AGA KHAN FOUNDATION

Beyond Financial Services

Combining Savings Groups with Agricultural Marketing in Tanzania

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Cover photograph courtesy of William Creighton

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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

Preliminary findings of the Catholic Relief Services (CRS) programme in Tanzania suggest that by federating Savings Groups into collective marketing structures, the capacity of their members to engage in joint marketing is enhanced. The federated market structure leverages the trust and confidence, created among group members through regular financial transactions, to build a more solid platform for joint marketing structures.

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List of Acronyms

AKF	Aga Khan Foundation
CRP	Community Resource Person
CRS	Catholic Relief Services
MRHP	Mwanza Rural Housing Programme
NGO	Non-governmental Organisation
OVC	Orphans and Vulnerable Children
PLWHA	People Living with HIV/AIDS
PMG	Producer Marketing Group
ROSCA	Rotating Savings and Credit Association
SACCO	Savings and Credit Cooperative
SIGA	SILC Groups Association
SILC	Savings and Internal Lending Communities
TSH	Tanzanian shilling
USD	United States dollar
VSLA	Village Savings and Loan Association

Executive Summary

Between 2000 and 2008, Catholic Relief Services (CRS) partnered with local organisations to improve production of chickpeas, pigeon peas, groundnuts and sweet potato in Mwanza region, Tanzania. To upgrade these food crops to cash crop status, CRS used a suite of complementary interventions, including new seed varieties, seed multiplication, integrated pest management, and improved agricultural marketing techniques. From the outset, CRS anticipated the formation of farmer organisations to manage both input supply and crop marketing on a commercial basis. Although not part of the original project design, CRS introduced Savings and Internal Lending Communities (or SILC) in 2006 to strengthen these farmer organisations. SILCs spread quickly in Tanzania, not only within the chickpea project where they were initially introduced, but in other CRS projects in health, home-based care and AIDS relief. Against the backdrop of this positive response to Savings Groups, CRS and a local partner - the Mwanza Rural Housing Programme - experimented with using the SILC model as a platform for joint crop marketing.

Another pilot project of CRS involves the development of a SILC Group Association (SIGA), which is a federation of at least four SILCs based within a single community. It primarily functions as a marketing cooperative that negotiates with buyers for the sale of crops produced by SILC members and others. In order to inform price negotiations, the SIGA estimates production levels and calculates the year's average cost of production; prior to the sale, the crop is then cleaned, packed and stored. Buyers then agree to provide cash advances to the SIGA, which is used to purchase crops from farmers, store it and then pay commissions based on volumes sold. In addition to collective marketing, SIGAs offer seed multiplication, input loans, and insurance for their member SILCs.

The addition of the SIGA has created new incentives for farmers to join a SILC, including better access to inputs, crop cleaning services, higher prices for crops, and commission income. The SIGA also introduced a weight-based measure that replaced the traditional volume-based system and contributed to increased revenue for farmers.

The relationship is also beneficial for the SIGA; by offering access to financial services, SILCs easily attract participation. Through their engagement in on-going financial transactions, most SILCs develop strong trust and confidence between members; this social capital provides a very effective base for establishing a collective marketing structure by hastening the group formation process and increasing the willingness of members to work together. In addition, SILCs

- Can guarantee the crop volumes needed to negotiate with purchasers;
- Lower the transaction costs of purchasing from dozens of small-scale farmers;
- Facilitate the participation of marginalized farmers, who frequently lack the financial or social capital to engage in agricultural marketing initiatives; and
- Provide access to loans that enable members to avoid pre-selling their harvests to local agents at low prices, waiting instead for the better prices offered by the SIGA.

Although the integration of the SILC and SIGA make the benefits of collective marketing possible for a diverse range of farmers, the SIGA faces significant sustainability challenges surrounding transparency, capacity and scale. SIGAs have a less robust financial management and oversight system than do the SILCs and are therefore at a greater risk of fraud. Capacity issues include

concerns of the ability of leaders to maintain accurate records, negotiate with buyers without external support, and to respond appropriately to volatile agricultural prices. Finally, SIGAs may be too large to be run transparently and too small to implement management tools such as staff development and adequate accounting controls.

Nevertheless, this case offers important insights about how to use Savings Groups as a platform for other services. First and foremost, Savings Groups need to be operating robustly before other activities are added; ultimately, if SILCs fail, so do the SIGAs. In addition, several contextual features facilitated the implementation of the SILC-SIGA model:

- A purpose or widely shared need that attracts a majority of members;
- The purpose of the additional function or institution is limited in scope (and therefore achievable);
- Homogeneous membership facilitates SIGA formation and function; and
- The existence of a market structure and purchasers willing to buy through cooperatives.

The SILC-SIGA initiative is still nascent; however, preliminary evidence does indicate the SILC-SIGA pilot yielded valued benefits for farmers and offered important lessons on how to add value to Savings Groups. SIGAs have succeeded where previous attempts to organize collective marketing were largely unsuccessful; they have addressed the diverse challenges of access to finance, poor quality seeds and a fragmented crop marketing chain that has traditionally been characterized by mistrust and, at times, exploitation. This new model reduces transaction costs and increases efficiencies, thereby creating a win-win scenario for producers and buyers alike. Farmers are voting for this system with their pocketbooks; that is, paying fees to the agents who have supported the establishment and operation of SILCs and SIGAs, thereby ensuring the continued existence of this system well after donor funding has ceased.

I. Introduction and Context

This case study reviews an agricultural production project implemented by Catholic Relief Services (CRS) in Mwanza region of northern Tanzania. Mwanza is comprised of eight districts across which the vast majority of the population is involved in farming. The project is active in two of the districts: Misungwi and Kwimba. It has supported farmers in their efforts to increase chickpea production and organized them to create their own access to financial services via Savings Groups and to market their produce collectively. CRS refers to its version of Savings Groups as Savings and Internal Lending Communities (SILC); the SILC model spread quickly in Tanzania, not only within the chickpea project where it was initially introduced, but in other CRS projects in health, home-based care and AIDS relief. Against the backdrop of this positive response to Savings Groups, CRS and its local partners experimented with using the SILC as a platform for joint crop marketing.

The research proposition of this case study is that Savings Groups enhance the capacity of their members to engage in joint marketing, thereby improving their access to agricultural markets and increasing the income they earn from their crops. This proposition is based on the hypothesis that regular financial transactions among savings group members build the social capital, relationships and institutional framework that enables effective joint marketing.

1. Country context

After nearly five decades of independence Tanzania remains one of the 10 poorest countries in the world. The per capita gross national income of USD 400 is far less than the Sub-Saharan Africa average of USD 952 (World Bank, 2009). The UNDP's Human Development Index ranked Tanzania 151 out of 182 countries in 2009 (UNDP, 2009). The rural to urban population distribution is approximately 70/30, with 46 percent under the age of 15. Although Tanzania experienced relatively rapid growth in per capita GDP over the past decade, the positive impact on poverty has been concentrated in urban areas and half of the country's population still remains below the poverty line. Tanzania remains highly dependent on aid, with over 40 percent of its national budget funded by donors (Triodos Facet, 2007).

1.1 Agriculture

The Tanzanian economy depends heavily on agriculture, which accounts for more than 40 percent of GDP, provides 85 percent of exports, and employs 80 percent of the work force (CIA, 2009). Seventy percent of farmers in Tanzania cultivate less than one hectare of land (Uliwa and Fischer, 2004). The main subsistence crops, accounting for 55 percent of total agricultural output, are maize, sorghum, millet, cassava, rice, plantains, wheat and pulses (Triodos Facet, 2007). The 30 percent of farmers who cultivate larger areas produce the majority of Tanzania's cash crops: coffee, cashews, cotton, tobacco and tea. Yields for most crops are only 20 percent to 40 percent of their potential, leaving many families barely able to produce enough for personal consumption. Even when farmers are able to overcome their main constraints to increasing production - lack of inputs, improved seed and animal traction - they tend to sell their crops individually and receive low prices from itinerant traders (Uliwa and Fischer, 2004).

Historically, producer organisations were a commonly-used strategy to address the economic challenges faced by Tanzanian farmers. Under the *Ujamaa*[1] movement that was initiated in the 1970s, a range of state-managed producer organisations were formed: village level primary societies[2], second tier cooperative unions, national crop marketing boards for export crops and parastatal processing industries for domestic products. As part of the movement, rural people were forced to relocate to newly created village settlements. Intensely unpopular, this enforced resettlement caused farmers to lose crops, to live on land of poorer quality and to spend more time walking to their fields (Sundet, 2006). The government built storage facilities for each village-level primary society, which nearly all villagers were then required to join.

The negative legacies of this period – mismanagement, fraud, non-payment, poor crop prices, and other inefficiencies – have created suspicion of collective marketing among many farmers and resulted in frustrated efforts to develop viable farmer cooperatives. Consequently, many farmers face serious problems identifying what to grow, accessing inputs, obtaining extension advice and marketing their crops. Moreover, the small farm sizes and production volumes of most farmers have impeded the development of an efficient crop marketing system. Most agribusinesses in Tanzania do not develop relationships with small-scale farmers; trading companies purchase crops year after year in the same areas, but do not provide inputs, technical assistance, or any form of financing.

In response to the plight of small farmers, the government of Tanzania shifted its emphasis from state to farmer control, and renewed support for rural finance through savings and credit cooperatives, or SACCOs. Today Tanzania is home to an estimated 6,200 producer organisations, but most lack access to adequate capital and management to effectively serve their members and improve economies of scale (Uliwa and Fischer, 2004).

1.2 Access to Finance

Farmers' attempts to upgrade both production and marketing require access to financial services, a scarce resource in rural areas. The FinScope national survey on access to finance commissioned in 2006 by the Financial Services Deepening Trust highlights the severity of the situation:

- Fifty-four percent of the overall adult population – 45 percent of urban, 57 percent of rural - has *no access at all* to financial services, either formal or informal;
- Thirty-five percent had access to informal providers only, such as Rotating Savings and Credit Associations (ROSCAs), village community banks or local money lenders;
- Nine percent have a formal bank account (eleven percent men, five percent women, sixteen percent urban, four percent rural);
- Only 20 percent of the population has access to a formal bank within an hour's walking distance; and
- Most people do not save money with a financial institution. Among savers, four out of ten favour saving in-kind (even more so in rural areas) and three out of ten say they keep money in a secret hiding place (FinScope, 2006).

[1] *Familyhood* in Swahili
[2] The Tanzanian term for village-based co-operatives

Tanzania does not benefit from a vibrant microfinance industry; only a handful of commercial banks and MFIs reach 'down market' to micro entrepreneurs. On the other hand, the country's long history with cooperatives has spawned a significant number of SACCOs that serve rural areas where few MFIs will venture. Finally, a relatively new wave of informal savings and credit groups is emerging with support from wide ranging international and local non-governmental organisations (NGOs).

1.3 Savings and Credit Co-operatives (SACCOs)

Despite a tainted cooperative history that has been characterized by mismanagement, poor governance and often collapse, all at the expense of poor (rural) producers, SACCOs are still the main providers of financial services in rural areas. The government has come out strongly in support of their revival.

In December 2006, over 3,500 SACCOs were registered with the Ministry of Cooperatives and Marketing, with approximately 420,000 members (of which roughly 60 percent are rural). Yet, in the majority of rural-based SACCOS, a small membership base results in correspondingly small savings balances and loan portfolios. The sustainability of such stand-alone rural SACCOs is questionable, due to sparse populations, limitations in infrastructure (roads, power, and communication), and a subsistence economy where business opportunities are limited by seasonality and high risk tied to the lack of crop diversification.

1.4 Community-based Savings Groups

Since 2001, there has been an increase in the number of informal savings-led groups of 15 to 30 people who save on regular basis and lend their pooled savings among themselves. These groups include:

- Village Savings and Loan Associations (VSLAs), first introduced by CARE in 2001;
- Savings and Internal Lending Communities (SILC), now a common feature of CRS projects in Mwanza region;
- Village Community Bank, a savings and credit model imported from rural Bangladesh that includes a 4-month business training and planning component (Orgut Consulting);
- Community Conservation Banks supported by World Wildlife Fund and the Wildlife Conservation Society Tanzania; and
- Financial Services Associations supported by Plan International.

Together these programmes serve an estimated 135,000 people across Tanzania (Savings Groups Information Exchange).

2. A history of CRS and the SILC/SIGA project

2.1 CRS in Mwanza region

Operating in Tanzania since 1962, CRS has focused its operations in the northern regions of Mwanza and Mara. Today, it operates in multiple sectors including health, agro-enterprise, microfinance and peace-building. Of its three offices, Mwanza is by far the largest, home to 50 staff members who oversee 70 percent of CRS projects in Tanzania.

CRS implements all of its projects through local church and NGO partners. Together, they pursue an integrated approach that combines targeted support to specific crops (e.g. chickpeas and cassava), health services with nutritional support and, increasingly, access to finance. In most of its projects, CRS has introduced the SILC model to assist its target groups – farmers, people living with HIV/AIDS (PLWHAs), orphans and vulnerable children (OVC), and their caregivers – to save and build a capital base for lending among themselves. Box 1 provides an example of how the SILC model is combined with other development services.

Box 1: Integrating SILCs with other services

CRS and its local partner, Kimkumaka, are implementing an integrated project known as the Poverty Alleviation Programme in 10 villages. The objective of this initiative is to improve income and nutrition through three interventions: the promotion of nutritional crops, nutrition education and savings and credit services through SILCs. In fact, SILC groups are the entry point for the project's other activities: seed distribution, crop production, a poultry pass-on scheme and food preparation that maximises the nutritional value of new crops.

2.2 Chickpea Promotion Project

Between 2000 and 2008, CRS partnered with the Diocese of Shinyanga, the Mwanza Rural Housing Programme, TechnoServe and others to improve production of chickpeas, pigeon peas, groundnuts and sweet potatoes in the Lake Zone of Tanzania. Their goal was to upgrade these 'small' food crops to cash crop status, thereby improving food security and increasing incomes. Of these commodities, chickpeas held the most potential and received the most attention; the amount of land devoted to chickpeas in Mwanza region has risen rapidly since 1995, driven primarily by increasing demand from the Indian subcontinent. Moreover, the chickpea subsector is dominated by a small group of agricultural processing and exporting companies, who control trade links to external markets.

Under the Chickpea Promotion Project, CRS identified several production and market-related opportunities to improve the operation of the subsector in favour of smallholder farmers. It used a suite of complementary interventions, including the introduction of new varieties, training on seed multiplication and integrated pest management, and improved marketing strategies. From November 2005 to April 2009, CRS's main partner in this effort was the Mwanza Rural Housing Programme (MRHP), a local NGO that has invested nearly two decades in promoting low-cost housing, agriculture, health and environmental protection in Mwanza region.

Photo credits: CRS staff

Although not part of the original project design, CRS introduced SILCs in 2006 in an effort to strengthen the farmer organisations that were a key component of the marketing strategy. In 2004, with help from TechnoServe, CRS formed Producer Marketing Groups (PMG) comprised of grain farmers who sought better deals with traders for their chickpea, 'green gram' (mung bean), and pigeon pea crops. However, the PMGs remained weak with only 20 percent of members' total sales going through the group (Best et al., 2008). A lack of cohesion and trust prevented them from achieving their goal to market collectively. Facilitating SILC groups with the farmers served to both improve their access to finance and build stronger groups for marketing purposes.

From April to December in 2006, CRS and MRHP organised 100 SILCs; this task was facilitated by the long history, strong connections and network of village animators that MRHP enjoys with the target communities. Farmers readily embraced the model, recognising its advantages over the traditional *ifgong'o* or ROSCA for gaining access to lump sums of money. The adoption of the SILC model spread quickly and by the end of 2006, CRS began to link SILCs together for the purpose of marketing, creating SILC Groups Associations, or SIGAs. SILC and SIGA promotion came to dominate the project activities.[3]

The relative strength of the SIGA model (compared to its PMG predecessor) is explained by its foundation of member SILCs. Coming together as community members first to save and then lend to each other, SILCs build the trust and cohesion that was missing from the original PMGs. This innovative integration of Savings Groups with collective marketing is the subject of this case study. It explores in detail how the integration was achieved, how SILCs and SIGAs function together, their impact, and potential for sustainability and replication.

[3] Both the SILC and the SIGA have roots in earlier work in the region by CARE, which experimented with linking VSLAs and Integrated Marketing Associations. When former CARE employees moved to CRS in 2006, they brought this experience with them.

2.3 SILC/SIGA project organisation

The core SILC team was small, comprised of a CRS Programme Officer and the MRHP Agricultural Coordinator who jointly trained and supervised 36 community resource persons (CRPs) to organize and support SILC and SIGA activities. In addition to working alongside MRHP in the field, the CRS Programme Officer was responsible for the technical management of the project including budgeting, training, monitoring and reporting. For training, she received additional support from local consultants and CRS staff in Dar es Salaam. This small team was overseen by CRS's Agriculture Programme Manager.

Key to the success of SILC groups (and later, SIGAs) are the CRPs who function as field agents, actively mobilizing, forming and advising SILCs and SIGAs. CRPs are local residents who are elected by SILC members on the basis of their literacy and numeracy skills, independence, and commitment. CRPs organize and train new SILCs in their own and neighbouring villages. Originally linked to the SILC, CRPs were subsequently embedded within the SIGA management structure once the latter was formed. By the time project funding ended in February 2009, MRHP and CRS had trained 36 CRPs who between them advised 190 SILCs with a total membership of 5,020.

Active within five different projects and supported by four donors (USAID, Cordaid, the Ryan Foundation and CRS private funds), CRS invested a total of USD 706,000 in chickpea production and marketing from 2000 to 2008. The promotion of SILCs and SIGAs was supported primarily by the Ryan Foundation which granted a total of USD 304,000 to CRS from October 2005 to February 2009.

3. SILC Methodology

Since 2006, CRS has introduced SILCs in 23 countries across Africa. Although it follows the basic methodology for Savings Groups in most of its projects, SILCs in Tanzania have been governed by a few different policies. As some of CRS's first Savings Groups, they were influenced by the former CARE staff who introduced them. The most significant difference is the status of the CRPs, or field agents: in Tanzania during the Chickpea Promotion Project, CRPs worked as volunteers. However, where CRS has introduced its SILC Innovation Project (see Box 2), including Tanzania, the equivalent field agent undergoes a rigorous yearlong process of selection, training, and examination.[4] Those who are successful are certified as Private Service Providers.

Another characteristic that distinguishes the CRPs of the 'first generation' SILCs in Tanzania is that the integrated services approach found CRPs shouldering responsibilities in multiple programme areas, including SIGA formation. These CRPs were likely drawn from a cadre of trained volunteers who had worked with MRHP on numerous other projects in health, housing and agriculture.

Although recruited and trained as volunteers, CRPs now report that the SILCs pay them a fee – TSH 3,000 to 5,000 (USD 2.30 to 3.85) for each meeting they attend (unless they are a member of the

[4] During this yearlong process, applicants receive a stipend. Under the new SILC Innovation programme, field agents in Uganda (equivalent to CRPs) receive a stipend of TSH 50,000 (USD 24) per month while mobilizing SILCs for the first two months on the job. At the end of this period, each FA must have formed at least five SILCs. They subsequently receive TSH 10,000 (USD 4.75) per month per SILC until they are eventually certified as Private Service Providers and begin charging fees to the SILC.

SILC). Supporting this finding, a project evaluation in 2008 reported that SILC members unanimously agreed that the CRPs should not be paid by external institutions, as they would lose the motivation to continue once project funds ceased. In addition, CRPs confirm that it would indeed be possible to earn a living as a service provider (Best et al, 2008). This experience, emerging within the context of the 'first generation' SILC, supports the goals of the newer SILC Innovation Project to build sustainable fee-for-service training for Savings Groups that can survive after project funding is terminated.

Despite these developments, SILC replication is not closely tracked by CRS. CRPs report that little 'spontaneous' replication occurs without their involvement to train and support new groups – that is, to their knowledge, SILC members are not helping to form new SILCs on their own. MRHP reports categorize SILC as funded (by CRS and MRHP) and unfunded (formed by CRPs); 61 percent fall in the latter category.

Box 2: The SILC Innovation Project

In September 2008, CRS initiated a new SILC Innovations project in Kenya, Tanzania and Uganda. Funded by a USD 8 million grant from the Bill and Melinda Gates Foundation, this three-year project is forming more than 14,000 additional savings and lending groups comprised of almost 300,000 members. The SILC Innovations project is also developing a commercially sustainable replication model based on the training and certification of local field agents as Private Service Providers who will charge fees to the groups for their services. Under this project, CRS will work with 15 local partners to help rural communities in six target regions in the three countries where the programme is currently underway. Ultimately, this model will enable SILC to function on a commercially sustainable basis in over 23 countries across Africa.

II. SILCs as a Platform for Agricultural Marketing

A SILC Group Association, or SIGA, is a federation of at least four SILCs based within a single community. The SIGA primarily functions as a marketing cooperative that negotiates with buyers to purchase the crops produced by SILC members and other producers. In addition to collective marketing, these federations offer agricultural input services, insurance and access to capital for their member SILCs. SIGAs are typically not registered, though they are guided by a constitution that is developed by the members at the time of formation.

In contrast to the SILC model, which CRS has applied throughout many of its projects, the SIGA is a single pilot experience from which CRS is still learning. CRS's overall agriculture unit views collective marketing as an effective method for expanding the market frontier for farmers and often integrates these structures into its programming.

1. Key SIGA Functions and Services

The SIGA offers three major services to its member SILCs: collective marketing, seed multiplication, loan funds and loan insurance.

1.1 Collective marketing

Collective marketing is the most important service offered by the SIGA. Once they become members, SILCs are expected to sell their crops to the SIGA.[5] SIGAs also purchase crops from farmers who do not belong to a SILC, so that they can increase their volumes and access higher commissions from buyers. The activities involved in collective marketing include: estimating production levels, calculating the year's average cost of production to aid price negotiations, raising the money required for collective marketing operations, cleaning the crop prior to sale, packing and storage, cash handling, and negotiating advance purchase contracts with one or more buyers. The primary crops marketed by SIGAs to date include chickpeas, mung beans, and small quantities of pigeon peas.

Immediately prior to the start of the growing season, SIGA officials conduct negotiations on behalf of their member SILCs at stakeholder forums involving buyers. While the price on offer varies according to market conditions and is therefore not specified in the contract, purchasing firms are asked to agree to pay at least the minimum production cost. SIGA representatives also present their non-price terms, including their policy for advances, weighing, and the commission structure.

When the contract has been signed, the purchasing firm pays an advance to the SIGA which is based on a percentage of the estimated volume that it will collect at an agreed upon price (usually the current market price). Once this advance is made, the SIGA assumes the risk of conditions that may cause the price of the crop to fluctuate. The SIGA then purchases, cleans, bags and stores crop from members and non-members until it exhausts the advance and additional funds are required. When the crop begins to accumulate in the storage facility, the purchasing firm sends its own vehicles to

[5] The one permitted exception is for entrepreneurs adding value to the crops, such as small-scale chickpea dehulling aimed at the local market.

the SIGA's warehouse for collection. At the end of the marketing season, it pays the SIGA a commission based on the total tonnage of the crop that the SIGA has sold, less any paid advances. To incentivise the sale of greater volumes that will lower its logistical costs of crop collection, the purchasing firm increases the commission as the SIGA surpasses certain weight milestones (30, 50 and 100 tonnes) from a base rate of TSH 12 per kilogram to as much as TSH 20 across all commodities.

The annual costs for collective marketing operations are between USD 200 and USD 400, including storage rental costs, monthly salaries for a guard and one or two people who weigh and store the crop and record the purchases, a per-kilo agricultural tax to the government, and equipment for cleaning or weighing.

1.2 Seed multiplication

The SIGA seed multiplication service was initiated when CRS and MRHP provided SIGAs with a one-time grant of free foundation seed to improve the quality of the crops they planned to market. SIGAs then loan seed to their member SILCs; at the end of the harvest, the SILCs repay two to three times the quantity of seed borrowed. The amount which remains in the group is then available for the group to use to plant or sell to others. SILC extensionists who sit on the Agricultural Technology and Input Committee[6] select local seed multiplication groups within each village based on available land and farming skills.

1.3 Lending and loan insurance

After covering operating costs for joint marketing activities, the SIGAs lend accumulated funds to member SILCs who submit loan applications at the SIGA general meeting. Money is lent at a monthly interest rate of 10 percent for on-lending to individual members. Upon repayment, the borrowing SILC retains half of the interest income and remits the remainder to the SIGA. Loan terms are usually three months in duration, with interest payments due monthly. Any surplus funds may be lent to other groups that do not belong to the SIGA, at a monthly interest rate of 20 percent.

SIGAs also provide loan insurance to member SILCs to cover any losses as a result the death or major loss of a SILC borrower. The fund covers the outstanding loan balance of the member, after any accumulated savings have been applied against the debt. While the insurance fund was originally established to cover accidents that impact multiple members of a SILC and cannot be covered by its savings, it is rarely used.

2. Revenue sources and fund management

Each SIGA has up to four sources of revenue:

- Mandatory contributions made by member SILCs to capitalize the input, insurance and education funds, either as lump sum payments to the SIGA upon entry, or as monthly dues;
- Interest earned on funds lent out to individual SILCs;

[6] One of four decision-making committees within the SIGA management structure.

- Fines and fees: as in SILCs, latecomers to meetings or visiting study groups are required to contribute money to the SIGA to capitalize the education fund; and
- Commissions paid at the end of the marketing season by buyers, which ranged between two and five percent of the total price for chickpeas in 2008, depending on the volume of crop sold by each SIGA.

Nearly all SIGAs manage four funds: an input, education, operational and insurance fund. The input fund is intended to facilitate the joint purchase of inputs – such as fertiliser or pesticide - by SILC members during the planting season when availability of cash is relatively low. The education fund is typically used to pay school fees; while officially optional, it exists in almost every SIGA.

Box 3: The origins of the education fund[7]

The education fund originated as an innovation of groups working with CARE International in Magu District of north-western Tanzania. A man had bribed both the headmaster and the father of a girl in primary school to permit him to remove her from school and take her as a wife. A VSLA group and the girl's mother opposed this and demanded that the man return the girl to her family and pay for her secondary education. When the man informed them that he could not pay the cost of her schooling, the group decided to create a separate fund that would provide them with the capital to do so.

All reserves except for the operational fund are lent to member SILCs when they are not being utilised. Although the export firms will advance money to SIGAs for the purchase of crops from farmers, the operating fund ensures that the SIGA can pay for other marketing-related costs without misallocating the money intended for crop purchases. Although the diversity of SIGA funds suggests complexity, this is deceptive as the amounts in each fund are relatively small. Analysis of SIGA financial data conducted in August 2008 indicates that across 16 SIGAs, the average size of the input fund is USD 96, the education fund USD 98, and the insurance fund USD 118 (Stoas and CRS, unpublished). Table 1 below presents an overview of the four funds.

Table 1: Overview of SIGA fund categories

	Operational	Insurance	Input	Education
Purpose	Funds expenses of collective marketing (e.g. storage, salaries).	Covers the net outstanding loan balance of a SILC member upon death or major accident. Unused funds are lent out for other purposes at the terms listed below.	Facilitates purchase of agricultural inputs such as fertiliser or pesticide.	Pays individual school fees or group educational expenses.
Perceived benefit	Funds collective	Diversifies risk by	Assists farmers in	Provides money for

[7] Daniel Lasier, personal communication, June 2009.

	marketing expenses and prevents the usage of trader advances for uses other than crop purchases	sharing the insurance fund across the larger group	purchasing inputs that increase yields and marketing volumes	group learning or individual educational expenses (e.g. school fees) on more accessible terms
Term	Length of marketing season (3-6 months)	3 months	3 months	6 months
Monthly interest rate	N/A	10%	10%	6%
Role of fund in SIGA model	Obligatory	Obligatory	Obligatory	Optional
Period of use	Seasonal	Year-round	Seasonal	Year-round
Frequency of use	Regular	Rare	Regular	Regular
Source of funds	Contributions, Commissions	Contributions, Interest	Contributions, Commissions, Interest	Contributions, Fine and Fees, Interest
Obligation to contribute	Varies (mandatory or optional)	Mandatory	Mandatory	Mandatory
SILC contribution	Variable, depending on estimated expenses	TSH 500-1000 per month, or a one-time contribution of up to TSH 15,000	TSH 500-1000 per month, or a one-time contribution of up to TSH 15,000	TSH 500-1000 per month, or a one-time contribution of up to TSH 15,000
Periodic distribution to members	Common; typically follows end of harvest season once commission n received	Rare; a few SIGAs share-out all funds each year but in most cases they are retained by the SIGA	Rare; a few SIGAs share-out all funds each year but they are usually retained by the SIGA	Rare; a few SIGAs share-out all funds each year but they are usually retained by the SIGA

1.4 Security and cash management

Though SIGAs tend have limited capital - in many cases less than their SILC member groups - they uniformly strive to on-lend all of their funds to generate a return and to reduce the risk of theft. At present, due to long distances from bank branches and the lack of formal registration, very few SIGAs maintain a bank account. However, many SIGA leaders intend to open accounts once they are officially registered with the government.

1.5 Recordkeeping

Each SIGA secretary is required to maintain two sets of records: the first set relates to collective marketing, tracking contributions to the operating fund, crop marketing and selling, farmers' production costs, and production forecasting. The second set monitors the overall financial status of the SIGA through a general ledger and a loan fund balance and history. However, in many cases these records are not adequately maintained.

Photo credits: CRS staff

3. SILC and SIGA management structures

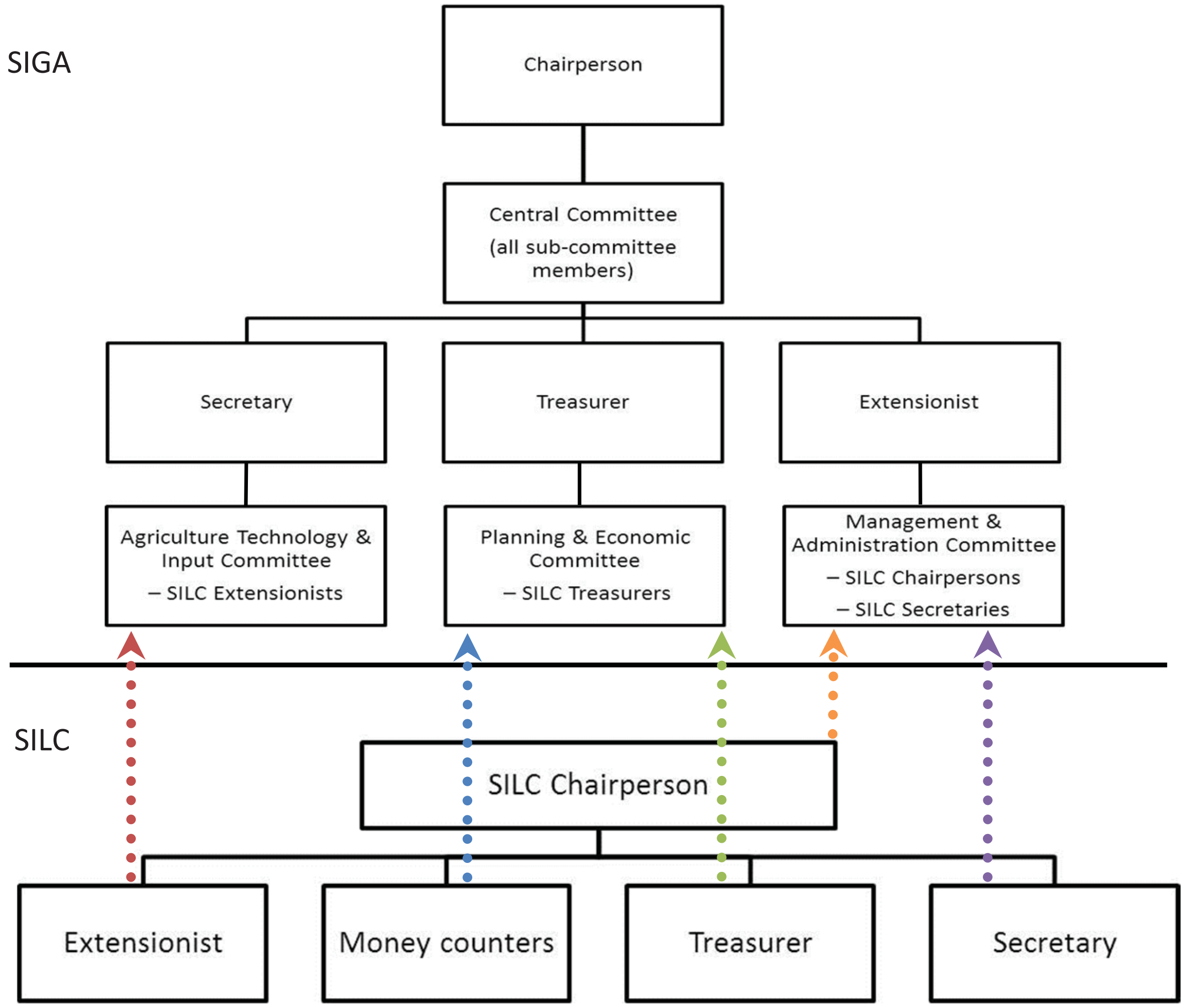
Given a SIGA's multiple priorities, its management structure is critical to ensuring effective operation. Since the SIGA is a federation of SILCs and it is important to seamlessly integrate a SILC into the SIGA structure, the logical conclusion is that the SIGA's management team consist of the same positions as a SILC: a chairperson, treasurer, secretary, and extensionist. The volunteer SIGA leaders are selected from among the SILC leaders holding the same position (i.e. the SIGA secretary is chosen from the existing pool of SILC secretaries). Many of the responsibilities of leaders at the SIGA level resemble those at a SILC: the chairperson calls and chairs the general meetings, the treasurer safeguards outstanding cash, the secretary records all financial transactions, and the agricultural extensionist oversees the seed multiplication and production forecasting activities.

Unlike SILCs, however, SIGAs have committees that are the core of the SIGA structure with authority for decision making:

- The Leadership and Administration Committee, comprised of the secretaries and chairpersons of all member SILCs and the SIGA, acts as a general management group charged with ensuring the effective functioning of the SIGA and its constituent SILCs;
- The Agricultural Technology and Input Committee, comprised of the SIGA and SILC agricultural extensionists, collects planting data, reviews seed multiplication activities and identifies new crops to be collectively marketed;
- The Planning and Economic Committee, comprised of SILC and SIGA treasurers, monitors contributions from members, manages marketing and collective selling, and reviews the SIGA financial ledger; and
- A fourth committee, the Central Committee, was not part of the original model but has been developed by many of the SIGAs as a way to prepare reports for presentation to all SIGA members during regular meetings. This committee has no decision making power.

Figure 1 depicts the management structure of the SIGA, including its committees and its linkages with member SILCs.

Figure 1: SIGA management structure and linkages to SILCs[8]



The SIGA general meeting is the forum in which decisions on the usage of funds are made. The regularity of SIGA meetings varies widely, with some meeting only four times per year and other groups meeting several times per month. Any flow of information from the SIGA to a SILC occurs through the SILC leadership team that sits on the SIGA committees.

All SIGAs are now expected to have one male and one female CRP who provide support to both the SIGA and its constituent SILCs. While the two CRPs in each village are linked to the SIGA, they are not usually part of the management structure. The Chairperson, Treasurer and Secretary are re-elected periodically, whereas CRPs change only due to departure or poor performance, given the technical nature of their positions and the training that they require.

The same is true for the agricultural extensionist, which is another unpaid, elected position at both the SILC and SIGA levels. The extensionists are important to the success of the SIGA's agricultural functions; key functions including managing village demonstration plots for the crops promoted by

[8] Adapted from Stoas and CRS, unpublished.

the project, overseeing seed multiplication and sales, estimating quantities and costs of production, and acting as a liaison to the government agricultural extension agent. Moreover, this person is typically involved with the SIGA to purchase inputs and perform quality control at marketing stations after the harvest. In many cases, extensionists have received prior training in agricultural technologies and techniques from MRHP or other agencies that provide periodic refresher trainings.

4. Functional coordination

The coordination of the SILC and SIGA components has been a relatively simple task, aided by the fact that both were implemented by the same staff from the same two organisations, using the same logistics and field personnel. Coordination of the two entities is also facilitated by the significant overlap in membership; given the demographic characteristics of the region, both tend to attract farmers engaged in cash crop production. While some SILCs also attract non-farmers (e.g. teachers and traders), those groups dominated by non-farmers (such as those located in urban areas) typically decline SIGA membership. Participation by SILC members in the SIGA is determined by the collective decision of the SILC to join or remain an independent entity. The extent to which SILC members are sharing in the costs of activities which they do not benefit from, particularly collective marketing activities, varies among groups. Groups surveyed considered practically all of their members to be farmers, and thus beneficiaries of the products being marketed.

III. Efficiencies and Risks Associated with Programme Integration

1. Economies of scale

The implementing agencies have realized significant economies of scale by combining the SILC and SIGA interventions. The two interventions were so fully integrated that the financial information available does not disaggregate financial costs between them. Nevertheless, the incremental costs of adding the SIGA to the SILC were relatively minimal, as the existing staff and transportation infrastructure were used to implement both interventions. Although CRS employed a SILC specialist to support SILC activities across all of its programmes in Mwanza, no similar position was funded for SIGA. Thus the primary additional costs were related to training; of the five to ten days of SILC training, course, two days are devoted to the SIGA model. Moreover, since candidates for SIGA leadership positions are drawn from SILCs, the amount of time required to form a SIGA is reduced.

The existing CRPs were leveraged in the formation of SIGAs, through the training of SIGA members and assuming responsibility for overseeing and supporting both the SILCs and their respective SIGA. Since training for SIGAs takes place during their first monthly meetings, it does not represent a significant additional time commitment for the CRPs. After the training session is completed, CRPs provide oversight to the SIGA, primarily through mentorship during its regular meetings. Each CRP is also expected to provide two days of annual refresher training to the SIGA leadership, although the extent to which this was occurring was not clear.

2. Programmatic fit

Although most SIGAs have only been operating for two to three years, and less monitoring data has been collected relative to SILCs, there are many ways in which programming appears to have been strengthened by combining the two interventions. Most significantly, the addition of the SIGA creates new incentives for members to join and continue participating in SILCs. Through the SIGA, farmers benefit from: a reduced risk of non-sale, price floor guarantees, commission income, access to market information, lower transaction costs, crop cleaning services, and improved access to inputs. In a region where the vast majority of SILC members are farmers, these are significant benefits. The insurance fund and seed multiplication services are also valued benefits.

The additional costs to individual SILC members of accessing these services are modest, primarily due to the programme's volunteer leadership structure. While the required per member contribution to the SIGA pool of funds varies, it averages USD 0.12 to USD 0.24 monthly.[9] This represents four to eight percent of the average monthly savings of a SILC member, and is non-refundable upon exit from membership. SILC members who were interviewed did not resent this extra contribution, though its added value would certainly be much less for the few members who are not farmers.

Since SILCs function as building blocks, they play a crucial role in ensuring the operational success of the SIGA. They meet a significant demand for access to financial services and they also serve as a training ground for members who foster trust among each other with their pooled savings. This

[9] Based on an average of two shares of TSH 500 each, purchased weekly four times per month.

experience makes it easier for farmers to join SIGAs and through their SILCs, undertake collective marketing of their crops. In addition, SILCs:

- Guarantee the crop volumes needed to negotiate advance contracting with purchasers;
- Lower the transaction costs of purchasing from dozens or hundreds of small-scale farmers, using the SILC structures to estimate approximate production volumes in advance of the harvest, to relay information and to coordinate activities among their members;
- Provide access to loans that enable members (particularly poorer farmers) to avoid pre-selling their harvests to local agents at low prices, waiting instead for the better prices offered by the SIGA; and
- Facilitate the participation of women who comprise the majority of SILC members (and whose participation in SIGA activities is higher than that of previous attempts at collective marketing).

The SILC linkage provides the SIGA with the solidarity that allowed it to continue operating and meeting regularly even when some SIGAs did not even engage in collective marketing in 2008.

3. Risks

Although the integration of the SILC and SIGA makes the benefits of collective marketing possible for a diverse population of farmers, it also creates additional risks for SILC members. Most importantly, the SIGA has a less robust financial management and oversight system than the SILC. Weaknesses include inexperienced staff, limited knowledge of SILC members of the SIGA's financial activities and, within the weaker SIGAs, limited accountability of the finance-related office bearers. This puts capital invested by SILC members at increased risk of fraud and may compromise the transparency and accountability that the SILC fosters among its members.

However, this risk is limited due to the small amounts of capital SILCs invest in the SIGA and the SIGA's practice of loaning all of these monies back to the SILCs. However, many SIGAs plan to open bank accounts and gain access external loan capital; the combination of weak financial management with a larger pool of funds to manage has the potential to increase risk, particularly as there will be no consistent and on-going oversight of the SIGAs at the end of the Chickpea Promotion Project.

Reliance on the volunteer efforts of the CRPs, the agricultural extensionists and the SIGA office holders poses another risk to the success of this pilot programme in integrating financial services with agricultural marketing. As members of the SILCs and SIGAs, CRPs have a vested interest in their success; indeed, many are members of two, three, or four SILCs. However, a volunteer system will work only as long as the existing pool of trained CRPs remains in place. Even though farmers appear to understand that the sustainability of the SILC-SIGA system relies, in part, on the ability of CRPs to charge a fee for their services, there is no provision for periodic renewal of technical assistance, where new CRPs are trained when the existing group moves on.

Finally, researchers noted a few examples where leadership positions had changed following elections. While SIGAs are still relatively young and there have been few elections held, it does suggest that the expertise and long learning curve required to competently manage the SIGA may inhibit leadership turnover, with negative implications for accountability; if there is no turnover in leadership, there is greater potential for fraud and mismanagement. As a result, leadership becomes entrenched and oversight weakens. Together these risks - particularly weak financial management of SIGAs, a poor grasp of SIGA functions by the SILC rank and file membership, a lack of transparency, aspirations to access the formal banking sector and a reliance on a technical cadre that is entrenched without turnover or active oversight - create the potential for elite capture, a characteristic of many small African cooperatives.

IV. Assessing the Value Added by SIGAs

Assessing the value added by the addition of the SIGA to the SILC model is difficult due to the fact that the earliest SIGAs were formed just three years prior to this case study, and most SIGAs have only participated in two selling seasons thus far. Furthermore, market disruptions in the international chickpea market during the 2008 season severely affected the performance of the SIGAs (see Box 4 below), thereby complicating any performance analysis. Additional data are clearly needed to assess the longer-term performance of these structures. Moreover, less monitoring information has been captured for the SIGAs than for SILCs over the course of their operations. Therefore although there are areas in which the SIGA model provides benefits for its members, a lack of data means that many of these outcomes cannot be quantified. This limits the capacity of the researchers to make definitive conclusions on certain aspects of the SIGA model.

Box 4: Chickpea market disruptions in 2008

The 2008 chickpea marketing season proved disastrous for SILC members. Various factors, including the international credit crisis caused the price of the chickpea crop to drop drastically from the beginning to the end of the production season. Buyers, fearing additional losses due to continued price declines in international markets, reacted by shifting to short-term purchasing and reining in the amounts and frequencies of advances they were delivering to the SIGAs. Without the capital to purchase the crop, the SIGAs were unable to buy what their SILC members produced and instead had to accept their sale to other buyers, who included village agents. While the same number of SIGAs participated in the collective marketing of chickpeas in 2008 relative to 2007, the volume of crop they sold declined significantly, as did sales to the SIGA by non-SILC members. It was only the introduction of mung bean sales that allowed many of the newer SIGAs to begin joint marketing and generate

Taking these issues into account, there are preliminary indications that the integration of the SILC and SIGA has added value in terms of pro-poor outreach, value chain efficiency, marketing commissions, the implementation of a weight-based purchasing system, access to services, and improved yields. A summary of project outcomes as of June 2009 is provided in Table 2.

Table 2: SILC-SIGA project outcomes

	2006	2007	2008	2009
Number of new villages	18	10	0	0
Number of SIGAs formed	6	14	8	0
Number of SIGAs selling collectively	5	16	21	N/A
Total number of SILCs	101	149	188	190
Number of SILCs that are members of SIGAs	N/A	124	N/A	181

Percentage of SILCs that are members of SIGAs	N/A	83%	N/A	95%
Number of SILC individual members	N/A	3,800	4,902	5,020
Total savings mobilised (USD) [10]	N/A	84,641	110,632	130,378
Total value of loans outstanding (USD) [11]	N/A	104,606	134,520	159,117
Total SILC profits earned (USD)	N/A	N/A	N/A	28,556
Number of SILC members selling chickpeas through SIGAs	N/A	1,048	946	N/A
Number of non-SILC members selling chickpeas through SIGAs	N/A	8,102	1,434	N/A
Number of SILC members selling mung beans through SIGAs	N/A	0	894	N/A
Number of non-SILC members selling mung beans through SIGAs	N/A	0	1,126	N/A
Total volume marketed (Tonnes)	N/A	1,352	482	N/A
Total value marketed (USD)	N/A	436,539	192,470	N/A
Average value marketed per SIGA (USD)	N/A	21,827	N/A	N/A
Total commission received (USD)	N/A	12,983	4,595	N/A
Average commission received per SIGA (USD)	N/A	649	164	N/A
Total SIGA fund value (USD)	N/A	5,104	N/A	N/A

1. Pro-poor outreach

There is some indication that the integration of the SILC and SIGA better enables the participation of marginalized groups who frequently lack the financial or social capital to engage in agricultural marketing initiatives. Access to their group's savings and loan funds meets the need of many farmers to quickly access capital during the harvest.

Farmers who sell to the SIGA tend to sell smaller quantities than was the case for the previously-formed PMGs that had offered joint marketing services in the region without a link to Savings Groups. This difference, of 3.3 bags versus 34 bags sold per member (Best et al, 2008), can be attributed to several factors, one of which is that the SIGA facilitates participation from poorer farmers who are SILC members. The PMGs were organised solely for the purpose of collective marketing and attracted those farmers who could afford to pay membership or marketing fees up front and delay the sale of their crop until the PMG was ready to buy it. In some cases, these

[10] As of June 25, 2009.
[11] Includes social fund, education fund, fines, interest, and commissions received from collective selling.

farmers may have also been purchasing crop from other farmers to resell, thus also partly accounting for the difference in sales volumes.

The enhanced participation of women in the SILC-SIGA model is also notable; membership in SILCs has increased the proportion of women who engage in collective sale. For instance, 22 percent of members who sold chickpeas to a SIGA during the 2007 harvest were female compared to seven percent of non-members.

2. Value chain efficiency

The implementation of the SILC-SIGA model lowers transaction costs and improves the overall efficiency of the value chains involved in the programme. The volume of product that SIGAs are able to mobilise gives them the scale to sell to the purchasing firm directly and avoid paying margins to their agents and sub-agents. The difference in price that this represents for SILC members is estimated to have averaged 20 percent of the total purchase price (Best et al, 2008). SIGAs therefore generated estimated additional revenues of USD 87,308 in 2007 and USD 38,494 in 2008 for SILC members. The SIGA also increases security for buyers, who occasionally have difficulty recovering the advances they extend to their agents. Unlike agents, SIGAs are able and willing to provide an effective bond on the advances that they receive by guaranteeing the representative who is sent to collect the money. Moreover, one of the purchasing firms reported that buying from the SIGA saves the cost of storage and salaries that are borne when buying through agents. The SIGA also pre-cleans the crops prior to sale, which reduces the time and cost required by the buyer to perform a secondary cleaning and cuts the expense of transporting worthless material such as stones, sand and twigs.

3. Marketing commissions

One of the purchasing firms only offers the volume commission incentive to the SIGAs and not to their agent, reflecting an advantage of the SIGA-SILC model. The marketing commission offers farmers access to an additional source of revenue which has usually exceeded the operating costs borne in joint marketing.[12] For instance, in the 2007 marketing season, the average SILC member earned USD 3.20 in commissions. While information on the aggregate marketing costs during that season is not available, feedback from individual SILC groups indicates that the commission well exceeded the costs incurred. Among eight SIGAs in 2008, average earnings per group from commission payments averaged USD 1103, ranging from USD 130 to USD 3,994 (Stoas and CRS, unpublished).

However, commissions did not cover operating costs for many SIGAs in 2008 when market fluctuations caused the quantity of crop sold to drop substantially. In these cases the SILC members were unable to recoup the contributions made to the SIGA's operating fund prior to harvest. This primarily hurt the smaller SIGAs that lacked significant economies of scale but still incurred the same fixed marketing costs. Moreover, the low overhead of the SIGA structure means that the operating costs of managing the collective marketing activities are minimal. As a result, nearly all commissions

[12] The total commission paid in 2007 and 2008 was USD 15,578.

earned are either remitted to SILC as earnings and placed in investments or funds that benefit SILC members, or spent on group infrastructure to benefit collective marketing operations (e.g. purchasing storage capacity).

4. Weight-based purchasing system

SIGAs contributed to raising the price paid to farmers by using a weight-based measure rather than the traditional volume-based system. Farmers report that this shift increases their earnings by up to 40 percent, depending on the type of traditional volume measure being used, although no comprehensive study has been completed that quantifies these gains. The shift to a weight-based transaction system is also an important and desirable change for the value chain as a whole, given its effects on transparency and market information, while also creating significant incentives for farmers to sell through this marketing channel.

5. Increased access to services

A significant added value of the SILC-SIGA model is the expansion of services beyond the base of SILC members. In fact, 89 percent and 42 percent of those selling to the SIGA in the 2007 and 2008 harvests respectively were not SILC members, but were attracted by the higher prices offered and the weight-based purchasing system. This demonstrates the much broader impact that the SIGA has on the village and the local crop marketing system. Not limiting its purchases to SILC members also represents a good strategy by the SIGA to increase volumes and returns, thereby strengthening its financial base. The volumes and value of crop marketed to date, both presented in Table 2 above, are very significant given the short history of the SIGAs.

However, in spite of the benefits of selling through the SIGA, not all SILC members chose to do so. The most common reason cited was the convenience of selling their crop at farm gate value,[13] rather than bringing their crops to the SIGA's warehouse and, in the 2008 season, the SIGAs' lack of working capital to purchase crops, owing to a dearth of onward lending from buyers. Ultimately, the SIGA's requirement that SILC members not sell elsewhere appeared to be more symbolic than a true deterrent; although most SIGA leadership committees insisted that this policy was in force and had substantial penalties for side-selling, none applied it. The estimation of production levels of all SILC members prior to harvest likely assisted their adherence to selling norms by helping SIGAs to know what to expect from each member.

6. Improved yields

An important benefit of the SIGA is the access of members to improved seed varieties and inputs. Farmers reported widespread use of the seed bank system to access quality seeds. The application of improved chickpea varieties can increase yields by up to 67 percent relative to the traditional varieties, although a lack of field-level monitoring information makes it impossible to know how yields have changed or how much of that gain can be attributed to the SIGA structure.

[13] According to the Organisation for Economic Co-operation and Development (OECD), the farm gate value is "a basic price with the 'farm gate' as the pricing point, that is, the price of the product available at the farm, excluding any separately billed transport or delivery charge".

V. Sustainability

At the time this research took place, the SILC-SIGA model was still being developed and given its pilot status, the implementing agencies had not formally articulated a strategy for its sustainability. The short period during which the SIGAs have been functioning independently of MRHP and CRS provides limited empirical evidence of their capacity for continued operation. Although both CRS and MRHP anticipate that the SIGAs will continue to function as viable institutions and provide services to both members and non-members post-project, there are risks that threaten this outcome. Since this case study examines the integration of other services with Savings Groups, this section focuses primarily upon the SIGA, outlining opportunities for and threats to its sustainability.

1. Opportunities supporting SIGA sustainability

The agricultural support services that SIGAs offer respond to a longstanding need; a dearth of marketing infrastructure has left farmers with minimal access to markets and low farm gate prices. Moreover, previous efforts to organize collective marketing in the area largely failed. In contrast, SIGAs have addressed issues surrounding access to finance, poor quality seeds and a fragmented crop marketing chain that has traditionally been characterized by mistrust and, at times, exploitation. The new model has reduced transaction costs and increased efficiencies for both producers and purchasers, producing a win-win outcome for value chain actors and creating incentives for the continued operation of SIGAs.

The SIGA's seed multiplication activities replaced CRS's previous strategy of distributing free seeds to the producer groups. Thus far, the available evidence indicates that in-kind credit works effectively as a mechanism to supply producers with quality seeds of varieties that are not otherwise available in local markets. Uptake among SILC members is strong and the quantity of seed maintained by the SIGAs is growing. Key to its success is the in-kind payment mechanism; by not requiring cash up-front during the planting period - when access to cash among farmers is generally low - the high quality seed is accessible to poorer farmers who might otherwise reuse their own seed in lieu of the additional expense. While extensionists were unaware of the need to periodically repurchase foundation seed to maintain quality, the technical and financial resources of the SIGA minimize the difficulty of adopting this practice.

Linking agricultural services to small, local, and transparent Savings Groups is the element that was missing from earlier marketing efforts. This innovation benefits from the trust that SILC members have developed through their regular self-managed saving and lending activities, the crop volumes that SILCs bring to the SIGA, and cost efficiencies resulting from the SIGA structure. Consequently, SIGAs experienced stronger participation and higher revenues relative to earlier models that were not linked to informal savings-led groups. While three other types of joint marketing groups were attempted in Mwanza region, none achieved the degree of solidarity and scale of the SIGAs. Box 5 provides further detail on the experience of PMGs that were originally formed under the Chickpea Promotion Project between 2003 and 2005.

Box 5: Contrasting experiences of Producer Marketing Groups (PMGs)

The Producer Marketing Groups that were formed under the Chickpea Promotion Project between 2003 and 2005 to facilitate collective marketing provide an important point of comparison with the SIGAs. Unlike SIGAs, PMGs had no links to Savings Groups and operated as independent cooperatives instead. The contrasts in performance are stark: PMGs lacked cohesion, managed to collectively sell less than 20 percent of their members' production, and attracted significantly lower participation of female farmers. The drop-off among groups has also been significant: of 14 PMGs, just four had conducted marketing activities at all by the end of 2008.

The support of both farmers and exporters for the continued operation of the SIGAs is a favourable indication for the sustainability of these services. The fees that SILCs have begun to pay CRPs for their training and counsel attest to the demand for such services. For some CRPs, especially those representing a large number of SILCs, these fees constitute significant income and create an incentive for them to continue with SILC and SIGA replication activities.

2. Threats to SIGA sustainability

Although SIGA services are in demand and have succeeded where others have failed, there are significant threats to the future sustainability of the SIGA model, particularly relating to the SIGAs' engagement in financial intermediation for SILC members. These threats are rooted in the interrelated factors of institutional capacity, transparency and size.

2.1 Capacity

Several indicators raise questions about the capacity of SIGA leadership; for instance, its ability to negotiate with buyers without external support may not be sufficiently strong in many SIGAs. This is a concern raised by one of the private exporters who pointed to confidence building as a relatively time-intensive process that still requires additional investment for many SIGAs. In the first three years, CRS and MRHP organized and paid for the stakeholder forums in which buyers and SIGA representatives negotiated terms for the upcoming harvest. At the time of writing, no strategy was in place for how future negotiations would occur post-project, either through continued stakeholder meetings or individual contacts between SIGAs and buyers.

As small organisations marketing a commodity that flows primarily into international markets, SIGAs are subject to major fluctuations in the prices they receive for their product. When the market for their crop collapses – as it did in 2008 – there are relatively few mitigation strategies available. SIGAs are ultimately reliant upon the continued willingness of a small number of buyers to purchase crops and there are few alternative markets that they can turn to if this system breaks down. Moreover, such volatility brings into question the capability of SIGA leadership to address such adverse market activity. One approach that SIGAs are increasingly pursuing is to diversify the range of crops they market in order to maintain sales commissions and minimize the risk that a poor year for one crop will end all collective marketing activities.

Another challenge for SIGAs is the mixed incentives of their buyers; although they acknowledge the benefits of buying from SIGAs, supporting an independent farmer cooperative reduces their control in the value chain. As a result, purchasers have retained their parallel agent buying structure in an effort to avoid dependency and mitigate risk. They even delegate to their agents the responsibility of paying SIGA advances; naturally averse to assisting a competitor, agents have delayed these payments, causing significant disruptions to SIGA cash flow. Recognising the risks of depending on agents, most SIGAs are determined to open their own bank accounts to receive direct payment from their buyers. Their ability to manage a bank account effectively will play an important role in their ability to operate on a long term basis.

Aspects of the SIGA structure – participatory constitutional development, periodic elections, and division of authority – were designed to create strong institutions capable of withstanding and resolving conflicts. SILC members generally demonstrate strong understanding of the management structure, the roles of various leaders and management committees, and SIGA procedures. This is why most have either re-elected the same group or have not yet held elections: a change in leadership may potentially threaten the SIGA's managerial and technical capacity, especially since in the absence of continued funding, the new leaders will not benefit from the rigorous training that MRHP and CRS provided. On the other hand, lack of leadership rotation heightens the risk of elite capture.

The lack of a system to ensure the on-going development and upgrading of the SIGA's technical staff poses a significant constraint to the model's sustainability. Both the CRP and agricultural extensionist are specialised positions that require significant training in order to properly carry out their respective responsibilities. As existing CRPs and extensionists move or otherwise discontinue their activities, their absence will create a glaring gap in skills required for the SIGA to continue operating effectively. Researchers have already observed that new CRPs have much less technical capacity than their more experienced colleagues and in some cases are not certain of what their responsibilities entail.

2.2 Transparency

While the financial management of the SIGAs creates social cohesion among members that many argue is responsible for the SIGAs' comparatively strong initial performance, it also poses certain risks to their long-term sustainability. The systems for financial management are comparatively underdeveloped among the SIGAs, relative to the SILCs. While the records of crop purchases and sales were found to be maintained relatively well, the loan books and general ledger were not. Moreover, the expected monitoring of SIGA records by the CRP did not always occur, due to a lack of motivation or knowledge; unlike SILCs, CRPs are not required to submit financial monitoring reports of SIGA activities, which have, in some cases, lessened the rigour of their follow-up.

Moreover, there is relatively little accountability demanded of the SIGA leadership by individual SILC members. Relatively few have an understanding of the current status of the SIGA, a gap which occasionally was observed among SIGA leaders as well. While the risk of financial mismanagement is mitigated through the division of responsibilities between the secretary and the treasurer, the transparency of lending decisions, and the policy to keep all SIGA money out on loan, there remain a number of potential risk factors that could threaten the continued operation of the SIGAs.

Among these are the SIGAs' internal lending activities derived from the education and input funds. Theoretically, these funds both generate interest income and further strengthen the SIGA by creating a reason for members to meet regularly. In practice, however, the small size of SIGA funds limits the amount of interest-generated revenue. Moreover, the SIGA's financial transactions expose the organisation to the risk of fraud especially given the lack of effective oversight of the SIGA's overall financial activities. Although in no instance did the researchers find evidence of fraud, the lack of staff turnover, coupled with poor record-keeping creates conditions under which such risks are more likely to occur.

2.3 Size

Given these challenges surrounding capacity and transparency, the question arises as to whether it is possible for SIGAs to adequately address them; potential responses include increased staff training, salaries, formalized procedures, and enhanced external controls. However, an important factor inhibiting these possible solutions is the SIGA's size.

All financial institutions require guarantees of transparency. In the case of banks, this is assured by professional external and internal audits, sophisticated information technology systems, and supervision by a government authority. Large financial institutions are able to afford these expensive services, but smaller institutions such as SACCOs usually cannot and often have issues with transparency as a result. In general, these establishments face greater challenges of ensuring security and transparency. This however, is not the case with much smaller organisations such as SILCs, which are able to ensure transparency by limiting the size of their Savings Groups to usually 25 or 30 people. Savings Group members observe every transaction at periodic meetings, approve every loan, ensure repayment themselves, and are present any time the records or cashbox are opened.

SIGAs are first and foremost agricultural cooperatives or marketing groups, not financial institutions. As such, the challenge of transparency may not be the same as for banks, SACCOs or microfinance institutions (MFIs). However, to the extent that SIGAs are embracing financial intermediation through their various funds, they increase their risk of encountering problems with security and transparency. As they begin to increasingly handle the finances of the SILCs, the risks surrounding the security of those resources and the transparency around their use are elevated. This is due to the fact that SIGAs do not possess the established management systems of the SILCs.

Unlike Savings Groups, SIGAs are too large and too complex to be run by a communal management structure and too small to afford modern management systems that include the infrastructure of internal and external controls. The same may hold true for building SIGA human capacity; if the SIGA staff members require on-going training, the question of how to pay for it become pertinent: are they large enough to pay themselves? Or are they too small to cover the recurring costs of staff development and professional management, but large enough to need them? Addressing such issues will be critical to determining the ultimate sustainability of the SIGA.

In summary, given the young age of the SILC-SIGA programme in Mwanza region, no empirical evidence is available yet on the sustainability of the independent SIGAs. Important gains have been made with the model's approach to collective marketing and seed multiplication services; SIGAs have succeeded in procuring crops, attracting buyers, negotiating higher prices, and earning commission income for their constituents. As a result, demand for these services is robust and growing.

However, by operating with limited capacity and insufficient financial management, SIGAs are vulnerable to elite capture and fraud. On-going administration, financial management, capacity and the future of the technical staff are areas of concern that could well threaten the long term viability of the SILC-SIGA model.

VI. Lessons Learned

The federation of SILCs into SIGAs has yielded valuable insights on the integration of Savings Groups and agricultural marketing activities. First, Savings Groups need to be operating robustly prior to being used as a platform for other development activities; compromising investment in SILC formation, training and monitoring in favour of the platform will limit the effectiveness of the SIGA, as will the premature establishment of the SIGA prior to SILC organisational maturity. Ultimately, if the SILCs fail, so do the SIGAs.

While economic homogeneity is a criterion for SIGA success, SILC can function effectively with socio-economic heterogeneity. The wealthy do not appear to segregate themselves in their own SILCs and those disadvantaged by health status or responsibility for orphans are readily integrated into existing SILCs. Those who want to save more than what one SILC allows simply join additional SILCs.

Building effective organisations that market collectively takes time; it is not a task that can be completed in one year. Organisations need the opportunity to experience and adjust to dynamic market context and their leaders need to establish confidence in themselves and in their constituents. As a result, facilitators need to have realistic expectations about how quickly this process can be established.

Through their engagement in on-going financial transactions, most SILCs develop strong trust and confidence among members. This social capital provides a very effective base for establishing a collective marketing structure by hastening the group formation process and increasing the willingness of members to work together.

Coordination among market actors is critical to effective market development and yet, is often one of the most difficult aspects to transfer to project beneficiaries. Forging interest and contracts with multiple buyers fosters competition, increases prices and reduces the risk of market disruptions. While CRS and MRHP have effectively brokered market relationships between SIGAs and private buyers to annually meet and negotiate sales agreements, the ability and capacity of either SIGAs or buyers to assume this role in the future is less clear.

The challenge of record keeping requires regular training and supervision for the SILCs, SIGAs and CRPs. Regular refresher courses are needed for all involved to ensure proper maintenance of the ledger as this responsibility is not solely in the domain of group leaders. Group members have to hold themselves accountable to be aware of the group balances and demand accurate financial reports from their leaders. Poor records can lead to a lack of transparency, breakdown of trust and rise of internal conflicts that threaten SILCs and eventually, the SIGA.

Finally, the SILC-SIGA model facilitates activities in both input supply as well as crop diversification; it allows for an efficient seed distribution and multiplication system that enables farmer access despite limited cash flow. Moreover, marketing multiple crops strengthens the collective marketing body by protecting against volatility in market prices for a single crop. This diversification will increase the likelihood that at least one crop can be marketed each year, thereby increasing the money generated for the marketing group and strengthening the group's marketing capacities by marketing two crops per year. This strategy will also increase the number of Savings Group members who can benefit from joint marketing activities.

1. Scalability and replicability

As the SIGAs represent SILCs from a single community, the SILC-SIGA model has the potential to scale-up to cover many villages not targeted during the Chickpea Promotion Project. As previously noted, CRPs have formed an estimated 61 percent of all SILCs. To date, unfunded replication of the SIGA model has occurred through the CRPs, who have charged a fee to train neighbouring communities on the methodology. According to an evaluation of the SIGA, 43 percent of SIGA groups were formed by the CRPs without MRHP or CRS support (Stoas and CRS, unpublished). SIGAs are also beginning to be replicated by another CRS-funded local NGO, Kimkumaka, which began initiating SIGAs in mid-2009. It was not possible during the case study to determine whether such groups differ in quality or longevity vis-a-vis those formed directly by CRS and MRHP.

Several features of the project context facilitated the implementation of the SILC-SIGA model and must be considered in evaluating its potential replicability, including:

- *A purpose or widely shared need that attracts a majority of members*: In Tanzania, the decline of the government-led cooperative system has left farmers with few marketing alternatives. Collective crop marketing can facilitate better prices and higher income; in such conditions, the SIGA has shown to be an attractive option for members.
- *The purpose of the additional institution is limited in scope (and therefore achievable):* SILC members agree to contribute cash and commit their crop to the SIGA in order to achieve higher prices. While the SIGAs do offer other services, their main *raison d'être* is to achieve higher crop prices for farmers.
- *Homogeneous membership facilitates SIGA formation and function:* Most SILCs are comprised of farmers who have an interest in the SIGA's services. It would be much harder for the SIGA to secure SILC engagement if its constituents were engaged in diverse occupations. As a result, those SILC whose members are not primarily farmers naturally choose not to join SIGAs.
- *The existence of a market structure and buyers willing to purchase through cooperatives:* the production of a crop with an export market has been critical to the functioning of the SIGAs. Robust demand and assured external markets make volume purchases lucrative, attracting larger buyers that are willing to sign advance purchase contracts rather than buying on the spot market.
- *Marketing associations require access to storage facilities:* As nascent institutions, SIGAs are not yet able to build or purchase their own storage facilities. The availability of low cost storage, generally dating back to the government-led cooperative movement of the 1970s, greatly assists collective marketing by reducing the barriers to operation.

2. Answering the research proposition

While recognizing that the SILC-SIGA initiative is still nascent, preliminary findings suggest that by creating a platform for the establishment of collective marketing structures, Savings Groups do enhance the capacity of their members to engage in joint marketing. The SIGA structure leverages the trust and confidence created among group members through regular financial transactions to build a more solid platform than have previous joint marketing structures that lacked linkages to Savings Groups. The wide membership base of the SILC lowers the high transaction costs of coordination and production management, facilitates consolidation of production, enables input distribution mechanisms, and provides a link to the financial capital needed to cover marketing and other costs.

While the SILC-SIGA linkage has enabled the incorporation of financial intermediation activities within the SIGA, there are also numerous threats related to capacity, transparency and size. Ultimately, time will tell whether the SIGA's financial integration activities can be successfully managed or will be revamped in order to facilitate financial sustainability and institutional cohesion, or whether the risks that they create will upset the stability of the entire model.

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