

AGRICULTURE LOAN USAGE AND CASH FLOW MANAGEMENT BY SMALL SCALE FARMERS

A Case Study of the TRIAS Programme in Hoima, Masindi and Mbararara



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ABOUT THE WORKING PAPER

This working paper presents findings from a study on the usage of agriculture loans, the capability of cash flows from the agribusinesses to cover credit costs and the capacity of small holder farmers to manage their household cash-flows.

About the authors

The study was commissioned by TRIAS Uganda (www.triasngo.be). It was carried out by Mountains of the Moon - School of Business and Management Studies (www.mmu.ac.ug). The data was analysed, presented and compiled into the report by Dr. Oliver Schmidt, Muhangi Bernard (MBA), and Muzigiti Geoffrey (MBA). Data collection was supported by Mawenu Robert (BA) and the 2010-class of students of the bachelor in banking and development finance (BBDF).

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List of acronyms and abbreviations

EBO SACCO	Ebirungi Birugomutuutu Savings and Credit Cooperative Limited
MADFA SACCO	Masindi District Farmers' Association Savings and Credit Co-operative Limited
MF	Microfinance
MFI	Microfinance Institution
MMU	Mountains of the Moon University
NGO	Non-Governmental Organisation
PAED	Participatory Agro-enterprise Development
SACCO	Savings and Credit Cooperative Organisation

Executive Summary

Background

TRIAS is a Belgian NGO working with seven partner organizations in the districts of Masindi, Mbarara, Buliisa and Hoima in Uganda. TRIAS program uses a participative capacity building methodology to enable farmers to obtain sustainable access to markets for selected agro-businesses (bananas, beans, groundnuts, maize, millet, rice, soya beans) and links them to partner-MFIs (HOFOKAM, MADFA SACCO, Mwizi SACCO and EBO SACCO respectively) for finance.

A study carried out to establish the usage of the agricultural loans provided by HOFOKAM, MADFA and EBO SACCO, if the cash flows from the agro-businesses that farmers in the program have selected are sufficient to cover credit costs and the capacity of members to manage their household cash-flows.

A randomly chosen sample of 42 groups was visited. On average 10 members per group were interviewed with a structured questionnaire. Then 1/5 of the members interviewed were visited at their homes to observe the status of their livelihood and to cross-check if it tallied with their responses. 45.6% of the sampled respondents were women.

Findings

Most farmers use most of their loans from TRIAS-partner-MFIs for the purpose of running the selected agro-enterprises. The cash-flows generated from the selected agro-enterprises are generally sufficient to cover the costs of running those agro-enterprises, including credit costs. Credit taken from TRIAS-partner-MFIs is mainly used as intended for operating the selected agro-enterprises. Some of the credit supports other agro-businesses; e. g. weeding and applying of pesticide may go to selected agro-enterprises as well as other crops (these include among others vegetables, tobacco and coffee). Most farmers pursue other agro-businesses and/or trade as well. Income from these other businesses is comparatively substantial, particularly in Mbarara.

Some of the credit is directed towards investment for example buying working devices and sometimes cattle and even land. Altogether, the loan products designed under the TRIAS-programme are better than most of the loan product in the tier 4 category.

Most respondents struggled to balance their total household cash flows; i. e. profit against consumptive expenditure. The main 'consumptive' expenditure was education. Respondents from Mbarara spent almost as much on education as the respondents from Masindi and Hoima taken together.

Strengths of the TRIAS-program reflected in this study were:

- Comprehensive training inputs; particularly well perceived by respondents in Mbarara;
- Innovative loan product design;
- Fairly large proportion of loans taken are injected in the selected agro-enterprises;
- The selected enterprises are, in cumulative perspective, profitable in the respective locations;
- The cash flow generated by the selected agro-enterprises covers, in a cumulative perspective, all costs including credit-costs. Moreover, in a household perspective, three quarter of households (for which this data is sufficiently complete) operate with positive returns;
- The large majority of households visited displays fairly well managed agro-enterprises and well kept and fed households.

A minority of farmers are not doing satisfactorily well. They run their selected-agro-enterprises at a loss. Many of them even run their other businesses at a loss (in Hoima only few of them pursue any other businesses), although TRIAS-program encourages them to discontinue such ventures if not profitable.

Recommendations

- Consider complementary interventions for vulnerable farmers like encouraging them to pool their land and/or other inputs and also other business activities.
- MFIs should be encouraged to continue strengthening their operational controls; keeping an eye on appraisal techniques and avoiding unintended relaxing is at the core of all credit risk management.
- The MFIs should keep strengthening implementation of the loans tailored to running specific agro-enterprises; this would ideally include development of an asset finance product to further reduce diversion of the operationally oriented loan product.
- The MFIs should make continuous efforts to instill prudence – or financial literacy – as to moderate farmers’ demand for credit.
- The MFIs might develop more value-adding products to support farmers’ desire to educate their children.
- The SACCOs might review their loan insurance package along the lines of HOFOKAM.
- SACCOs need to explore if loan insurance could be a product to be pursued in collaboration with the other SACCOs operating in the same area; the more customers, the cheaper the insurance cover.
- MFIs need to review and probably strengthen its risk management framework. The data of this study indicates that there are considerable environmental risks, i.e. spreading over-indebtedness.
- The farmers need to be supported in proper records management .

Terms and definitions

Cash flow refers to the cash inflows generated by an enterprise and the cash outflows caused by the same enterprise. Cash inflows and cash outflows usually occur at different points in time. The purpose of different business loans is to provide cash inflows at the point of time of cash outflows. The loan amount is repaid at the time of cash inflows generated by the enterprise. Hence, a loan principle represents (usually one large) cash-inflow and an equal cash outflow (usually split into several smaller installments).

Cash outflows are caused by operational and financial costs and by investments:

- **Operational costs** include all expenses required to operate the existing enterprise. For instance a given agro-enterprise requires seeds, tools and labor for planting, weeding, harvesting, fertilizers and herbicides/pesticides, bags for packing the harvest and maybe cost of some processing (e. g. taking maize to the maize mill). Working capital, e. g. stock for a shop, is part of operational costs of an enterprise.
- **Financial costs** are the costs of business loans, i. e. interest and other charges paid to microfinance institutions.
- **Investment** are the expenditures for assets; either replacement of existing ones or addition of assets towards expansion of the enterprise. Tools like hoes, push carts etc. are sometimes called assets, but here we count them under operational costs. Hence, assets are larger and/or longer lasting items like e. g. land, buildings and machines.

The standard microfinance loan provides short-term finance for working capital of enterprises with high turn-over, such as trade. Agricultural loans are different, because working capital is only turned over once in a **season** (here: 4 months). Moreover, the line between investment and operational costs is sometimes blurred. E. g. opening of land could be either. Some crops do not operate seasonal but perennial, notably matooke.

Size of the agro-enterprise: Its **approximate measure** is either the **operational cost or the loan size** input into that enterprise. A farmer with a smaller land may have higher costs and take larger credit than a farmer with a larger land.

Average refers to the **mean**. The total – usually amounts of Uganda Shillings (UGX) – divided by the total number of respondents

1.

Background

TRIAS is a Belgian NGO working with six partner organizations in the districts of Masindi, Mbarara, Buliisa, Kiryandongo and Hoima in Uganda. TRIAS program uses a participative capacity building methodology to enable farmers to obtain sustainable access to markets for selected agro-businesses (bananas, beans, groundnuts, maize, millet, rice, soya beans) and links them to partner-MFIs (HOFOKAM, MADFA SACCO and EBO SACCO respectively) for finance. The overall objective of the programme is to ensure the food and income security of smallholder farm households in Masindi, Hoima, and Mbarara Districts, and their involvement in local economic development processes, is improved in a sustainable way.

The programmes in each of the districts are similar, each implemented by two partner organizations, using the same approach, and focusing on food and nutrition security, participatory agro-enterprise development, access to savings- and credit facilities, and organisational development and institutional strengthening (OD/IS) of partners. The programme targets smallholder farm households in selected sub-counties; with services being provided in an integrated and complementary manner.

1.1 Features of the core products introduced by TRIAS-partner MFIs to suit crop farming.

HOFOKAM (Hoima) and MADFA Sacco (Masindi) allow repaying the principal after the crop has matured and been harvested. Ebo Sacco (Mbarara) allows a **grace period** of 3 months before adding the principal to the monthly installments.

Table 1: Features of the agricultural loans offered to farmers in the TRIAS programme

Feature	Ebo Sacco	HOFOKAM	MADFA Sacco
Core product			
Minimum / Maximum Amount (UGX)	0.5m / 15m	0.05m ¹ / none	3m / 15m
Period (months)	12	6 ²	1-12
Repayment rhythm ³	Monthly after grace period of 3 months	grace period equals loan period	grace period equals loan period
Pricing			
Monthly Interest rate (mode of calculation)	3% (declining balance)	2.5% (flat)	2.5% (flat)
Up-front fees ⁴	/	2%	1.5%
Loan insurance (percentage of loan amount)	1%	1%	1%
Collateral			
Compulsory savings (% of loan amount)	/	20%	20%
Group guarantee	Yes	Yes	Yes
Process			
Appraisal time (days between application and disbursement) ⁵	up to 7	2 to 7	3 to 7

- 1 Depends on group size.
- 2 Arrived at based on the crops beans/soya beans/ maize; which normally take 1 month to prepare the gardens, 3 months to mature and harvest, and 2 months to dry and sell.
- 3 Repayment rhythm refers to the principal. Standard repayment rhythm of interest is monthly. However, HOFOKAM and MADFA SACCO seem to imply that deferred interest rate payments are sometimes negotiable (they refer the term 'grace period' to total payment, not to principal only).
- 4 Called 'stationary' by HOFOKAM and 'commitment fee' by MADFA SACCO.

Both internal and external evaluations of the TRIAS programmes indicated that the target group has increased access to appropriate farmer friendly financial services through development of products based on the needs of the farmers by all the four microfinance partners, increased number of farmer households that have obtained agric enterprise loans as well as significant increases in agro-enterprise loan volumes, and better loan repayment rates from farmers that have undergone the Participatory Agro-enterprise Development (PAED) process.

However the target group farmers continued reporting challenges of high interest rates charged by the MF partner that purportedly make the agro enterprises less profitable, and inability by farmers to generate enough cash to pay loans from the agro-enterprises. This is in contrast to the enterprise selection process that is done on a cost benefit analysis basis.

This raises the following questions that need to be answered based on evidence from the field;

1. Do farmers invest the funds borrowed from the MFI/Sacco for investing in their agro-enterprises selected through the PAED approach?
2. What other purposes do they use the loans for other than investment in the agro enterprises?
3. Do the selected agro-enterprises generate sufficient cash to meet the loan repayments?
4. Do the farmers have enough capability to effectively manage their family cash flows?

1.2 Methodology

The study covered 3 districts of Masindi, Hoima, and Mbarara where the programme has been implemented since 2008.

1.3 Objectives of the research

1. To establish the actual usage of agriculture loans borrowed from the MFI/Sacco the proportion invested in agro-enterprises selected through the PAED approach; and other purposes of the loan if any.
2. To establish the cash-flows generated from the selected agro-enterprises against the cash-flow requirements of the loans taken
3. To understand the capability of farmers to effectively manage their family cash flows and the associated gaps

1.4 Sample Size and Survey methods

The study used both quantitative and qualitative methods to provide empirical evidence supported by data and the farmers' perspectives. Questionnaires were designed and administered to 42 groups. The sample was drawn on group level because the groups are the unit where the TRIAS programme effects holistically. The average number of group is 17 and a total of 414 individuals were interviewed.

Furthermore the observation method was used and primarily targeted evidence of the loan use and of the sources of income mentioned in the questionnaire. For instance on the information provided about cash-flows, through observation of whether the size of the home correspond to the number of family-members mentioned; major assets like iron sheets, TV, motorcycle could indicate that income is different from what was mentioned in the questionnaire.

2. Findings

2.1 Loan use

2.1.1 Overview

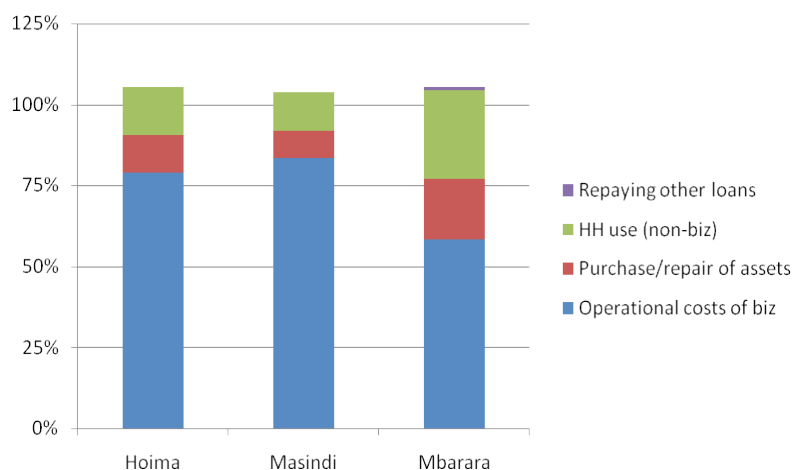
The biggest portion of the agriculture loans taken from TRIAS-partner MFIs namely EBO SACCO, HOFOKAM and MADFA SACCO was applied for the intended use (figure 1). Between 58% (Mbarara) and 84% (Masindi) of respondents used the loan to finance operational costs of their agro-business. In Mbarara, more farmers used the loan amounts for investment than in Masindi and Hoima.

For investment, the line between household assets and business assets is blurred. For instance, some respondents considered buying land as purchase of a household asset, others considered it a business asset. Therefore, household assets are counted double in figure 1, under assets and under household-use respectively. Therefore, the total is greater than a hundred percent, but the deviation is rather small.

In some cases, respondents did not differentiate between operational costs and investment for instance one respondent from Hoima indicated ‘pangas, hoes, pump’ as investment. Pangas and hoes would be more accurately considered operational costs. Several respondents from Hoima and Mbarara considered ‘stock’ – it is not indicated if it refers to seeds/seedlings for the selected agro-enterprises or to working capital for other businesses – as investment.

Only 1% of respondents in Mbarara did admit that they sometimes use loans from TRIAS-partners to repay other loans (figure 1). However, based on experience this question is often not answered truthfully. Hence, the percentage would be higher than indicated here.

Figure 1: Loan use, by locations



Note: Reference period is one season. HH-assets are counted double, therefore the total is >100%. 0% of respondents from Hoima and Masindi reported to use loans for ‘repaying other loans’.

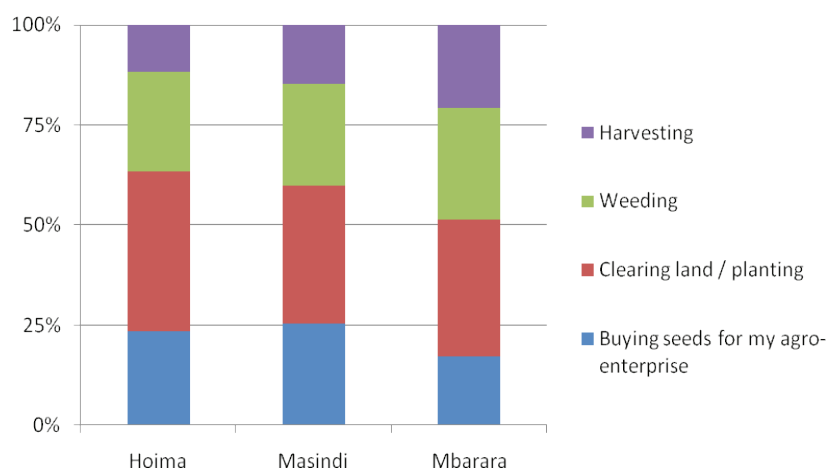
2.1.2 Operational costs along the value chain

Farmers spend money on labor for opening / clearing land; they spend on seeds for planting; on pesticides and fertilizers during weeding; and on labor and transport and maybe processing (e. g. milling) during harvesting.

Figure 2 shows the break-down of operational costs by these steps in the value chain. This cumulative perspective does not control for unit of acreage. Seeds were considerably more expensive in Hoima and Masindi than in Mbarara. On the other hand, harvesting was considerably more expensive in Mbarara than in Hoima and Masindi. One explanation is the difference in crops for example Hoima and Masindi farmers have to buy seeds for rice and other seasonal crops every season, but matooke farmers in Mbarara can make use of the matooke suckers.

Clearing land was about 5% points more expensive in Hoima than in Masindi and Mbarara. At weeding stage, there were no significant differences between the three locations.

Figure 2: Operational costs of agro-businesses, by value chain stages

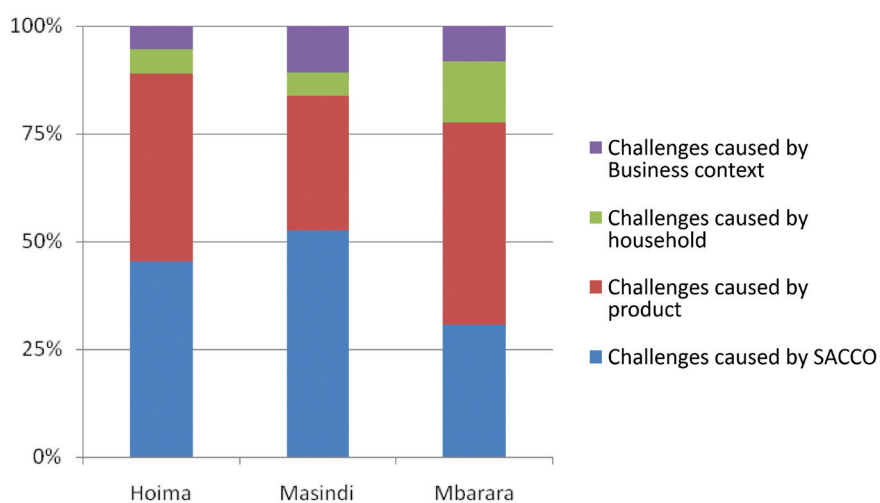


Note: Reference period is one season. Costs are cumulative across all respondents who gave information about their costs differentiated by value-chain stages. Unit of acreage is not considered.

2.1.3 Challenges in repaying the loan

Ideally, group members should not encounter any challenges in repaying the loan, because they have been trained to estimate the income from the agro-enterprise they pursue, and to choose a loan size. Probing into the repayment challenges that members encountered helped in shedding light on how well the training was applied; or that the loans had been used otherwise.

Figure 3: Challenges in loan repayment



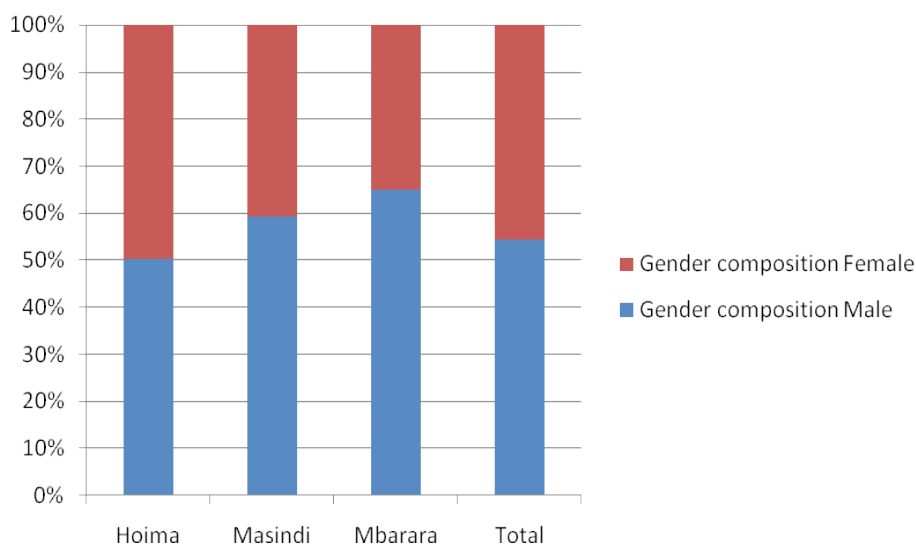
However, the responses to challenges in repayment pointed to another nexus altogether. In all three locations, over 75% of all challenges reported were related to the features of the loan product and/or to the way it is operated by the respective MFI (figure 3).

Respondents from Mbarara reported more challenges from other household members than respondents from Hoima and Masindi. 16% of respondents from Mbarara reported disagreements with spouses about the loan use, and pressure from household members – spouse or others – to divert the loan amount from the intended use.

2.1.4 Gender composition of the sample

The different responses from the three locations could be partly explained by the gender-wise composition of the sample. The proportion of female respondents was lowest in Mbarara and highest in Hoima. Over the total sample, 54.4% of respondents were male and 45.6% were female (figure 4). Note however that from observations made in the field, group members handle their businesses as a family.

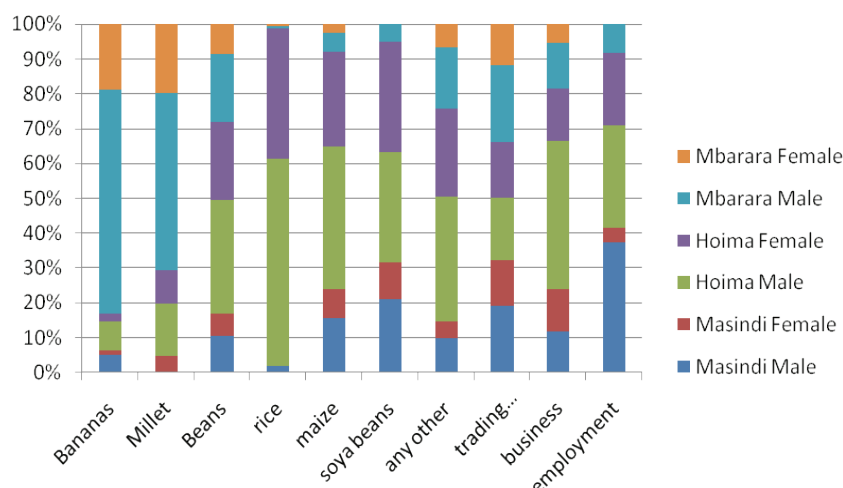
Figure 4: Gender-composition of sample, total and by locations



Regarding the choice of TRIAS-supported agro-businesses, there was no variance according to gender. Apart from Masindi where no male respondent grew millet and no female respondent grew rice, all other crops in all locations were being pursued by both men and women albeit in varying proportions. Along traditional lines, women were found to be more involved in growing millet, beans/soya beans, as well as rice (in Hoima). Men engaged in growing coffee, maize, trading and employment (figure 5).

Men were found to be more engaged in growing of bananas (77.9%) compared to women (22.1%). It should however be noted that in most families (especially in Mbarara), as observed in the home visits during the study, that the banana plantation is taken care of by all family members but the man as head of family takes credit for everything.

Figure 5: Gender-wise distribution of business undertakings, by locations.



Regarding other businesses, a larger number of men (67.4%) were found to engage in others business especially shop tending compared to women (32.6%). Surprisingly, a good number (41.2%) of females were found to be involved in trading of agricultural produce. Less women than men were formally employed (25% of the formally employed female viz a viz 75% male). Moreover, men were found to be involved in a multiplicity of undertakings (63.1%) than their female counterparts (36.9%). This could be attributed to the decision making liberties that men traditionally enjoy more compared to women. Men are also more likely to have the required capital to engage in many undertakings (especially because they own the land they use as collateral to access credit).

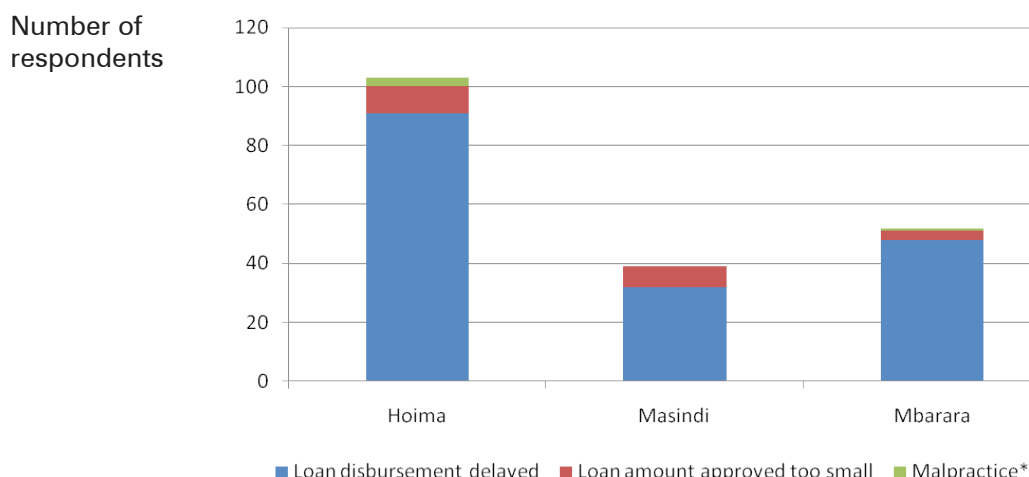
2.1.5 Challenges caused by SACCO operations

The major criticism of MFI operations refers to timing of loan disbursement. Out of all challenges reported, 36% refer to delay of loan disbursement (figure 4). This may be relative to the point of appraisal and, more critically, to the requirements of the selected agro-enterprise. For example, if a loan disbursement is delayed from the time of planting by 2-3 weeks, the farmers in Hoima and Masindi (where seeds are relatively expensive) would either plant late or plant less, both of which directly affect the yield of the agro-enterprise, or they would borrow 'interim', which would come at a cost higher than the loan from HOFOKAM or MADFA SACCO, and hence reduce the profitability of the selected agro-enterprise.

Indeed, 43% and 40% of challenges reported by MADFA SACCO and HOFOKAM customers respectively expressed dissatisfaction with the appraisal time, compared to only 28% of EBO-SACCO customers.

The SACCOs and MFIs need to assess critically their operational procedures to address this critical issue of agricultural lending. A process mapping exercise might be considered to get the best possible 'grip' on the issue.

Figure 6: Causes of customer dissatisfaction with MFI operations



Less than 1% of respondents also mentioned some behaviors of MFI-staff which we consider malpractices (figure 6). These included in Hoima ‘crony of HOFOKAM to buy the produce’, ‘no time to train group members’ and ‘un-returned deposit’. In Mbarara, it was an upfront deduction which was not released later. In the same line, one group reported that they had not taken a new loan for a long time, yet EBO SACCO had not released their compulsory savings. It is commendable that reports of such malpractices are very few. That shows that TRIAS partner-SACCOs and credit-only MFI respectively have achieved a rather high level of operational quality. However, there are internationally recognized good practices for microfinance. These include taking appropriate time to train borrowers and groups, in particular first time borrowers, and releasing any collateral, such as compulsory savings, swiftly and presently after completion of repayment. In particular for training, it has been observed that laxity of training is correlated to other malpractices like poor repayment performance and multiple borrowing. Crisis in microfinance, e. g. in India, have evolved from operational malpractices, which are a result of lack of internal controls and quality management (Schmidt 2011).

Several respondents note that the loan amounts are too small, i. e. smaller than the amount applied for. However, the major product concern in all three locations is that the loan period is too short. We shall discuss this contraction in the following section on product features.

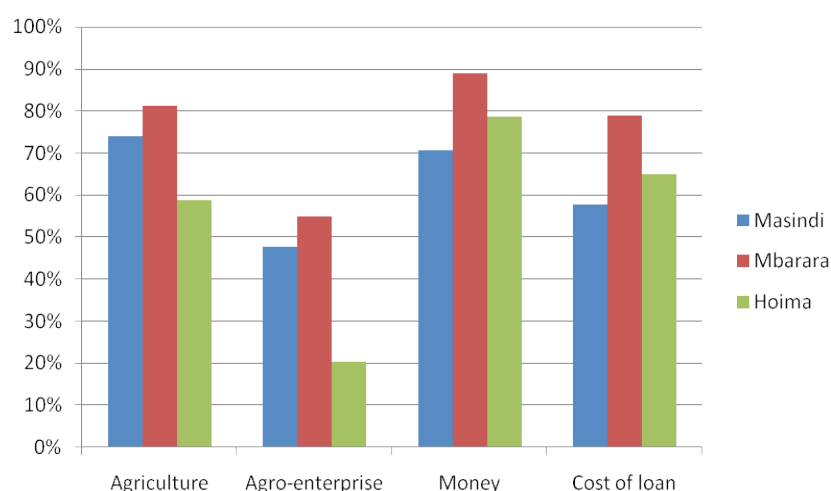
2.1.6 Training inputs

TRIAS sought to provide comprehensive training to the group members. Trainings were carried out by TRIAS-partners, i. e. MFIs and farmer associations in the three locations.

Trainings were provided on agricultural practices (cultivating, storing and marketing), agro-enterprise management (choice, cash flow, loan finance), and money management (saving, planning/spending, borrowing, cost of credit). 96.6% of respondents received at least one training. All except 1 of the 14 respondents who had not received any training joined the groups in 2011 and 2012.

Figure 7 shows that the money-management trainings were on average attended by the largest percentage of respondents (between 71% in Masindi and 89% in Mbarara). The largest percentage reports to have attended a training on savings (between 80% in Masindi and 92% in Mbarara). Out of money management, the training on loan costing has been attended by the lowest percentages of respondents (between 58% in Masindi and 79% in Mbarara).

Figure 7: Attendance of trainings, by theme and location



Note: % out of the 96.6% respondents who reported to have attended at least one training.

The trainings on agro-enterprise management recorded the lowest percentages of attendance (between 20% in Hoima and 55% in Mbarara). This would imply that there are some gaps in farmers’ managerial capacity to choose their enterprise appropriately, estimate and track cash flows, and determine the appropriate loan size.

Indeed, the findings of the qualitative survey support this gap, as the large majority of homes visited did not keep any or only incomplete records.

Respondents in Hoima perceive delivery of trainings on agricultural practices (59%) and agro-enterprise management (20%) to be significantly lower than in the other two locations (over 70% and about 50%).

There might be different reasons for the differences in perception. They could be caused by the way partner organizations deliver the trainings; they could be caused by the way participants absorbed the contents; and they could be caused by the wording of the questionnaire.

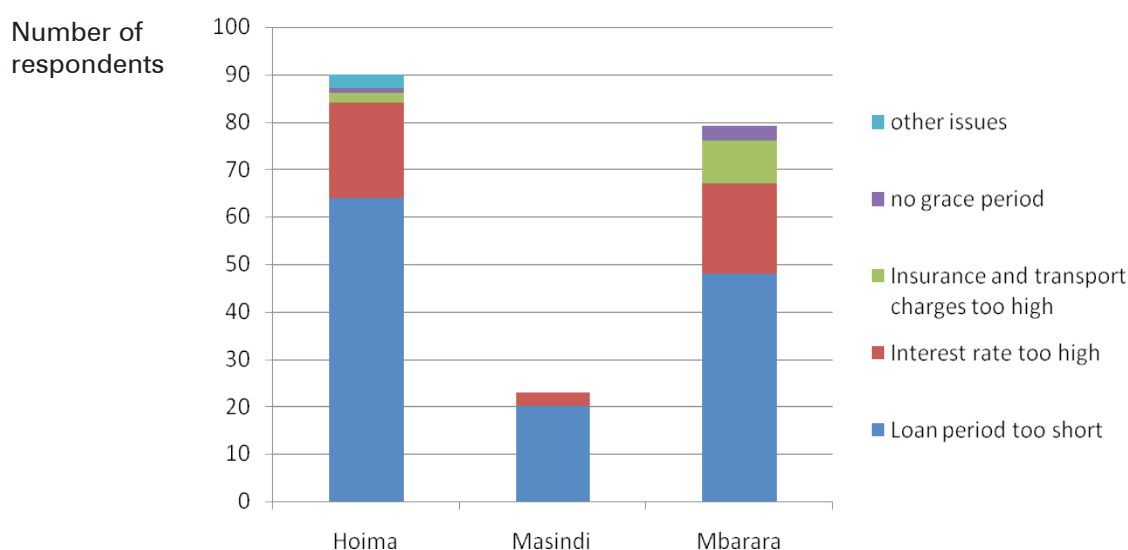
It seems reasonable to note that managerial skills (as opposed to knowledge) – agro-enterprise management, loan costing – have not been absorbed very well. On the level of skill learning, one of the reasons would probably be a weak feedback loop. In agricultural practices, the farmer (learner) can very quickly – season to season – observe the effects of adoption or change of practices, and can also exchange experience in discussion with other group members. With regard to managerial aspects like loan sizes or costing, both feedback loops are rather weak for example it is unlikely that a farmer shows perfect records to other group members and points out how they have improved her business. Also, farmers may be less open about loan sizes.

2.1.7 Challenges by product features

Complaints about the product features were loan periods and the charges (figure 8). Most concerns were on the loan period. Only few respondents miss a grace period. Indeed, grace periods tailored to the agro-enterprise are one of the innovative features of the loans offered by TRIAS-partner-MFIs. (see Annex I). However, one third of all respondents complained that the loan period is too short. That means they find it difficult to repay the amount received, plus interest, in the period given. From this follows that they would find a larger amount even more difficult to repay. Yet, many also complain that the loan amount approved is too small, i. e. smaller than what they applied for. This seems to be a contradiction. However, these two responses two feedbacks by different classes of respondents; both worthwhile of further examination by the MFIs.

- If the loan approval is too risk averse, it might affect the size and hence profitability of the agro-enterprise.
- If the loan applicants are over-optimistic about their repayment capacity – which is the usual human behavior – it might be worthwhile for the MFIs to explain their approval process more both in the initial training and repeatedly as they communicate the disbursements. They should use cases of harmful over-borrowing to remind the group members that correcting of the applied loan amounts is in the best interest of the borrowers.
- If the loan periods were indeed too short, the methods of choosing the agro-enterprise (PAED) and the according loan size would have to be revisited.
- Probably more likely is that parts of the loans are diverted to other uses, making the agro-enterprise carry higher capital cost than justified by the investment made into it, and that thus ‘there is loan left at the end of the agro-enterprise cycle’.

Figure 8: Challenges caused by product features



Many of the respondents noted that ‘interest rates are too high’ and the same complained about the loan period and sometimes about the loan size. Reducing the interest rate might appear to be one way of managing the repayment within the loan period. However, serving remote agricultural customers under Ugandan conditions where there are no identity register, unclear land ownership, poor physical and electronic infrastructure is inevitably expensive; the issues of operational standards discussed above underline this point.

Moreover, TRIAS-partner-MFIs offer rather competitive pricing of their loan products. Analysis by the NGO MF-Transparency (2012) shows that the agricultural loan products by HOFOKAM, EBO SACCO and MADFA SACCO are priced lower than the average of comparable loan products by Ugandan MFIs. This analysis, based on the international standard formula of Annual Percentage Rate (APR), controls for loan amount, loan period and legal form. Loan amount and period are variables that enter the APR-formula; legal form has supposedly an indirect influence, as regulation changes operational costs (e. g. lay-out of branches, credit reference requirements), reputation and, usually, size of the company.

Table 2 presents the APR for based on the features of loans offered to farmers under the TRIAS-programme (see Annex I). The loan size and loan period are based on survey respondents, taken as un-weighted averages over the three locations. Differences in APR are driven by the grace period and by the size of the security deposit:

- A longer grace period means that the borrower has more time with more money, and that translates into a lower APR. HOFOKAM and MADFA SACCO offer longer grace periods than EBO SACCO.
- Security deposits ‘drain’ the borrower of a large fraction of liquidity, and thus translate

into lower APR. EBO SACCO’s security deposit is half that of HOFOKAM and MADFA SACCO.

Although EBO SACCO has the highest APR (without security deposit), the cost of its loan in UGX is about one fifth lower than for HOFOKAM and MADFA SACCO. This is because the grace period is a short one. Hence, interest goes down as the principal is being repaid. For HOFOKAM and MADFA SACCO, the principal is repaid at the end of the loan period. Hence interest is paid on the full amount over the whole period.

Table 2: Cost of a standard loan¹, TRIAS-partner-MFIs

	EBO SACCO	HOFOKAM	MADFA SACCO
APR without security deposit ²	38.1%	34.6%	35.8%
APR with security deposit ²	44.0%	43.5%	45.0%
Credit cost (UGX)	82,000	102,000	105,000
Security deposit (UGX)	40,000	80,000	80,000

- 1 Loan size: 400,000; Loan Period: 9 month. The loan size was arrived at as the average of the median loan amounts of respondents of the three respective locations. The loan size is the average loan period based on the most common loan sizes of the three respective locations.
- 2 HOFOKAM and MADFA SACCO require a security deposit in form of compulsory savings. The amount required is 20% of the loan amount. EBO SACCO reports that it does not require compulsory savings; however according to MF Transparency (2012) they ask for a security deposit of 10%; that was also mentioned by respondents in qualitative interviews. This security deposit of 10% might refer to a requirement to buy shares in the SACCO (a common practice of SACCOs in the Mbarara region). In that case, the costs of MADFA SACCO are understated in this table, because its membership requirements are not taken into account.

A number of respondents, particularly in Mbarara, complained about the transport and loan insurance charges. MFIs regularly charge transport of field officers to go and appraise – and maybe monitor – the loan. That is a good practice and ultimately ensures repayment and thus sustainability. MFIs use different formulas to calculate transport charges; either a ‘flat rate’ applied to all customers or a specific charge depending on the residence of the customer. Under a flat rate, customers residing nearby the MFI premises subsidize those living far away. The specific rate is thus economically efficient; but it makes services for remote customers very expensive and thus adds to their location disadvantage. Short of opening more branches, which is very expensive in itself, reaching remote customers is a non-trivial management problem for financial institutions.

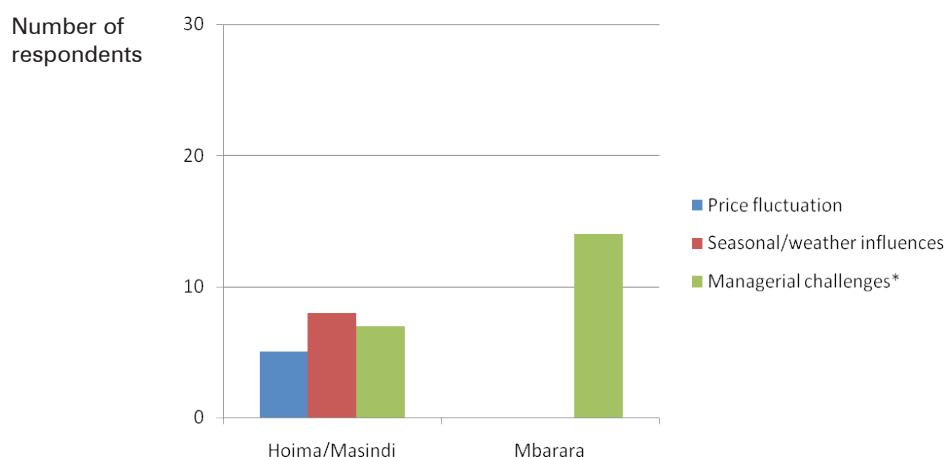
Loan insurance is principally a good product feature, because it protects the borrower and her family in case of fatal calamity. For example HOFOKAM offers loan insurance through the international insurance company Chartis. HOFOKAM-Chartis loan insurance covers death, heavy sickness and accidents leading to total incapacitation. In case of death of the borrower, it contributes to burial costs. Furthermore, it covers accidental death of up to 4 minors in the borrower’s family.

However, experience shows that these loan insurances in Uganda are usually overpriced, often grossly so. If it is a simple life insurance of the borrower only, there should be a considerable efficiency reserve. If the insurance has a broader service scope (e. g. some forms of sickness or accident, covering spouses, etc.), the efficiency case would not be straight forward.

2.1.8 Challenges from the business context

Challenges from the business context can be characterised as managerial, influence of season/ weather on the production, and price fluctuations (figure 9). Managerial challenges include sending of money to sellers of inputs/assets and costs of transport. Seasonal influences and price fluctuations are a significant concern in Hoima and Masindi. Most farmers there grow seasonal crops. They were more vulnerable to seasonal fluctuations, and thus more aware of them than perennial-crop farmers in Mbarara. The latter were more concerned about managerial issues of their business context.

Figure 9: Break-down of challenges from business-context, by locations



* Managerial challenges comprise of 'Sending money to seller of inputs/assets' (given answer option) and costs of transport (answer option 'any other').

2.2 Cash flow and loans

2.2.1 Overview

In a cumulative perspective over all respondents, the agro-enterprises were clearly breaking even, with a total profit margin of 53%. This is the profit margin after all seasonal and other costs and after costs of credit from TRIAS-partner MFIs. If some of the other costs and some of the credit benefits other businesses also – as discussed in section 4.0 – some of the profit from those businesses would have to be added to the equation, and the profit margin would be even higher.

The total loan amounts given out by HOFOKAM and MADFA SACCO to respondents in Hoima and Masindi represent 77% and 58% respectively of the seasonal profit. However, the total loan amount given by EBO SACCO to respondents in Mbarara represents 266% of the seasonal gross profits. For example, if the average respondent from Hoima and Masindi would earn 1,000,000 UGX from her selected agro-enterprise, she would have taken a loan of 770,000 and 580,000 UGX respectively. Hence, after repaying her loan principle, this average respondent would remain with 230,000 (Hoima) and 420,000 UGX (Masindi). However, the average respondent from Mbarara would remain with 0 UGX and still owe 1,660,000 UGX of loan principle to the MFI!

Seasonal profitability of the agro-businesses varies between 120% (matooke) and 262% (rice). However, for each of them there were great variances between the locations. Still, with the exception of beans in Masindi, all agro-businesses at all locations (there is no rice in Mbarara and practically no bananas in Hoima) could return a profit after repayments of TRIAS-partner-MFI-loans even if the complete inputs were credit-financed.

Cash-flow-analysis on the level of individual respondents qualifies the cumulative perspective: Whereas the majority of respondents are running profitable agro-enterprises, about 1 out of 4 are struggling with losses. The reasons appear to be twofold: On one hand, some farms have been managed and diversified poorly; often respondents have only grown one or two crops. This might be compounded by weather and or price fluctuations; e. g. all respondents with losses in Masindi grew maize. On the other hand, some farms are too small to operate profitably, in particular after credit cost is accounted for.

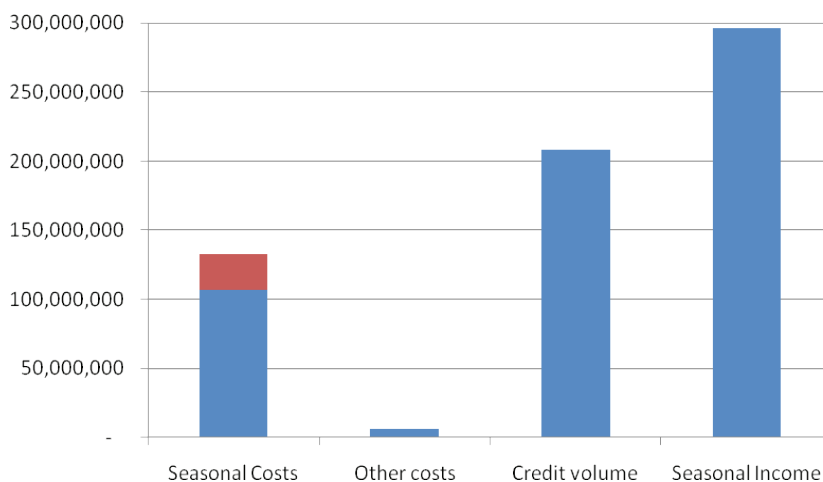
2.2.2 Cumulative analysis of TRIAS-agro-businesses: Cash-inflows exceed cash-outflows

Costs and income

The 414 respondents of this survey spent about UGX 140m on their agro-businesses, generating a seasonal income of about UGX 300m. They injected a credit volume of about UGX 210m (figure 10).

The major cost factors are seasonal operational costs specific to the selected agro-enterprise. These include land clearing, planting, weeding, fertilizing and protecting against pests and – particularly in Hoima – against birds, and harvesting, including transport and sometimes storage. Other costs are inter-crop costs, mostly spraying (pesticides and fertilizers), and inter-seasonal costs, such as purchase of hoes and repairs of working materials. Last but not least, credit costs are interest and other charges on the loans from TRIAS-partner-MFIs, calculated for 4 months (= 1 season).

Figure 10: Volume of costs, income and credit of survey respondents



Credit volume and income

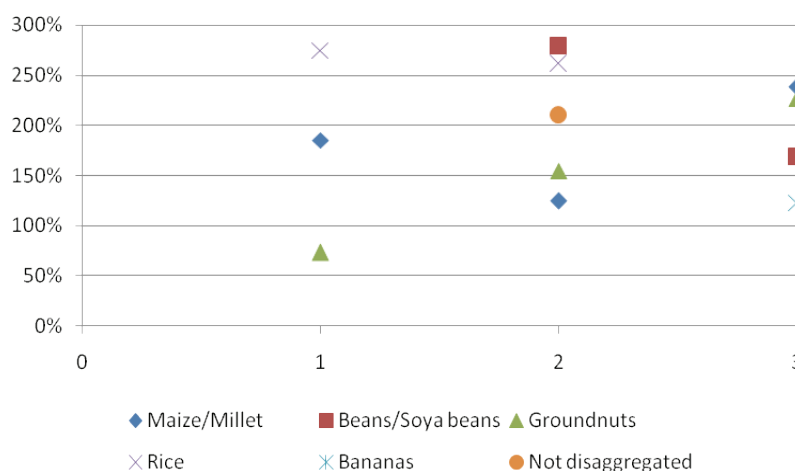
The credit volume exceeded the cost volume by about one third. Against the purpose of the loan – that was financing operational costs – this means this portion must be diverted by other uses (alternatively, the cost volume might have been understated). This is broadly in line with the reported loan use (see chapter 4.1.1, figure 1).

The comparison of the credit volume and the seasonal income also showed why some farmers felt that the repayments are a burden. One third of the credit was identified to be diverted; i. e. it does not finance improved productivity of the selected agro-enterprises. Yet, has all of the credit has to be repaid out of the agro-enterprise. Thus, the credit seemed to eat up a large part of the income. In fact, the credit size represents an advance on the profit of the agro-business. With that, the MFIs take a considerable risk – if the profit does not come through, e. g. because of weather or other hazards that may well befall the crops, the loan will default.

Remember many respondents complained about loans being smaller than applied for (4.1.3). Yet this analysis shows that the credit might be too large. That is assuming that the loan amounts disbursed are to be repaid within a season. If they run across seasons, the burden eases of course. However, in that case they can no longer be considered crop-operation-loans.

And indeed the responses on loan uses (figure 1) show that only about 75% of the credit volume are used to cover operational costs.

Figure 11: Profitability by crops and locations



* Cost of credit is here calculated as monthly interest, based on 3% nominal interest rate, multiplied by 4 months, plus 10% of the nominal interest to represent other charges; as percentage of loan amount. This approximation neglects the differences between effective cost of credit between HOFOKAM, MADFA and EBO SACCO (see table 2).

Profitability by crops and locations

Profitability varies according to crops and land sizes. However data on land sizes were not readily available. Cost and income data by crops shows that all of them are profitable in all places where they are grown (figure 11). Groundnuts in Masindi are the least profitable. Rice is the most profitable crop across places. On average, crops in Hoima return most. Differences of profitability of each crop vary substantially across places, particularly for groundnuts and beans. Rice has smaller variances; it is not grown in Mbarara, while bananas are grown only in Mbarara.

2.2.3 Household-level analysis: Capacity and vulnerability

Average profits and loans

On average, a household’s seasonal profit before credit was about UGX 450,000; the average loan amount was about UGX 500,000. However, households in Masindi and Hoima had on average higher profits, while those in Mbarara had lower profits. Yet, respondents from Mbarara took substantially more credit than those from Masindi and Hoima. Hence, households in Masindi have on average a seasonal profit after credit of about UGX 510,000, while households in Mbarara have on average only about UGX 210,000 after credit (Annex I). Respondents in Mbarara took more than double the credit of respondents in Masindi and Hoima. Indeed about half of the total credit volume is consumed in Mbarara, yet they represent only about one quarter of all respondents!

Accordingly, credit costs weigh in stronger in Mbarara than in the other two locations. Credit costs are interest and other charges as shown in table 2 (chapter 4.1.3). Table 3 shows the wedge that credit costs drive between profits before and after credits. For Masindi and Hoima, the credit-cost-wedge represents around 10% of average profit before credit. However in Mbarara, the credit-cost-wedge between profits before and after credit is three times larger; it represents a difference of about 30% of average profit before credit.

Table 3: Profits before and after loans from TRIAS-partner-MFIs, average household per location

	Masindi	Hoima	Mbarara	Total across 3 locations
Number of respondents	82	218	114	414
Average profit				
- before credit cost	549,776	490,472	328,036	457,490
- After credit cost	506,757	424,857	227,839	386,827
Average loan amount	318,659	379,220	871,281	502,720
Return on loan amount*	173%	129%	38%	91%

* Average profit before credit over average loan amount.

Accordingly, the loans were much more productive in Masindi than in Mbarara. The return on the loan amount in Mbarara hints that they hardly realize leverage. There are considerable risks of an unhealthy credit bubble in Mbarara (lenders' competition, large portions of loans not channeled into production, low returns on loans).

Profit and loss by households

Most households run their selected agro-enterprises profitably (table 4). Among these surplus-making-households, the median profitability before credit costs was 200% and more. However, about 12% of respondents run their selected agro-enterprises with losses. Their fraction was highest in Masindi (about 19%) and lowest in Hoima (about 10%). Among these loss-making-households, the median loss was higher in Hoima and Mbarara than in Masindi.

Table 4: Distribution of profit and loss before credit, by locations

	Masindi	Hoima	Mbarara	Total across 3 locations
No of respondents with both income and cost data*	63	152	84	299
Number with profit	53	138	74	265
Number with zero profit or loss	10	14	10	34
Median positive profitability**	225%	200%	233%	
Median negative profitability	-34%	-46%	-62%	

* The difference to total respondents (see table 1) are those which have only reported income or loss for their TRIAS-businesses, but not both.

** Without outliers, i. e. profitability over 1,000%. Number of outliers in Masindi – 4; Hoima – 17; Mbarara – 5.

The picture does not change fundamentally after credit (table 5). However, 23 of respondents fall from profit into loss; the fraction of respondents making a loss increases to almost 1 in 5 (out of the sub-sample which availed this data). The median loss in Mbarara and Hoima reduces: While there are more households making a loss on their selected agro-enterprise after credit, most of them make a relatively small loss compared to those who were in loss before credit. The median loss in Masindi increases slightly, however, showing that the difference between them before credit was relatively smaller and that the effect of credit is relatively harsher than in the other locations.

Table 5: Distribution of profit and loss after credit costs, by locations

	Masindi	Hoima	Mbarara	Total across 3 locations
No of respondents with both income and cost data*	63	152	84	299
Number with profit	49	125	61	236
Number with zero profit or loss	14	21	23	57
Median positive profitability**	165%	176%	122%	
Median negative profitability	-36%	-31%	-40%	

* The difference to total respondents (see table 1) are those which have only reported income or loss for their TRIAS-businesses, but not both.

** Without outliers, i. e. profitability over 1,000%. Number of outliers in Masindi – 2; Hoima – 7; Mbarara – 1.

Characteristics of households with losses

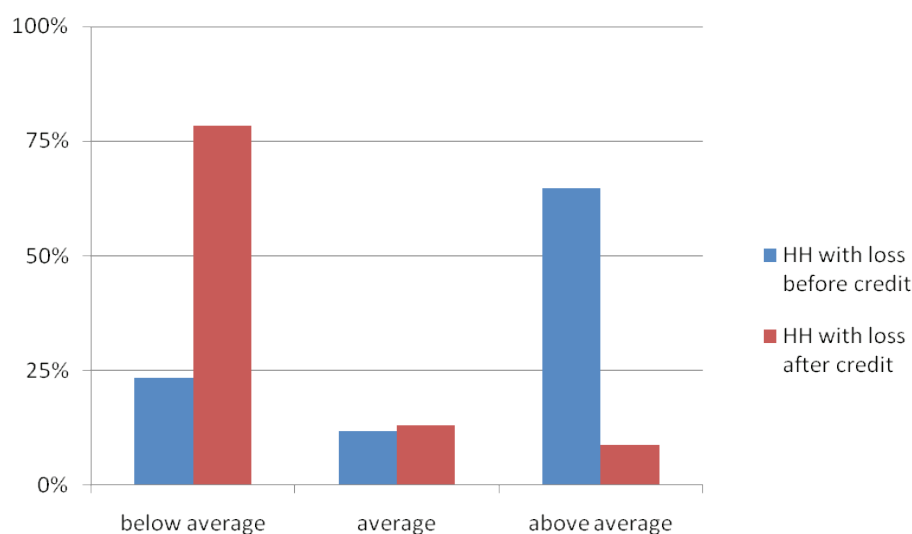
Losses can have different causes; and regularly several causes are at play concurrently. Potential causes are

- High costs relative to enterprise size,
- High credit relative to enterprise size; which might be rooted in errors of assessment of enterprise repayment capacity, or in diversion of part of the credit for non-productive uses;
- Lack of managerial capacity;
- Environmental issues, which may be direct hazards to the enterprise, e. g. weather or price fluctuations, or hazards to the household, e. g. sickness or accidents, which indirectly affect the enterprise.

65% of households which generated operational losses before credit were above average enterprise size (figure 12). Hence, the cause of their poor performance is probably not the size of the enterprise but managerial or environmental issues. Accordingly, the proportion of households with above-average-enterprises drops to only 9% of all loss-making households after credit.

Loss-making farmers with above-average enterprise size seemed more often to ‘put all eggs in one basket’, particularly in Mbarara where many of them grow exclusively matooke. Thus, managerial choice creates undue exposure to environmental risks that may befall the chosen crop. E. g. in Masindi, all households with losses grew maize.

Figure 12: Distribution of loss-making households, by business-volume



Y-axis: Percent of respondents who reported losses.

Business-volume is measured by seasonal operational costs. Below average is average minus more than 20%; above average is average plus more 20%. Average seasonal costs for

- Masindi: UGX 273,000 plus 20% = UGX 327,600, minus 20% = UGX 218,400;
- Hoima: UGX 298,000, plus 20% = UGX 357,600, minus 20% = UGX 238,400;
- Mbarara: UGX 171,000, plus 20% = 205,200, minus 20% = UGX 136,800.

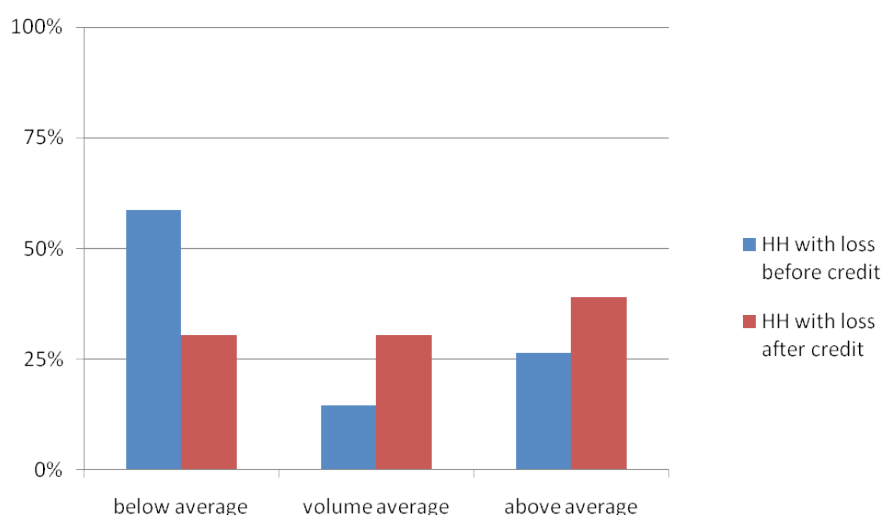
785 of households which returned losses after accounting for credit costs are below average business volume (figure 12). Hence, the cause of their poor performance is probably inefficient size of the business. In Hoima and Masindi, these farms are too small to cover credit costs. In Mbarara, many of these farms are very profitable – small inputs return high incomes – but the credit volume is bizarrely out of sync with these business volumes.

Interestingly, smaller farms tend to be more diversified than some of the larger farms. Yet, these farmers are faced with bad choices: If they ‘Put all eggs in one basket’ they would raise their risk exposure which, given the small business size, could not be cushioned. Having diversified the crops has further decreased the efficiency of the already too small business.

In all locations, loan appraisal of the smallest farmers is a factor contributing to their loss and exposing them to over-indebtedness. Before credit costs, 59% of loss-making households are those with below-average enterprises. After credit costs, their proportion reduces to 30% because more households with average- and above-average enterprises fall into loss when credit costs are added (figure 13).

However, the earlier findings must be taken into consideration: Farmers are already complaining about small loan amounts approved, relative to what they applied for. While the findings here show that the risk exposure for both farmer and MFI is on the high side, farmers often perceived the MFIs as too restrictive. It is a tense scenario to manage, and its relaxation depends on structural changes outside the realm of finance; the creation of minimum effective business sizes.

Figure 13: Distribution of loss-making households, by credit-volume



Y-axis: Percent of respondents who reported losses.

Credit-volume is measured by the most current loan taken from TRIAS-partner-MFI. Below average is smaller than average minus 20%; above average is larger than average plus 20%. Average seasonal costs for

- Masindi: UGX 319,000 plus 20% = UGX 382,800, minus 20% = UGX 55,200;
- Hoima: UGX 379,000, plus 20% = UGX 454,800, minus 20% = UGX 303,200;
- Mbarara: UGX 871,000, plus 20% = UGX 1,045,200, minus 20% = UGX 696,800.

2.2.4 Observations from visits to respondents’ homes

Through observation it was found out that majority of the farmers (Hoima 75%, Mbarara 70% and Masindi 65% of the farmers visited) in the three locations had well maintained farms, majority of these farmers also employed other people to support them on the farm especially during weeding and harvesting, its also evident that majority of these farmers can afford factor inputs and for a some few farmers there was evidence of recent or planned expansion. However, most farmers did not have grannaries and thus do not have storage facilities, also clearly evident was the lack of record keeping.

Also important to note is that most of these farmers (Hoima 47%, Mbarara 43% and Masindi 30% of the farmers visited) had other businesses for side income, majority of the farmers in the three locations had good looking houses and also healthy and school going children. From the observation, a good number of farmers visited possessed assets like Motor cycles, Bisycles, Solor power among others. This is also evidenced by the positive cash flows realized from the Agro-businesses and other businesses that farmers are engaged, that the surplus is invested in buying such assets.

2.3 Farmers’ capacity to manage household cash flows

2.3.1 Total income and expenditure for all sources of income

Business portfolio and credit-finance

The agro-enterprises selected by farmers under the TRIAS-programme formed the major part of respondents’ household income. However, income from other businesses amounts to about 1/3 of total income (figure X). The proportion was slightly larger in Masindi and Mbarara – around 36% - than in Hoima (about 28%). Other businesses include cultivation of tobacco, coffee, cassava and vegetables; animal husbandry; shops and other trade; and some crafts, e. g. basket making (Mbarara), butchery (Masindi), and a maize mill (Hoima). Formal employment ranges from 2 (Hoima) to 6% (Masindi) of other businesses’ income. In total, the average respondent’s annual income is about UGX 2.8m; that is USD per day 3.07. Given the average

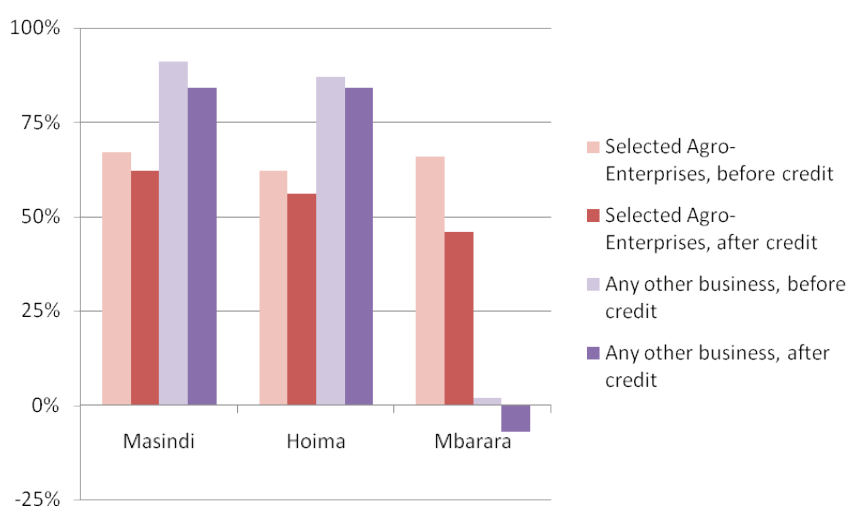
Ugandan household-size of 7 to 8, most respondent households fall below a per-capita-income of 1.25 US\$ per day.¹

In Masindi and Hoima the profit margins before credit of other businesses were higher than for the selected agro-enterprises. The profit margin before credit of other businesses in Mbarara was only 2%, though. The profit margin before credit selected agro-enterprise in Mbarara falls in the same range as for the selected agro-enterprises in Masindi and Hoima.

The picture for Masindi and Hoima did not change much when profit margins after credit are considered. The cost of credit accounts on average for 5 %-points of the profit margin.

However, in Mbarara the profit margin after credit for selected agro-enterprises is 20 %-points lower than before credit. Moreover, the profit margin for other businesses turns negative to -7% (figure 14).

Figure 14: Profit Margins before and after credit



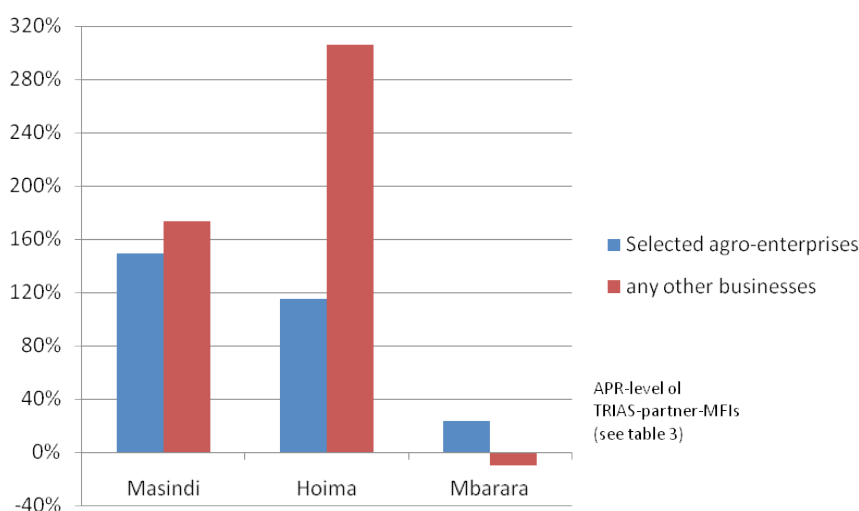
Some have argued that the seasonal costs and incomes are not the accurate basis to understand the profitability picture of the pre-dominant selected agro-enterprise in Mbarara, i. e. the perennial matooke.

To understand the leverage of the credit inflow better, we compared the return on credit for the agro-enterprises selected under the TRIAS-programme and for any other businesses (figure 15). In Masindi and Hoima, the return was over 100%. It was even higher for other businesses than for the selected agro-enterprises; however the large difference of returns on credit for Hoima might reflect weaknesses of the data – the seasonal costs reported appear unrealistically low; hence the profit was likely to be overstated. In Mbarara, credit did not carry a positive leverage effect, because the return on credit is lower than the cost of credit.

In summary, profitability of the business mix in Masindi and Hoima was attractive. Members there were tempted to divert credit to other businesses, because the returns might be even higher than for the selected agro-enterprises. In Mbarara, respondents would be better off following the advice of TRIAS to discontinue non-performing other businesses. However, because the credit volume is large compared to the business activities, credit costs eat up the profits. At the same time, the return on credit is lower than the cost of credit.

¹ This assumes that respondents' households do not have huge other sources of income which went unreported. Although the income and expenditure data of the survey is certainly incomplete, it is unlikely that the error would be to the tune of 100% of the income and expenditure-data captured here.

Figure 15: Return on credit, by business class and location



Access to credit through the TRIAS-program does ‘spill over’ to other businesses. On the one hand, some credit-financed inputs apply to both TRIAS- and other businesses, for instance spraying pesticides or fertilizers. On the other hand, parts of credit may be used for specific inputs for other businesses, for instance seeds for tobacco or sunflowers. It is not possible to disentangle the degree to which TRIAS credit is channeled into other businesses, but it is probably safe to assume that it evens out the difference in post-credit-profitability noted above. This will therefore be a positive un-intended benefit of the programme taking the nature of the target group.

The TRIAS-program increases the complexity of money-management required by respondents on two levels. On the one hand, they have to determine the best credit-volume to be injected into their respective businesses. On the other hand, they have to ensure that cash-inflows from credit are not diverted from the intended use. Respondents seem to be roughly ‘on course’ regarding the former but struggling regarding the latter. Note that using credit for other than TRIAS-investment purposes does not in itself mean diversion; the credit might have been accessed with that purpose in mind.

However, putting into view the discussion from chapter 4.1 and 4.2.2 and the observation that almost no respondent has reached the level of keeping proper records, it seems save to state that money management skills still need attention; despite rather intensive trainings on that topic.

Business portfolio of vulnerable households

Regarding the vulnerable households, almost all of those from Mbarara and Masindi engage in other businesses, but only few from Hoima do so.

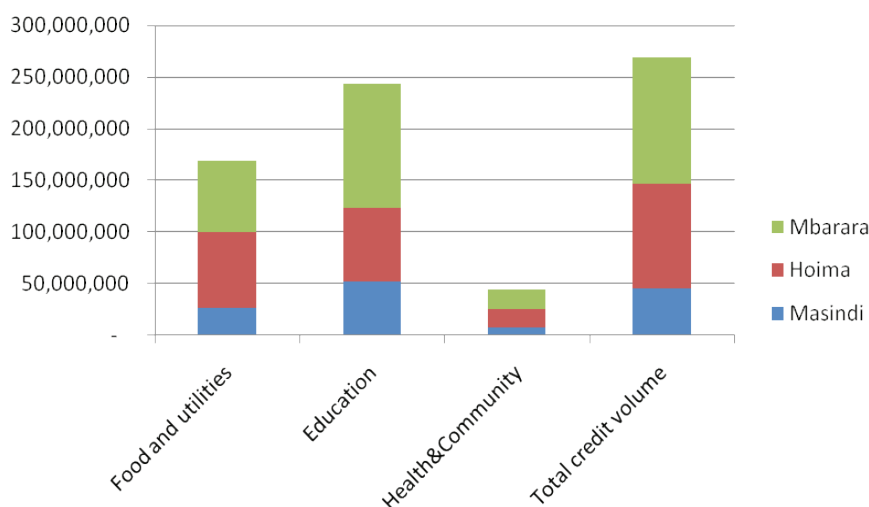
Respondents from Masindi were most successful with their other businesses. All but one generate positive returns. However, only about half of them cover the losses from their TRIAS-businesses. In Mbarara, half of them turn their fortune through other business, although only 3 of them substantially so. The other half, however, also runs losses in their other businesses. In Hoima, only about 1 in 5 vulnerable households engaged in other businesses, including one formally employed. Out of these, only 2 cover their losses from the TRIAS-businesses, the others add losses to their balance sheet.

In summary, for some of the vulnerable households, substantial engagement in other businesses might be the reason that the selected agro-enterprises had not been attended to well enough. Overall however, these households are performing rather poorly on either of their business ventures. The choice they face is a very difficult one: They need to reconsider the balance between diversifying risks and optimizing enterprise size. However, such a commercial choice about growth might not be accessible to a household that is concerned about mere survival.

2.3.2 Household development and consumption

Economics considers all current spending other than savings and investment as consumption. The major item of consumption of respondents' is education (figure 16). However, the label may be questioned. Education is surely a long term investment. Moreover, willingness to spend for own and children's education is a strong indicator of development orientation; education will lead to change in business practices and business lines people engage in. It is also linked to improved health care and other social behaviors. Accordingly, spending on health care and community involvement – e. g. contributing to weddings or funerals – carry at least partly investment characters. Health care means maintaining productive capacity; community involvement means networking to harness economic and other opportunities, e. g. borrowing from neighbors individually or through ROSCAs/ASCAs.

Figure 16: Expenditure for consumption and household development



Respondents in Mbarara and Masindi spent more for education than for food/utilities, but respondents in Hoima spent more on food/utilities than on education.

The average respondent of Mbarara spent almost double the amount for health/community than the average respondent of Masindi and Hoima. Overall, this vote takes only a small fraction of all spending.

Table 6: Net-worth of respondent households, by location

	Masindi	Hoima	Mbarara	Total across 3 locations
Negative net-worth				
Number of Households	41	122	104	267
Median (UGX)	-545,800	-413,400	-700,000	
Positive net-worth				
Number of Households	41	96	10	147
Median (UGX)	601,147	479,700	208,500	

Most households struggle to balance their total cash flows. The net-worth is the sum of all cash-inflows and all cash-outflows. A negative net-worth means that the household spent more than it received (in a given period, here: season). About 2 out of 3 respondents' households have a negative net-worth. The distribution is worst in Mbarara where only 10 households report a positive net-worth. The median negative net-worth in Mbarara is substantially higher than in Masindi and Hoima (table 6). In Hoima, the picture emerging is most balanced; some of the variance for Masindi and Mbarara may be accorded to the smaller sample-size. Thus,

based on the Hoima-sample, it may be noted that about 56% of respondents fail to balance their total cash-flows; that means the profits from their selected agro-enterprises and other sources of income cannot cover their expenditures for food, education and health. About 44% of respondents can cover those expenditures from their profits.

The difference between outflows and inflows must be covered from substance, i. e. 'cashing in' some assets; or from credit. Another possibility could be the income-effect through self-grown food of some selected agro-enterprises – matooke, maize, beans.

3

Conclusion and recommendations

The study found that the TRIAS model is successful. Farmers can access adequate credit that allows them running profitably their selected agro-enterprises. The key strength of the TRIAS-program include:

- Comprehensive training inputs; particularly well perceived by respondents in Mbarara;
- Innovative loan product design;
- Fairly large proportion of loans taken are injected in the selected agro-enterprises;
- The selected enterprises are, in cumulative perspective, profitable in the respective locations;
- The cash flow generated by the selected agro-enterprises covers, in a cumulative perspective, all costs including credit-costs. Moreover, in a household perspective, three quarter of households (for which this data is sufficiently complete) operate with positive returns;
- The large majority of households visited displays fairly well managed agro-enterprises and well kept and fed households.

A minority of farmers are not doing satisfactorily well. They run their selected-agro-enterprises at a loss. There are two major nexuses that cause farmers to fail to perform. On the one hand, enterprises are too small, and farmers' managerial capacity is limited. They are in the category of highly vulnerable family farmers. Moreover, the choice they face: Either to concentrate on one agro-enterprise and carry un-cushioned risk to their income and food security if it goes bad – as seems to have happened to a number of respondents who concentrated their efforts on growing maize or to diversify with the resulting agro-enterprises being inefficiently small, hence not profitable.

On the other hand, farmers fail to perform because they do not use credit wisely. Particularly in Mbarara many respondents had taken on more credit than their businesses – the agro-enterprises selected under TRIAS-program and/or any other source of income – can repay.

A major reason for exorbitant credit is education. Respondents in Mbarara were found to be spending more on education than those in other places. However, their means are rather less, because matooke is comparatively less profitable than other agro-enterprises. Thus, other businesses are more crucial to them than to respondents in Hoima and Masindi. The profitability-outlook of matooke might be underestimated here, because it is a perennial and not a seasonal crop, and therefore inputs and incomes would better be compared over a longer time period.

Recommendations to the partner

Farmers do constantly ask for more credit than they should; and if denied, they are likely to borrow from other sources. A continuous effort to instill prudence – or financial literacy – is in the best interest of the MFIs.

MFIs need to pay special attention to money management abilities, particularly when successful agro-enterprises lead to increasing complexity of total business- (and other activity) portfolios of the target group.

The SACCOs may need to review their loan insurance package along the lines of HOFOKAM. SACCOs may consider exploring if loan insurance could be a product to be pursued in collaboration with the other SACCOs operating in their areas; the more customers, the cheaper the insurance cover.

SACCO may engage the insurance companies to reduce the premium and this could be based on information on the volumes from other SACCO's in the area.

SACCOs and MFIs need to review and probably strengthen its risk management framework. The data of this study indicates that there are considerable environmental risks, i. e. spreading over-indebtedness.

To the farmers, there is need to empower them to keep records.

References

MF-Transparency (2012): Transparent pricing in Uganda, under: www.mftransparency.org/microfinance-pricing/uganda/, date accessed 10th March 2013.

Schmidt, O. (2011): Microfinance Tragedy in Andhra Pradesh, in: Development and Cooperation 2011/01, pp. 30-33.

Annexure

Annex 1: Names of groups and numbers of members interviewed/visited

Name of Group	Number of members interviewed	Number of members visited
Hoima		
Twekambe Kiryabana	5	1
Kanigiro Cattle Keepers	8	1
Tweyombeke Farmers-Kichwamba	6	1
Twekambe Katerega	17	4
Akatungoza Wegesa	9	0
Mukama Murungi Kibararu	7	2
Musaija Mukulu Nerika Farmers Association	7	3
Twekambe Ngogoma	3	1
Bujungu Tukole	11	4
Abateraine Kihule	8	3
Mercy Bulindi	7	3
Kwegondeza Bulyango	6	3
Kyomuhendo Mixed Farmers	7	3
Nezikukoka Bulyango	11	4
Tukolerehamu Farmers Dwoli	24	5
Tukwatanize Buhimba	12	2
Twimukyanganane Nyabuhere	20	3
Tweyombeke Kyakapeya	3	0
Tweheyo Kikwataningo	3	3
Butebere Farmers' Group	22	3
Bwihamba Farmers Group	12	3
Nezikokolima Farmers Group	2	1
Bujungu Tweheyo	8	0
<i>Total Hoima: 23 groups</i>	<i>218</i>	<i>53</i>
Masindi		
Atek Lwalk	9	2
Kyangamwoyo Group	17	4
Bijampooro Farmers Group	18	5
Diika Mwamba Group	10	3
Mwije Tukole	6	1
Atek Kun	5	1
Umoja Group	7	2
Twekambe Farmers Group	5	1
Kyabaryali Group	5	1
<i>Total Masindi: 10 groups</i>	<i>82</i>	<i>20</i>
Mbarara		
Bwengure Barisa	12	1
Akarungu farmers	12	1
Kitookye Matookye	14	1
Rwema Rukaka local chicken farmers	14	1
AbamweBukiro farmers	12	1
Kamuganga coffee growers	14	1
Rweishaka abakuzire	12	1
Rugarama field farmers	12	1
Bamwe group farmers	14	1
<i>Total Mbarara: 9 groups</i>	<i>114</i>	<i>9</i>
Total: 42 groups	414	82

Annex II Questionnaire

Interviewer: Complete before beginning the module.

Questionnaire number:	
Name of interviewer:	
Location (circle appropriately)	Masindi Mbarara Hoima
Group number:	
Date:	
Time Start:	
Time End:	

CONSENT FORM

My name is _____ and I am a student of Bachelor of Banking and Development Finance at Mountains of the Moon University, a large community-owned University in Fort Portal, Kabarole District.

We are doing a study to better understand the effects the different projects of TRIAS and its partners have on you, your family and farmer group .

We would like to ask you some questions, and your answers will help us understand how TRIAS programs have impacted you and what should be done to serve you better in future.. Of course, participation in this study will not affect your membership or role in your group. So we request you to tell us the truth about everything we ask. Your answers are very important because they will help the SACCO to serve you even better in the future.

Some questions are a little sensitive and personal. Please, indicate when you don't want to answer.

Everything you say will stay between us (you, our workers and our researchers). We don't even put your name on this paper. Therefore, feel at ease and provide honest answers.

I'd like to start by asking you some questions about your background and family.

A.1 Basic Information (respondent)		
1. Sex:	<input type="radio"/> male	<input type="radio"/> female
2. Age (please circle appropriate age bracket)	<input type="checkbox"/> 15-20 years	<input type="checkbox"/> 21-25years
	<input type="checkbox"/> 26-30 years	<input type="checkbox"/> 31-35 years
	<input type="checkbox"/> 36-40 years	<input type="checkbox"/> 41-45 years
	<input type="checkbox"/> 46-50 years	<input type="checkbox"/> 51-55 years
	<input type="checkbox"/> older	<input type="checkbox"/> Don't know
3. Schooling (please circle appropriate age bracket)	<input type="checkbox"/> primary	
	<input type="checkbox"/> secondary	
	<input type="checkbox"/> university	
	<input type="checkbox"/> none	
4. In which year did you join this group?	<input type="checkbox"/> Before 2005	<input type="checkbox"/> 2005
	<input type="checkbox"/> 2006	<input type="checkbox"/> 2007
	<input type="checkbox"/> 2008	<input type="checkbox"/> 2009
	<input type="checkbox"/> 2010	<input type="checkbox"/> 2011
	<input type="checkbox"/>	

5. A) Have you participated in any training that was given to the group? (circle accordingly) **Yes** **No**
 B) If yes, which kind of trainings? Please also tell us who trained – TRIAS, the SACCO, the farmers’ association, other organisation. Please also tell us how many weeks the training took (if less than a week = 0)

Type of training (please circle accordingly)		Who trained (TRIAS or the SACCO or the farmers association or another organisation)	How many weeks did the training take (if less than a week = 0; if more than one training of the same type, add weeks together)
Agriculture	How to grow crops (which ones?)		
	How to store produce (which one)		
	How to sell produce (which market, which time)		
Agro-enterprise	How to chose an enterprise		
	How to know the cash flow of an enterprise		
	How to decide if an enterprise should take a loan		
Money	How to save		
	How to plan for spending of money		
	How and when to take a loan		
	How to know the cost of a loan		
None of the above			

A.2 FAMILY

Now we want to ask you about your family. Again, please remember we will not share your answers with anyone, so feel free to be honest.

6. A) Marriage status	<input type="radio"/> single	<input type="radio"/> married	<input type="radio"/> widowed/separated
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B) If married male:

How many spouses do you have? _____

If married female:

How many spouses does your husband have? _____

7. What is your (first) spouse`s age

15-20	21-25	26-30	31-35	36-40	41-45
46-50	51-55	56-60	61-65	older	Don` t know

8. What was the highest class your (first) spouse completed in school?

primary	secondary	university	None	Don` t know
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9. Children	Male	Female
A. How many children do you have who go to primary school?		

B. How many children do you have who go to secondary school?		
C. How many children do you have who go to university?		

B. Income

10. What are your major sources of Income (please circle accordingly; give details where circled)?

Source of income	Which one
Agro-enterprise (growing and selling farm produce)	<input type="checkbox"/> bananas <input type="checkbox"/> millet <input type="checkbox"/> beans <input type="checkbox"/> rice <input type="checkbox"/> maize <input type="checkbox"/> soya beans <input type="checkbox"/> any other
Trading in Agriculture products	
Business	
Employment (please give monthly salary and since when [month] employed in that job)	
Any other	

9) A) Income from agro-enterprise:

How much income (money) did you get from your agro-enterprise in the last season? (if more than one agro-enterprise [= crop grown in a season], use column 2 and 3 accordingly)

Agro-enterprise:			
Amount (UGX):			
Season from-to (month)			

B) Income from other sources:

How much income (money) did you get from other sources of income in the last season? (i. e. during the same months for which the income from agro-enterprises was noted)

C. Expenditure

11) A) What is the major input for your agro-enterprise in a season?

Agro-enterprise			
Major input (e. g. seeds, weeding, storing, transport, etc.)			
Cost of the major input (UGX)			

B) Did you have any other major costs in your agro-enterprise (e. g. repair, extra-schedule spraying, etc)?

C) Income from other sources:

What were your major cost items for other sources of income?

- 12) How much do you spend for feeding your household (all the people eating from the same pot in your home) **on a typical day**? _____ UGX
- 13) How much do you spend for school fees (tuition, books, uniforms, etc.) **in one term**? _____ UGX
- 14) A) How much did you spend for health care of your household members **in the last three months**? _____ UGX
- B) How much did you contribute to community events **in the last three months** (burial, wedding, community service, etc)? _____ UGX

D. Loans

Question 16 is about loan access and costs and conditions from EBO SACCO / HOFOKAM / MADFA SACCO (read the according institution); question 17 below asks about the use of the loan from the SACCO / HOFOKAM, question 18 about challenges encountered in servicing the loan.

16. (a) From where do you take loans? (you may tick more than one)	<input type="checkbox"/> EBO SACCO / HOFOKAM / MADFA SACCO	<input type="checkbox"/> Other places
(b) If ticked " EBO Sacco/ HOFOKAM/ MADFA SACCO " in 16(a), how much did you take in your latest loan?	Principal: (if this is a current loan, please indicate how much is outstanding right now: Principal: _____ Interest: _____)	
In which month did you take this loan:		
How much interest do you pay for that:	% p. month	
How do you repay	<input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly interest only, principal during harvest	
Have you delayed repayments for this loan?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
(c) How often have you taken a loan from EBO-SACCO/ HOFOKAM/MADFA SACCO since you have been a member of this group?		
(d) If ticked " Other places " in 16(a), please specify. (more than one answer is possible)	<input type="checkbox"/> From my spouse	<input type="checkbox"/> Commercial bank
	<input type="checkbox"/> From Friends/Relatives	<input type="checkbox"/> Group (please give details):
	<input type="checkbox"/> Other SACCO (give details)	<input type="checkbox"/> Other places (give details)
(e) If ticked " Other places " in 16(a), how much have you taken from all of them together right now:		

(f) Are loans from other places more or less expensive (is the interest higher or lower) than at EBO SACCO/ HOFOKAM/MADFA SACCO? <i>(please give for each ticked under d)</i>	
(g) If ticked "Other places" in 16(a), what is better about them than the SACCO/ HOFOKAM loans?	
(h) Would you, or have you in the past, taken a loan from other places to repay the EBO-SACCO/HOFOKAM/ MADFA SACCO loan?	

17. How did you use the loan, if any, from EBO SACCO / HOFOKAM / MADFA SACCO?
(please circle accordingly, give details if applicable).

School fees	
Purchase of an asset for the business (which one)	
Purchase of an asset for the household (which one)	
Buying seeds for my agro-enterprise	
Clearing land / planting	
Weeding	
Harvesting	
Repairs (which ones)	
Repay another loan (from where)	
Any other (please give details)	

18. What are major challenges you face in taking loans? (please circle)

- Agreeing with spouse on use of loan amount
- Sending the money to the seller of inputs/assets
- The SACCO takes long to disburse the loan
- Servicing the loan within the loan period
- Pressure from other household members to divert the money
- Any other (please give details):

E. Savings

Question 19a, b, c, d are not applicable to members of HOFOKAM groups. Move straight to 19e (saving in 'other places').

19. (a) Where do you save? (you may tick more than one)	<input type="radio"/> EBO SACCO / MADFA SACCO	<input type="radio"/> Other places
(b) If ticked "EBO SACCO/ MADFA SACCO" in 19(a), how often you save there (daily, weekly, monthly)?		
(c) If ticked "EBO SACCO/ MADFA SACCO" in 19(a), how much money do you save in the SACCO in the last month (in UGX)?	UGX	

(d) How much (UGX) do you have in your SACCO savings account right now?		
(e) If ticked "Other places" in 19(a), please specify. (more than one answer is possible)	<input type="checkbox"/> In the house	<input type="checkbox"/> Commercial bank
	<input type="checkbox"/> Friends/Relatives	<input type="checkbox"/> Saving groups
	<input type="checkbox"/> Other SACCO (give details)	<input type="checkbox"/> Other places (give details)
(f) If ticked "Other places" in 19(a), how often do you save according to each of the ticked "other places", given under 19(e)?	<input type="checkbox"/> daily <input type="checkbox"/> weekly <input type="checkbox"/> monthly <input type="checkbox"/> Other (which one)	
(g) If ticked "Other places" in 19(a), how much money do you save in each of these "other places", given in 19(d)?		
(h) How much (UGX) do you have saved in other places (altogether) right now?		
20. Do you save more during a peak-season?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
21. If "Yes", how much more?		

F. Decision Making

22. Does your spouse know where you keep your savings?
 Yes No
23. Does your spouse know how many savings you have?
 Yes No
24. Does your spouse know from where you have taken the last loan you took?
 Yes No
25. Does your spouse know how many loans you have taken?
 Yes No
26. Does your spouse know if any repayments have been delayed?
 Yes No
27. Does your spouse/other family members make contributions for your loan repayment?
 Yes No
28. What are other sources of loan repayments:
- Other business
 - Employment (own or family member)
 - Savings
 - Contribution/Borrowing from relatives or friends
 - Borrowing from ROSCA/ASCA
 - Borrowing from money lender
 - Any other (please specify)

29. A. Who makes decisions about school expenditures?

Mainly wife	Wife and husband jointly	Mainly husband
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B. Who gives the cash for school expenditures?

Mainly wife	Wife and husband jointly	Mainly husband
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30. A. Who makes decisions about major household expenditures?

Mainly wife	Wife and husband jointly	Mainly husband
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B. Who gives the cash for major household expenditures?

Mainly wife	Wife and husband jointly	Mainly husband
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2 Observation Check List

Date:

Observer:

Project:

	Yes	No	Comment
AGRO-ENTERPRISE			
Farm well maintained			
Employs other people to help			
Evidence of affordability of factor in-puts e.g. equipment, pesticides, and drugs			
Evidence of recent or planned expansion			
Presence of a granary			
Keeps Business records			
Other BUSINESS			
Evidence of progress e.g. New stock, size of stock, etc			
Added facilities and equipment e.g. Refrigerator, weighing machine, or any other equipment			
Employs other helping staff			
In case of cattle, presence of Milk collecting and keeping containers(note the size)			
HOME			
Children- healthy looking and well nourished, clothed			
Evidence of children attending school e.g. books, school uniform, reading charts etc.			
Modern roofed house, plastered walls, cemented floor			
Any electrical appliances			
Solar power			
Vehicle , Motorcycle			



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