSCA to enable members to all purchase the same household item such as bed sheets, cookware or a mattress. In this case, members received product information through the SG and its CBT, both trusted entities that inspired the formation of the ROSCA for the purpose of lamp purchases. This is significant because ROSCAs have often failed due to mistrust and fraud among members and SGs can minimise this dysfunction.

The following table presents the five financing methods uncovered during this study, and a description of each:

<table>
<thead>
<tr>
<th>Financing method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Cash from share-out</strong></td>
<td>At the end of each cycle (typically 9 to 12 months), SGs distribute all accumulated assets to their members. CBTs report strong sales at this time; they also report that many members are waiting for share-out to place their orders.</td>
</tr>
<tr>
<td><strong>2. Cash out-of-pocket</strong></td>
<td>Out-of-pocket payment - unrelated to the group cycle - is most common among non-members who account for approximately 25 percent of overall sales. A few male group members also reported purchasing lamps out-of-pocket.</td>
</tr>
<tr>
<td><strong>3. Standard group loans</strong></td>
<td>Although data is not available for all sales, interviews with CBTs and SG members about their sales and purchases respectively yielded a rough estimate of one quarter of members who borrow from the regular group fund to buy a lamp. Often</td>
</tr>
</tbody>
</table>
the cost of a lamp is included in a larger loan.

<table>
<thead>
<tr>
<th>4. Social fund</th>
<th>At least one group decided that the need for safe lighting qualified as an emergency and has allowed members to take loans from the social fund (typically one month, interest free loans) to purchase lamps.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. ROSCA</td>
<td>The idea of creating a ROSCA to finance a lamp for every member surfaced several times during our discussions with CBTs and two of the groups interviewed had done so. In one group of 23 women, 11 members had already purchased lamps.</td>
</tr>
</tbody>
</table>

3. Programmatic gains from the sale of lamps

Using SGs as a platform for social marketing is efficient, leveraging the role of the CBT – building on the presence, trust and social capital that the CBT has gained with SGs – as well as the financial facilities of the group. In addition, this nexus of solar lamps, CBTs and SGs offers distinct benefits to the facilitating agency; it strengthens the web of relationships that connect the programme, field staff and clients.

Facilitating agencies invest in training staff but run the risk of losing them when external funding ends. CBTs are the key elements that link facilitating agencies to SG members. As noted in Part II and in the coming discussion on sustainability, CREAM and UWESO both have a strong interest in maintaining contact with their groups because networks of organised groups in remote rural areas facilitate the provision of a broad range of services and are therefore attractive to both government and private development entities. As a result, both UWESO and CREAM view the groups as assets that raise their credibility with other service providers and donors; they have little incentive to abandon their groups, even after the groups are able to function on their own. As a result, any innovation that allows the facilitating agencies to retain contact with their groups is welcome.

The NGO’s perception of SGs as an asset to be cultivated does not necessarily undermine the SG model. UWESO and CREAM respect the goal of autonomous SGs capable of managing their own savings and lending activities. However, they will seek to maintain contact with groups and do so by using SGs as platforms for other services (provided by themselves, other NGOs or government). Given this perception of the groups’ value, the role of purveyor of solar lamps is particularly relevant to both agencies for two reasons. Firstly, solar lamps help them to retain the most desirable staff; the sales commission is another source of income for CBTs, especially when the grant that pays their salary ends. CREAM deliberately selected CBTs for lamp training from among those whose jobs were to be suspended due to the end of grant funding. Secondly, by providing access to a desired product, UWESO and CREAM enhance their credibility with SG members. Lamps are seen as another benefit these agencies offer and increase the motivation of SGs to remain connected to them after ‘graduation’.

By using CBTs as sales agents, both models have created multiple variations of who pays specific costs and how donor subsidies are applied. CBT activities, such as supervisory visits to groups where lamp sales are arranged, are donor funded; therefore, the facilitating agencies are attaching lamp sales on to existing activities that are subsidised. CBTs may occasionally visit mature SGs for reasons other than to monitor their financial operations and to sell lamps. In this case, the costs of CBT
activities are also subsidised but likely not by the same donor that paid for the original SG programme.

Finally, personnel who are no longer CBTs and have transitioned into the role of village agents will continue to visit groups and sell lamps. The marketing activity of village agents is not subsidised; they become private sector actors earning commissions from lamp sales and training fees paid by groups. To build their customer base, village agents are motivated to maintain contact with the groups they have organised as well as form new ones. In Masaka, UWESO has three ex-CBTs who continue as active field officers, but their only income comes from sales commissions.

Although the two approaches used by CREAM and UWESO resulted in different experiences for their respective CBTs, both confirm the educational, health, safety and financial benefits to group members of lamps. However, under the microfranchise model, the supply, distribution and commission were all under the control of the microfranchisee. The terms and conditions he offered to CBTs were not generous enough, and sales under this model have reportedly declined due to multiple factors. On the other hand, CREAM CBTs are starting their sales careers under more favourable terms and their markets are wide open; as a result, they have more confidence in this new business opportunity.

4. Value added by using groups as platforms for social marketing

In the focus groups conducted with SG members, the lamps were reported to be highly popular with all users; for the first time, they had light without odour, smoke and risk. Members proudly discussed who owned the lamp, who controlled it in the household, who used it and how. It is commonly placed high up to light the room during dinner; afterwards, it is brought to the table where children do their homework. Some use it to light their shops at night (observing increased customer traffic) and others report using it in the early morning for prayers. One woman claimed that it was the best gift her husband had ever given her.

In addition to saving money on expenditures for paraffin and phone charging, owners of the Firefly 12 Mobile can earn money by charging phones for others. On sunny days, up to three phones can be charged at a fee of USh 500 (USD 0.23) per phone, for estimated average earnings of USh 7,500 (USD 3.41) per week. As a result, demand is growing for dedicated products that will charge multiple phones at a time. However, this new business potential is the result of a temporary window of opportunity created by a scarcity of charging capacity in rural villages. As more people obtain lamps, the price of phone charging will fall.

Even those who have experienced battery failure or other malfunctions enthusiastically confirm that they would and do recommend the lamp to family and friends. The product is obviously popular and it is interesting to examine why and how SGs have contributed to its dissemination:
• **Access:** In a context that finds few commercial agents reaching out to the rural poor who are the target market for this product, SGs have provided the venue for their members to learn about solar lamps. The CBT brings the product to the group, enabling members to learn about it free of risk or expense.

• **Trust:** SG members are more open to learning about and purchasing a product from someone they trust, such as CBTs and village agents.

• **Financing:** SGs provide their members with payment options.

• **Stimulating demand:** Lamp sales to SG members are having demonstrable positive effects which stimulate demand among other residents of the community. Sales to non-members vary significantly by CBT, but demand from within and external to SGs is growing, as word of the product and its reputation spreads. One CBT envisions that he will set up a kiosk in town to sell lamps when he is no longer employed by CREAM.

While it is clear that SGs are supporting lamp sales, it is worthwhile considering the reverse: what is the impact of lamps on SGs? The first place to look for an answer to this question is with the CBTs. The dual demands of their roles as trainer and sales agent raise questions about their ability to balance the demands of these tasks. The potential for abuse of the charitable and commercial roles must be acknowledged. While the CBT does take some time at meetings to either market the lamp or manage orders, researchers found no evidence of conflict between the roles of SG support and lamp sales. CBTs do not appear inclined to favour one responsibility over the other. In fact, the two goals appear mutually reinforcing; the possibility of lamp sales motivate CBTs to visit mature groups and form new ones, but this goal requires healthy, financially strong SGs whose members can, with the help of the group, afford to purchase lamps. So far, the CBTs’ focus on the commercial incentives in establishing new groups and visiting mature SGs seems to complement their motivation to see the positive social changes created by SGs themselves.

The second place to look for an answer to this question is policy, emanating either from the facilitating agency or the SG, with respect to lamp purchases. SGs do not impose group purchases or set savings goals with respect to lamps (except in the event that members decide to form a ROSCA to enable everyone to acquire one). The purchase of a lamp remains an individual decision and any effort on the part of CREAM to make it a requirement would change the nature of the relationship between CREAM and the SG; CREAM correctly respects the autonomy of the group and limits the relationship to one of facilitation, not of control.

The third set of answers is largely hypothetical. Demand for lamps led at least one SG to make its social fund available to members for lamp purchases. The question arises as to whether such a decision could lead to an inability (such as a lack of funds) to address more dire emergencies and

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13 Other SGs in Tanzania, Uganda and Kenya have set group goals for share-out that improve various elements of the lives of group members; for example, everyone agrees to buy iron roofing sheets or mattresses.
leave affected members in crisis; hypothetically the answer is yes, but there is no evidence supporting this potential negative impact given the early and isolated practice of accessing the social fund for solar lamp purchases. Moreover, the case could be made that marketing products to SGs undermines the culture of saving and investment they are meant to foster; however, reactions to this scenario will vary widely depending on the products being marketed.

The multiple benefits of solar lamps generated enthusiasm for using SGs as a platform for social marketing. Despite errors in early implementation due especially to the ad hoc nature of the microfranchise model, it is clear that SG members would not have lamps and their safe, smoke-free lit environments without these targeted sales efforts. However, this initial success raises a question about the relationship between the SG platform and product. Could the same model, corrected for early design flaws, be used for other products? Who decides which products? Should a facilitating agency of SGs be the gatekeeper for the products members are exposed to? How many products could a CBT effectively sell? The following sections on Sustainability and Lessons Learned point to some answers.

Finally, the value of SGs as a platform for social marketing must be considered in the context of a dynamic market. In 2010, SGs are the critical link between the solar lamp and its target market, and they may continue to be so in the near future. However, in the next two to five years, the market will be different. A diversity of products and prices may overwhelm the simplicity of CBTs marketing one product through their groups.
IV. Sustainability

A rich web of questions concerning sustainability arose during the course of this study, as the institutions involved were using three distinct models for marketing lamps: the microfranchise model (J.K. at UWESO), the NGO intermediary model (CREAM until May 2010), and the village agent model (CREAM after May 2010). For each, it is possible to examine the sustainability of the model itself as well as the effect of the model on the sustainability of the SG.

In the case of SGs, there are also questions about the sustainability of each model. Is it likely to continue to deliver the desirable good or service indefinitely? If it is not likely to continue, for how long might it function? What subsidy is required, if any? Are there risks and adverse impacts associated with that model?

The questions, and some preliminary answers are summarised in Table 10, which is followed by further discussion of these questions.

| Table 10: Impact of various social marketing models on group and model sustainability |
|---------------------------------------------------------------|-------------------------------|-------------------------------|
| **Group sustainability** | **Sustainability of the model** |
| Microfranchisee (J.K. at UWESO) | No important effect on group sustainability | If the product or service is one that requires a separate marketing channel, then the microfranchisee may have long-term income. |
| NGO Intermediary Model with CBTs (CREAM until May 2010) | Possible effects include more frequent visits from the CBT and may lead to mission drift if the NGO becomes “too commercial”. | Not sustainable if it requires donor funding to keep CBTs in the field. |
| Village Agent model (CREAM after May 2010) | May lead to continued contacts between the group and the CBT after other sources of funding for CBTs expire; the impact of continued visits is complex and unknown. | Potentially sustainable if various conditions are met (discussed below). |

1. The impact of various social marketing models on group sustainability

In general, value added activities that have an adverse effect on group sustainability are likely to do so by taking time away from the group’s other objectives and activities, disrupting power relationships within the group, reducing its assets, or negatively affecting transparency. Since the purchase of lamps is a quick transaction between a salesperson and an individual group the authors do not believe that any of these adverse effects is likely to any great extent. There was no evidence of any stress or weakness created by the lamp sales in any of the groups that were interviewed.

Value added activities that have a positive effect on group sustainability are likely to occur through increasing group cohesion, improving the group’s financial performance, making membership appear more desirable to members or non-members, or reinforcing existing transparent power
structures. There is some possibility that lamp sales could become a goal of the group which, once attained, leads to feelings of satisfaction and accomplishment; lamp sales could lead to successful loans since the savings associated with the solar lamp often outweigh the costs; and access to lamps could make membership in the group desirable by giving members preferential access to an aspirational product. In any of these cases, the sale of lamps might reinforce group sustainability, but this remains conjecture; while respondents mentioned the positive effects of the lamps in their own lives, none specifically mentioned any effect on the group itself.

However, there may be an indirect effect on the groups if the sale of lamps allows the facilitating agencies to retain contact with the groups longer than they might otherwise. This potential effect is discussed below in section 3.1.

2. Sustainability of the various models

The questions related to the sustainability of the different models are interesting and complex.

Under the microfranchisee model, the implementing agency has little or no financial stake in the sale of lamps; it simply facilitates access to its SGs by independent contractors. Since J.K. was a UWESO employee when he started selling lamps, this case is not a pure example. However, after a short time, he left UWESO and operated independently. While he shared some of his revenue with the UWESO CBTs, these small payments did not have a significant impact on the CBTs’ financial circumstances. However, there clearly were some programmatic and reputational impacts, both positive and negative.

The negative impacts consisted of feelings of resentment and discouragement among group members and CBTs resulting from the lack of enforceable warranties and locally available service facilities, and the insufficient commissions to the CBTs. On the positive side, many group members were able to buy products that they deemed highly useful, and the CBTs were able to somewhat augment their income. Ultimately, the authors believe that the net impact on UWESO, its staff, and its members was positive; any failure of this microfranchise model can be attributed to the characteristics of the entrepreneur and neglect by BASE and UWESO, reflecting flaws in implementation rather than inherent defects in the model itself.

In the village agent and NGO intermediary models, the implementing agency does have a financial stake in the sale of lamps. Many NGOs have started for-profit enterprises in hopes of gaining a steady revenue source to reduce their dependence on unpredictable donor funding; several operate hospitals, theatres, small factories, educational facilities, and other enterprises. The results range from successful non-profit businesses to failures in which the non-profit ends up subsidising the ostensible revenue generating activity. While neither CREAM nor UWESO see the sale of lamps as a significant revenue source, both see it as a business that will support their programmes. The important question for assessing whether it is appropriate for an institution that works with SGs to sell solar lamps, or engage in any other business, does not hinge on whether the institution is an NGO, a commercial business, or a cooperative; rather, the question should be whether the commercial activity is one that the institution is sufficiently competent to manage successfully and how well the potential commercial activity fits with the institution’s overall strategy and mission.
3. The train-and-retain strategy

There is an additional way in which the sale of lamps may affect both group and institutional sustainability. Both UWESO and CREAM practice a strategy of relating to groups after they have been trained, known as ‘train-and-retain’. While the two agencies are among the most experienced and efficient SG implementers in Uganda, they continue to provide visits and training to their SGs indefinitely, for reasons previously described.

Both agencies believe that solar lamp sales can have a positive effect on the sustainability of SGs. CREAM in particular has articulated its argument for this belief. First, CREAM holds that the train-and-retain model is good for group health and sustainability; secondly, it believes that lamp sales will be a means to finance train-and-retain activities in the absence of donor financing. Specifically, CREAM believes that not only can social marketing activities continue without subsidy, but it can earn enough revenue to cover the costs of visiting and training SGs. It is difficult to determine whether the latter argument is plausible, given the lack of existing evidence for sustainability; however, the authors of this case conclude that success with such a strategy may be possible.

3.1 Is the train-and-retain model good for group sustainability?

In general, groups learn how to collect savings and make loans after a few months - or even after a few weeks - of training. Learning to calculate a proportional share-out is more difficult and because groups only conduct share-outs once a year, many never learn how to calculate a proportional share-out. These groups usually either practice ‘flat’ distribution, in which each member receives his or her savings plus an equal share of earnings, or they receive assistance from a trainer, another group, or in some cases from freelance experts, who provide free or paid assistance.

However, in addition to the basics of savings and credit procedures and the more complicated proportional share-out, there are situations that many groups only encounter after several years of functioning (Anyango, 2007; Odell and Rippey, 2011):

- Replacement of the founding group officers;
- Helping members find alternative investment opportunities as the amount of loans and share-outs grows with each year;
- Deciding on group income-generating activities, which many groups want to do if they find that the available pooled funds is greater than the demand for loans; and
- Linkages with other projects, programmes, and agencies, including NGOs, financial agencies, and development projects.

If a group wants and receives assistance in these areas, it does not mean it is not sustainable and that it would fail without external assistance. In fact, most groups will successfully confront these issues. The situation is similar to those of donor-funded MFIs; even after they have reached a state that would be considered sustainable, many continue to receive various consultancies, participate in

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14 A phrase coined by one of the authors, Paul Rippey. Rippey contrasts ‘train-and-retain’ with ‘train-and-abandon’ and ‘train-and-transform’. In the train-and-abandon model, the implementing agency has little further contact with groups once they have completed their basic training in SG methodology. In train-and-transform, the implementing agency encourages federations or other structural changes, or linkages that change the fundamental nature of the group.
workshops, and otherwise profit from donor assistance. The purpose of the additional training and visits could be described as helping groups move from competence to mastery.

Figure 2 below is intended only to be indicative of some of the possible steps in moving towards mastery. Of course, groups may not encounter all of these issues; they may also face them in a different order or may face other issues altogether.

**Figure 2: Potential steps in moving from competence to mastery**

<table>
<thead>
<tr>
<th>Competence</th>
<th>Mastery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic savings and credit procedures</td>
<td>Proportional distribution</td>
</tr>
<tr>
<td>Rotation of management</td>
<td>Individual investment strategies</td>
</tr>
<tr>
<td>Group income generating activities</td>
<td>Programmatic linkages with other activities</td>
</tr>
</tbody>
</table>

If one looks at group development in these terms, then additional visits and training by a skilled CBT may guide groups further in the direction of mastery.

Agencies that draw their groups together into clusters can often carry out these post-basic training visits at almost no cost, since groups at various levels of maturity participate in each cluster, making it easy for trainers to arrange a short visit to each SG. Even if all of the groups in a cluster have completed their basic training, a visit is a way to provide services to multiple groups efficiently.

### 3.2 Can social marketing help finance train-and-retain visits?

CREAM believes that the solar lamp marketing programme can help it retain some of its best CBTs upon the end of CARE funding (which occurred on May 31, 2010), as they transition to the village agent model. A desired outcome for the village agents is both to visit and maintain relations with existing groups as well as to form new ones.

CREAM formalised the transition from salaried employee to social marketer; it invited what it considered to be its best CBTs to apply to be village agents as acceptance was not automatic. CREAM believes that the fees from group formation and the margins on the solar lamps will generate sufficient income to enable the village agents to remain in the area and that it can bear the extra effort and costs of managing the solar lamp programme, since its share of the revenue from lamp sales will provide a positive benefit overall.

An examination of the hypothesis that it is possible to use the social marketing approach to finance train-and-retain activities should be kept separate from a further question of whether it is desirable to do so; this analysis will attempt to address questions both of possibility and desirability.

Moreover, the question arises as to whether the revenues from the social marketing of lamps will enable CREAM to finance its train-and-retain activities; according to rapid financial projections made on the basis of the best available information, the answer is affirmative, although the authors point out that the limited period of this field experiment at the time of the case study is far from confirming that conclusion.
As stated in section 2 above, the margin per lamp for the trainer on the most popular model of lamp is USh 5,000 (USD 2.27), and for CREAM it is USh 8,500 (USD 3.86). To replace his or her salary of USh 90,000 per month (USD 40), a CREAM trainer would have to sell only 18 lamps (11 with CREAM).

However, this analysis needs to be qualified. While being a village agent and working on commission is considered less desirable than being salaried - since most people prefer the security of salaried work - other factors may influence the village agent to want to remain with the programme, including:

- The lack of other employment options and the possibility that remaining affiliated with CREAM will give people priority if other paid work with CREAM becomes available in the future;
- Continuing to pursue other avenues of work, including agriculture and maintaining their own work hours;
- The prestige and networking advantages that come with being associated with a prominent organisation like CREAM; and
- Loyalty to the groups they have trained, as well as to their colleagues.

While it is impossible to quantify these factors, it is certain that the ability to sell lamps and augment their income might make staying on as a non-salaried village agent a lucrative arrangement for some former CBTs.

As a caveat, the reader should be aware of the limited applicability of this case to other social marketing efforts. As discussed above, solar lamps are distinguished from other products that could be promoted via social marketing because a) the product is highly and widely desirable with multiple benefits; b) lighting is already included in the household budget and is not as financially challenging as adding a new expense; and c) there is no real competition in the low-cost solar lamp sphere in CREAM’s working area. The result is that solar lamps are, for the present, easy to sell and quite profitable. It is accepted that the lucrative nature of this opportunity will not be permanent; as other firms move into this market selling similar products, competition will drive the margins down.

However, the fact that the current favourable conditions are not likely to continue indefinitely should not reflect too poorly on the sustainability of the operation. The African continent as a whole is going through rapid transformations as populations grow, the climate changes and new technologies arrive. To provide an applicable example, many MFIs that were thought to be sustainable are in danger of being displaced by new systems, including SGs and mobile banking; after all, ‘sustainable’ is not synonymous with ‘forever’. However, if CREAM can stay ahead of new trends, it may be able to use the village agents to market other new products and services should the margins on solar lamps become too low. The many advantages that CREAM has for reaching the rural market will exist for the foreseeable future. In fact, the market for solar lighting should be seen as one of providing solar solutions not only single lamps. Because the need for more lighting is palpable among people who have purchased their first lamp, the authors believe that as new products become available, demand will continue to be robust. In addition, as batteries and bulbs fail, there is likely to be a healthy market for service and replacement parts.
V. Lessons Learned

This case is based on early experiences with models that, in some cases, were not well implemented; as a result, little to no empirical evidence exists to say that one model is innately better or more enduring than another.

However, the diverse experiences discussed here lead to three conclusions that would apply to many different social marketing situations involving SGs: the importance of clarity and transparency, the potential viability of NGOs using their residual assets from donor projects to create business activities, and the nature of the product affecting the suitability of the marketing channel.

1. The importance of clarity and transparency

There is no substitute for clarity and transparency; without them, it is impossible to know what is working or is not working, making it difficult to manage a social marketing, or indeed, any enterprise. Some of the implementation described here, particularly the early Masaka experience, was notable for the absence of records and written agreements. The initial enthusiasm for bringing a good product to the SG members, and the apparently easy opportunity to make money for the CBTs should not lead to a rush to market. It is important to take the time to think through the implications of a social marketing enterprise, to make ensure that the interests of all the parties are protected and that agreements and contingencies are enshrined in clear written agreements. In the Masaka implementation, this was not done, with the result that the interests of the group members were compromised by the lack of service, the CBTs did not have sufficient incentives to continue to sell lamps, and UWESO put its reputation at risk. All of these costs could have been reduced or eliminated by clear written agreements before lamp sales began.

2. The potential viability of NGOs as social marketers

The legal form and the mission of the agency selling a product are less important than the ability of the institution to develop a sustainable business model, capitalise on its competitive advantages, understand the elements of the marketing chain, and execute its business model and market knowledge in an effective manner. In some cases, non-profit establishments with a social mission may be able to sell a product better and more sustainably than a for-profit firm. Although donor assistance ultimately creates the infrastructure that enables the model to go forward, it does not depend on continuing donor participation and in fact can help diversify funding sources. Of course, the market may evolve in unfavourable ways, lowering margins so that the model may no longer be viable; however, this will not happen overnight and an enterprise does not need to last forever to do well and be declared sustainable.

Donor funding often produces unexpected residual value after a project ends and there are legitimate questions about who should inherit this value. In recent cases, NGO MFIs have faced this question when they have transformed into for-profit regulated institutions and the value of the
donor supplied assets, usually loan funds, increases substantially when other investors come in. The cases of Compartamos in Mexico and SKS in India are prominent examples.15

The question of the value of the assets inherited by UWESO and CREAM is not as dramatic as the cases of transforming NGO MFIs, but some of the same principles come into play. While the NGOs did not inherit loan funds from their donors, they have other assets as a result of implementing donor projects: trained and loyal staff, knowledge resources, access to a network of SGs, good will, and bonds of confidence. While largely intangible, these assets are nonetheless valuable and a commercial interest would need to make large investments to begin to equal the staff, knowledge, network and confidence that both UWESO and CREAM have established in their areas. Both NGOs want to retain and capitalise on those assets.

In the first two models discussed here, microfranchising as in the case of JK at UWESO, and the NGO intermediary model using CBTs, as practiced by CREAM until 31 May, 2010, UWESO and CREAM can only capitalise on their assets as long as they have funding to keep CBTs in the field. These inherently short-term efforts might produce net value for SG members and for the NGO, but they will not continue to do so past the end of the grant.

The village agent model, however, drives sales through the use of private sector incentives for the supplier, the NGO and the village agents and it offers some promise of sustainability. Whether it is appropriate for NGOs with their fiscal advantages and social missions to compete in the private sector is a question that is beyond the scope of this study. That question of principle aside, the authors believe that in the case of the CREAM village agent model, the NGO has a chance of being successful from both a business and a social point of view.

3. Sustainability of the marketing channel as a result of the nature of the product

While CREAM’s village agent model might be viable for selling solar lamps in the West Nile region of Uganda, great caution should be taken in generalising from this case. As previously emphasised, it is impossible to disassociate the product from the marketing channel. Solar lamps have such clear and exceptional benefits over paraffin lanterns that it is likely that everyone will benefit from their sales even if the operation is not particularly efficient.

But different products at different times will have different outcomes and implications for the role SGs can play. Table 11 below gives an indication of the way in which characteristics of a product and the supply chain can affect the suitability of SGs as a marketing channel. It compares some of the observed characteristics of solar lamps to the assumed characteristics of mosquito netting, another product that is often the object of social marketing. While the authors stress that they have only a passing acquaintance with the social marketing of mosquito nets, the table highlights factors that should be carefully analysed before launching a social marketing campaign.

15 These two NGO MFIs launched initial public offerings that were hugely successful, turning contributors to the NGOs into millionaires. The following publications offer discussions on the experiences of these organisations: Rosenberg, Richard. Reflections on the Compartamos Initial Public Offering: A Case Study on Microfinance Interest Rates and Profits. CGAP, 2007.
### Table 11: A comparison of two products marketed through Savings Groups

<table>
<thead>
<tr>
<th>Desirability of the product and its perceived usefulness</th>
<th>Solar lamps</th>
<th>Mosquito nets</th>
<th>Implications for marketing to SGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Medium</td>
<td>The solar lamp is in strong demand, particularly by paraffin lamp users; the lamps more or less “sell themselves”. Mosquito nets are also desired by anyone who is regularly bitten by mosquitoes, but their role in preventing malaria, which is the principal motivation for selling them through social marketing channels, requires education and consciousness raising. Such awareness campaigns require financing; it could be built into the price of the nets but more often depends on donor support.</td>
<td></td>
</tr>
<tr>
<td>Affordability within existing household budget</td>
<td>High</td>
<td>Low</td>
<td>Many people who spend money on paraffin can afford to pay for a solar lamp if they can overcome the initial hurdle of the cost of acquisition. The mosquito net, on the other hand, is a new expense that may require people living near the poverty line to forego some other purchase.</td>
</tr>
<tr>
<td>Reliability</td>
<td>Uncertain</td>
<td>High</td>
<td>Mosquito nets almost always work as advertised while solar lamps have so far proved to have a non-negligible failure rate. Vendors must dedicate resources assuring customers that there are facilities in place for aftersales service.</td>
</tr>
<tr>
<td>Percentage of group members who constitute market</td>
<td>Nearly 100%</td>
<td>Nearly 100%</td>
<td>In both cases, almost all group members are potential customers. Any products that appealed to a smaller percentage of members are less appropriate for social marketing (e.g. agricultural inputs, condoms, etc.)</td>
</tr>
<tr>
<td>Portability</td>
<td>High</td>
<td>High</td>
<td>Both solar lamps and mosquito nets are lightweight and easy to transport, making them easy for CBTs to deliver by bicycle or public means. Heavier products such as books or farm inputs could pose logistical challenges.</td>
</tr>
<tr>
<td>Margin</td>
<td>Currently high</td>
<td>Probably low</td>
<td>The current high margin on solar lamps rewards any establishment with access to a large population, as the margin is large enough to keep a sales force motivated to travel long distances for product sales and delivery. The researchers assume that the margin on mosquito nets is much lower as they have been on the market for a long time and are not as immediately desirable or affordable. However, some mosquito nets may be available at wholesale for free or below cost, in which case the margin for the sellers could be much higher.</td>
</tr>
</tbody>
</table>
Supplier credit

<table>
<thead>
<tr>
<th>Supplier credit</th>
<th>Partial, inadequate</th>
<th>Unknown</th>
</tr>
</thead>
</table>

The constraint of supplier credit has limited the flow of goods to clients in Arua. Fortunately for CREAM, lamps are sufficiently desirable that people will pay for them in advance. The same might not be true for other products. Unless NGOs have reserves of capital, they will either need supplier credit, or will need to take pre-payments.

Complexity of product line

<table>
<thead>
<tr>
<th>Complexity of product line</th>
<th>Very simple</th>
<th>Very simple</th>
</tr>
</thead>
</table>

That both mosquito nets and solar lamps are simple products simplifies warehousing and inventory control, bookkeeping, training of sales personnel, and service. In most cases NGOs will do well to avoid the management responsibility of a complex product line.

4. Is the research hypothesis demonstrated?

This study was designed to test the proposition that SG implementers can make their existing networks of trainers and groups, and in some cases clusters of groups, available to commercial interests in order to bring socially useful products to rural markets with efficiency and cost advantages over other sales channels, without compromising the autonomy or performance of the SGs or those of the facilitating agency.

The authors believe that solar lamps are an exciting product and are the low-hanging fruit of social marketing, and a plausible case can be made that in the case of this particular product the research hypothesis is true: solar lamps can be marketed through SGs in a way that protects the groups, strengthens the implementing agencies, and helps rural people overcome the barrier of amassing a lump sum to purchase them to ultimately improve the quality of their day-to-day lives.
Appendix A: Case Study Methodology

The two lead researchers conducted interviews with senior staff of the three participating agencies: UWESO, CREAM and Barefoot Power. In both Masaka and West Nile, they interviewed Savings Group members primarily through focus group discussions, with the assistance of interpreters of the local language (although a few of the group members spoke English). The acting programme director of UWESO was able to accompany the team during the first day of the visit to West Nile, and the visit between the two programmes brought out contrasts in their approaches that might not have been immediately obvious otherwise.

<table>
<thead>
<tr>
<th>Interviews at UWESO</th>
<th>Acting programme director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masaka branch manager</td>
</tr>
<tr>
<td></td>
<td>Former lead CBT, BASE Microfranchisee</td>
</tr>
<tr>
<td></td>
<td>CBT, Kitanda sub-county, Masaka District</td>
</tr>
<tr>
<td></td>
<td>CBT</td>
</tr>
<tr>
<td></td>
<td>CBT, Masaka</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Focus Group interviews with Savings Groups</th>
<th>Binyonyi Cluster: 4 groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kyansi Cluster: 8 groups</td>
</tr>
<tr>
<td></td>
<td>Bakijululu-Kwagalena Cluster: 4 groups</td>
</tr>
<tr>
<td></td>
<td>Mukukulu Cluster: 4 groups</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Interviews at CREAM</th>
<th>Executive director</th>
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<tbody>
<tr>
<td></td>
<td>CBT, Yumbe District Town Council</td>
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<tr>
<td></td>
<td>CBT, Yumbe District/Town Council</td>
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<tr>
<td></td>
<td>CBT, Koboko Town Council</td>
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<td></td>
<td>CBT, Koboko</td>
</tr>
<tr>
<td></td>
<td>CBT, Arua town</td>
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<thead>
<tr>
<th>Savings Groups</th>
<th>Alyiodoza group A-B-C: Yumbe town, Yumbe District</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Tichita Women’s Group, Arua Town</td>
</tr>
<tr>
<td></td>
<td>Ayuli Group, Olumule Trading Center, Arua District</td>
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<tr>
<td></td>
<td>Alyofeni Group, Abuku sub-county, Koboko District</td>
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<thead>
<tr>
<th>Interviews at BASE Technologies</th>
<th>Marketing and sales manager</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Sales and operations manager</td>
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<thead>
<tr>
<th>Other Stakeholders</th>
<th>VSLA coordinator, CARE</th>
</tr>
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<tr>
<td></td>
<td>Association of Microfinance Institutions of Uganda</td>
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</tbody>
</table>
Appendix B: Lamp Reliability as seen in the Kyansi Cluster

In one village, the researchers interviewed 29 members of Kyansi Cluster, a cluster of eight SGs. The sample interviewed was chosen by an unusual randomising procedure: as the researchers were talking to all eight groups at once, a sudden rain storm caused the members to run for shelter and the researchers found themselves with about a quarter of the cluster members in a large room, where they had the time to interview the members of that sample one by one, while waiting for the rain to stop. The cluster members purchased lamps in late 2008, during the period when the models being sold by BASE Technologies are reported to have had a shorter lifespan than the models sold before or since. The researchers asked each member whether they had purchased a lamp, and if so, whether it was still working, and if not, when it had failed. One member had purchased 2 lamps; so in total, out of 30 people present, 24 had purchased 25 lamps. Of the 25 lamps, 17 had failed, and 8 were still working.

The results were informative: the lamps in question demonstrated an *average* lifespan not far from the promised 18 months, although since some of the lamps were still working, it was impossible to know what the average lifespan would be once they had all failed. However, variations in the lifespan of the lamps meant that some purchasers were getting excellent value for their lamps, while others were getting much less value; ten of the lamps had not lasted a year.

It should be stressed that a certain number of manufacturing errors are to be expected in a new product designed for affordability and manufactured in large quantities in China. Moreover, this small sample should not be thought of as necessarily representative of the experience of those who have purchased solar lamps, for at least three reasons:

- The sample discussed here was one using an older model lamp that has since improved;
- The causes of the failures are unknown and it is highly likely that in some cases the failures were due to misuse or damage to the lamps;
- The sample was small and the impromptu selection procedure – the rainstorm – may not have been randomising to the degree required.
Bibliography


