Responsible Agriculture Finance for Smallholder Farmers in Tanzania and Uganda

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Background

The MasterCard Foundation (MCF) commissioned a study on the topic of input credit for smallholder farmers in Tanzania and Uganda. More specifically, the study was to focus on two components: (1) the extent to which smallholder farmers understand the pricing structure and compulsory nature of bundled input credit products; and (2) the level of risk and exposure smallholder farmers face when engaging with providers of agricultural finance. The objective of the study was to improve MCF’s understanding of how agricultural finance can be delivered in a responsible way in line with the Client Protection Principles.

In order to scrupulously interpret the study’s sampling approach, findings, and subsequent implications, it is important to begin with a contextual overview of ‘input credit’ within Tanzania and Uganda. Additionally, it is essential to detail the different sub-components of what constitutes an ‘input credit bundle’ within such contexts. Given the intent of MCF to leverage the insights of the report for its broader programming throughout Africa, the elucidation of such contextual information is critical for establishing the appropriate boundary conditions of the study.

Overview of ‘Input Credit’ in Tanzania and Uganda

The provision of credit from formal financial institutions to smallholder farmers for the purpose of purchasing inputs remains very much in its infancy in both Tanzania and Uganda – and indeed throughout much of Africa in general. While the total number of microloans has certainly been increasing on the continent, the vast majority of growth has come within urban rather than rural regions. This increased focus on financing for ‘small businesses’ in urban settings as opposed to agricultural financing for rural farmers is similarly reflected within Tanzania and Uganda. Additionally, in instances where formal financial institutions are becoming more involved in providing credit to the agricultural sector, it is much more up-stream within the value chain (i.e., warehousing, off-takers, etc.) or to farmers that are more commercial

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1 Dalberg Global Development Advisors (2016), *Inflection Point: Unlocking Growth in the Era of Farmer Finance*
2 DeBruyne (2014), *Perceived versus Real Challenges in Rural Finance: The Experience of AMT Members*, African Microfinance Transparency
3 Financial Sector Deepening Trust (2013), *FinScope Tanzania 2013*
in nature. In fact, the Head of Agricultural & Rural Finance at Financial Sector Deepening Trust in Tanzania estimates that less than one percent of all finance in the country is focused on agricultural production at the smallholder level.\(^5\)

The primary reason for the dearth of input credit from formal financial institutions to smallholder farmers in Tanzania and Uganda is the high degree of risk these farmers represent.\(^6\) In general, financial institutions see farmers as one of their most challenging client segments because: (1) their income is erratic; (2) their required investments can be significant; (3) their risks can be difficult to mitigate; and (4) their financial needs extend beyond agricultural production.\(^7\) Thus, as compared to other actors within the agricultural value chain – which in and of itself is considered a high-risk sector – funding inputs for smallholder farmers are thought to represent the highest degree of risk.\(^8\)

Additionally, smallholder farmers are considered one of the costliest segments to serve.\(^9\) Of course part of such costs emanate from the transaction-related costs of reaching remote rural areas, designing new tracking systems, etc.\(^10\) However, just as significant can be the high costs of capital in serving the smallholder segment. As the Executive Director of the Tanzania Association of Micro-Finance Institutions (TAMFI) described the situation, the country’s financial institutions are currently facing their own shortage of capital,\(^11\) and many of the institutions providing input credit to smallholder farmers are not permitted to take deposits/savings. Thus, these financial institutions often rely upon outside investors for providing capital, investors who expect high short-term rates of return that may be difficult to achieve by targeting smallholder farmers. The end result is that the vast majority of all smallholder farmers within Tanzania and Uganda continue to be excluded from formal financial institutions.\(^12\)\(^13\)

So faced with a lack of access to credit for purchasing inputs, what do most farmers in Tanzania and Uganda do? Some don’t use inputs at all. For example, it is estimated that only 64 percent of smallholder farmers in Tanzania use fertilizer, and less than 50 percent use pesticides.

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\(^5\) FSDT Interview
\(^6\) Yakini Development Consulting (2012), *Agricultural Finance Markets Scoping*, Finance Sector Deepening Trust
\(^7\) Anderson & Ahmed (2016), *Smallholder Diaries*, CGAP
\(^8\) Akiba Commercial Bank Interview
\(^9\) Making Finance Work for Africa (2012), *Policy Brief on Agricultural Finance in Africa*
\(^10\) Dalberg Global Development Advisors (2016), *Inflection Point: Unlocking Growth in the Era of Farmer Finance*
\(^11\) TAMFI Interview
\(^12\) Anderson, Marita, & Musiime (2016) *National Survey and Segmentation of Smallholder Households in Tanzania*, CGAP
\(^13\) AMFIU (2013), *The State of Microfinance in Uganda*
on their crops\textsuperscript{14}. However, most of the farmers we interviewed saw their land as ‘old’ in that it will fail to produce adequate yield without at least basic inputs; they therefore do whatever they can to acquire these inputs during the planting season.

Many farmers within Tanzania and Uganda use some sort of savings to purchase at least a portion of their farming inputs. This money is often saved from either the proceeds of the previous planting season, or from the sale of an animal or some other asset\textsuperscript{15}. Additionally, some farmers receive government assistance for the purchase of inputs, either by way of direct provision or by way of a voucher system. However, the stability and dependability of such government programs is extremely low, causing farmers not to rely exclusively on these types of subsidies\textsuperscript{16}.

Perhaps not surprisingly, the vast majority of farmers within Tanzania and Uganda use informal sources of financing to purchase inputs\textsuperscript{17}. To some degree, this might involve borrowing money from family and friends at varying rates of interest. Usually, however, such monies only represent very small amounts, and thus additional sources of financing are needed\textsuperscript{18}. Similarly, a small but growing percentage of smallholder farmers are able to receive modest short-term loans from SACCOs, VSLAs, or ROSCAs, but again these types of funds are typically insufficient to purchase inputs without additional financing.

To make up the shortfall, a number of smallholder farmers turn to private lenders. These lenders are either wealthy individuals or, more typically, they are intermediaries who buy crops from individual farmers and sell in aggregate to off-takers. In return for providing financing for inputs, these lenders demand that the farmers sell to them a portion of their crop yield at a heavily discounted price. The cost for using such channels is considered so high that they have come to be known in Eastern Tanzania as ‘kukata kichwa’ which translates as ‘cut your head’, and in Western Uganda as ‘mbata’ which means ‘take your blood’. One focus group in Mbeya, Tanzania described the situation like this:

\begin{quote}
Why they call it ‘cut your head’ is because that arrangement is very expensive compared to bank loans. Interest rates can go up to 200 percent ... the ‘killing interest’.
\end{quote}

\textsuperscript{14} Anderson & Ahmed (2016), Smallholder Diaries, CGAP
\textsuperscript{15} Anderson, Learch, & Gardner (2016), National Survey and Segmentation of Smallholder Households in Uganda, CGAP
\textsuperscript{16} Tanzanian Agricultural Development Bank Interview
\textsuperscript{17} Anderson & Ahmed (2016), Smallholder Diaries, CGAP
\textsuperscript{18} Anderson, Marita, & Musiime (2016) National Survey and Segmentation of Smallholder Households in Tanzania, CGAP
The [kukata kichwa] arrangement is like this – you are giving the person one bucket of coffee for 10,000 shillings which is worth 45,000 shillings. 19

In the event you are unable to provide the ‘kukata kichwa’ or ‘mbata’, the penalties are also typically exorbitant, as another focus group participant noted:

“In this private arrangement, they have a contract. And the private person defines the terms. They say ‘this 100,000 shillings is equivalent to six buckets of coffee’. Then ... on top of that if you won’t pay me ... the 100,000 will be equivalent to 1,000,000. Then you sign the contract. Later when you fail to repay the six buckets of coffee, he will take you to the court and force you to pay the 1,000,000.” 20

One would assume the most likely supplier of input credit would be the input sellers themselves. However, recent surveys in both Tanzania and Uganda indicate that over 95 percent of smallholder farmers are forced to pay for their inputs in cash21. In conducting a series of interviews with input suppliers within the field, it was clear that they simply lacked the necessary capital to offer inputs on credit. While they were often able to obtain financing from a formal financial institution to help manage their own internal business cash flows, they lacked the financial capacity to provide payment terms to smallholder farmers of any more than a couple of days, and only for a small portion of the balance.

While it is important to understand the informal lending context, this study focuses primarily on the level of farmer comprehension and risk with respect to formal input credit. Furthermore, it is important to note that the term ‘input credit’ is used to refer to both: (1) farmers receiving cash loans from formal financial institutions for the purpose of purchasing inputs, and; (2) farmers receiving inputs directly as part of an integrated program involving financial institutions, large agro dealers, and off-takers. While the studied included two examples of the latter financing structure (One Acre Fund; AgriFin Accelerate), this non-cash arrangement appears to be the exception rather than the norm in Tanzania and Uganda. Additionally, the managers charged with overseeing such ‘non-cash’ programs made reference to the fact that it was not uncommon for farmers to sell such inputs in order to obtain cash for other purposes 22.

19 Mbeya 1 Farmer Focus Group
20 Mbeya 2 Farmer Focus Group
22 One Acre Fund Interview
Sub-Components of Input Credit ‘Bundles’

While it may be common in some parts of the world for loans from formal financial institutions to simply involve a disbursement of cash to an individual in return for subsequent repayment with interest, input credit products for farmers in Tanzania and Uganda are often much more complex in that they are ‘bundled’ with other compulsory services and fees. Additionally, the input credit that is available to smallholder farmers is not available individually – farmers must apply as a group, and in the vast majority of cases, also agree to assume joint-liability for all members in the group. In some instances, the smallholder farmers must provide collateral directly to the financial institution – often land title but also other chattels such as motorcycles, housing materials, or other small assets. In other cases, collateral is pledged to the other members of the group, and subject to repossession in the event that the individual farmer fails to repay their portion of the group loan to the financial institution.

As part of the study, input credit bundles from six different financial institutions were examined (FINCA, Opportunity Bank, BRAC, Tanzania Agricultural Development Bank, Akiba Commercial Bank, Vision Fund Tanzania). While the specifics of such ‘bundles’ certainly differ from institution to institution, there are several sub-components that seemed to be common amongst nearly all financial institutions.

**Application Fee** – In order to even apply for a loan, smallholder farmers need to pay an application fee. Often this is a small percentage of the requested amount, but can be as high as 4 percent for one of the financial products that was studied. However, the application fee is typically communicated in a dollar amount rather than percentage terms. Typically a search fee – the fee paid to the credit bureau to run a credit check – is included within this amount, but other times it is separated out.

**Processing Fee** – In the event that the loan is approved, smallholder farmers will also be charged a processing fee to obtain their input credit. Again, this is typically small (1-2 percent) and is communicated in a dollar amount rather than in percentage terms. At times, subsumed within this fee, is the amount that the financial institution pays to insure the loan against default with a third-party insurer.
Life Insurance – All of the loan products examined as part of this study have a compulsory life insurance component. The percentage charged is typically small (1-2 percent) and communicated in a dollar amount rather than in percentage terms. At a minimum, the resulting policy guarantees that the loan would be forgiven in the event of the farmer’s death. However, some policies have additional features in which the surviving spouse would also receive an income benefit in the event of the farmer’s death.

Loan Security Fund – With the exception of only one of the input credit products studied, all products include a sub-component in which the financial institution holds a portion of the farmer’s funds internally. According to a recent study, only approximately one-third of all micro-finance institutions have this requirement\(^\text{23}\); however, it appears to be a much more ubiquitous feature of input credit within Tanzania and Uganda. Typically, this component involves the farmer making an up-front cash deposit ranging from 10-20 percent of the total loan amount that the bank holds for the duration of the loan. However, at other times the value of the loan security fund is simply deducted from the total amount upon disbursement.

Interest Fee – Again, with the exception of one of the input credit products examined, all products include an interest fee. The one product that does not have an explicit interest fee instead charges an ‘administrative fee’ to accommodate the fact that many of its borrowers are Muslim and prohibited from paying interest. The interest fee is communicated as a fixed rather than compounding percentage, and varies from 2.5 percent per month to 5 percent per month for the financial products that were studied.

Financial Training – Most input credit products include compulsory financial training. Such training can occur up-front and/or after the loan has been disbursed. Training may only be a single day, but may also be a recurrent feature associated with the loan. Sometimes the financial institution itself is responsible for conducting the financial training, and other times they outsource these activities to a non-governmental organization.

\(^\text{23}\) Rosenberg, Gaul, Ford, & Tomilova (2013), *Microcredit Interest Rates and Their Determinants*, CGAP, Mix, and KfW
**Ancillary Components** – There are a number of additional compulsory components that may be bundled with various input credit products on a more ad hoc basis. These may include: (1) technical training in an effort to improve the farmer’s crop yields; (2) crop insurance against poor weather (although such products are extremely rare at present, and often cover only up to the amount of the input loan rather than the value of the harvest); (3) off-taker agreements in which farmers agree to sell their harvest to a single buyer at a guaranteed minimum price; and (4) supplier contracts which negotiate bulk purchasing but remove the choice between different input products as a result.

**Data Collection**

To provide further insight into smallholder farmers’ level of comprehension and risk with respect to input credit products, an inductive qualitative approach was employed. This began with an extensive literature review of 70 articles published within both practitioner and academic outlets that were deemed pertinent to the area of investigation. Part of the objective of such a review was to gather information about the microfinance context within Tanzania and Uganda specifically (i.e., FinScope Surveys; State of the Practice Reports; Smallholder Household Surveys; Bananaskins). However, the majority of articles reviewed were focused more broadly on the borrowing behaviour of impoverished households as communicated through financial diaries, field experiments, and white papers. Such publications were extremely useful in highlighting how illiteracy, social norms/obligations, and cognitive biases collectively impact the way impoverished individuals process financial information and make subsequent decisions with regards to credit, savings, and other financial products. The literature review was also helpful in understanding the array of different approaches that financial institutions targeting low-income populations are currently taking to structure their products to address such factors.

Subsequently, a data collection trip took place over a 15-day period within Tanzania and Uganda. More specifically, a series of field interviews and focus groups was conducted with relevant stakeholders including: (1) financial institutions offering input credit products (both head officer personnel and field staff); (2) smallholder farmers (both current and potential users of input credit); and (3) relevant third-party actors including NGOs, financial associations, advocacy groups, and research think-tanks. In total, there were 37 interviews/focus groups
conducted with over 200 participants which formed the basis of the data for the study (Please see Appendix A for a more detailed description).

The financial institutions that participated in the study (FINCA, Opportunity Bank, BRAC, Tanzania Agricultural Development Bank, Akiba Commercial Bank, Vision Fund Tanzania) were selected due to their prominence in providing input credit within Tanzania and Uganda combined with their involvement in MCF programming. Similarly, the third-party actors (Mercy Corps, AGRA, One Acre Fund, TAMFI, AMFIU, FSDT, GDI) were selected based upon their expertise and existing ties to MCF. The smallholder farmers were either current or targeted participants for several MCF funded input-credit programs (AgriFin Accelerate, One Acre Fund, FINCA, Opportunity Bank).

Given that such programs are widely dispersed throughout both Tanzania and Uganda, it was important to select specific regions in which to undertake the smallholder farmer focus groups. Within Tanzania, the two selected areas were Mbeya (AgriFin Accelerate) and Iringa (One Acre Fund). While both are located within Western Tanzania, these were selected based on two factors: (1) a recent report24 identified Mbeya as one of the most financially excluded in contrast to Iringa which was listed as one of the most financially included; and (2) in-country logistics made travelling between regions of Tanzania highly prohibitive in a limited time period. Within Uganda (where in-country travel is logistically easier), the areas of Masaka (Western Region) and Iganga (Eastern Region) were selected based upon a contrast whereby the smallholder farmers in Masaka are considered to be financially better off than those within Iganga. It should be noted, however, that despite best efforts at obtaining diversity in smallholder farmer responses, there are undoubtedly important nuances associated with other regions in Tanzania and Uganda that were not captured within the data (for example, the region of Mwanza in Tanzania is much more prone to drought for smallholder farmers).

The composition of the focus groups with smallholder farmers was purposefully varied. From an inter-group perspective, variance was sought in that: (1) both well performing and poorly performing groups were interviewed: (2) groups that were both extremely poor and moderately poor were interviewed: and (3) groups that were part of an overlapping SACCO/VSLA were interviewed as well as those that were not. From an intra-group perspective, variance was sought in terms of: (1) having members of the leadership team (i.e.,

24 Financial Sector Deepening Trust (2013), Finscope Tanzania 2013
Chairman, Secretary, Treasurer) participate as well as a number of non-executive members: (2) having a mixture of both female and male farmers participate: and (3) having members who had experience taking formal input loans (once or multiple times) and those who did not.

While the discussions with smallholder farmers were largely open-ended in nature, a series of ‘Grand Tour’ questions was used to guide the interviews (please see Appendix B for more details). These questions were helpful in ensuring that the groups remained focused on the issues of farmer comprehension of input-credit products and their associated risks, while allowing respondents the freedom to pursue tangential avenues of discussion where desired. At times, questions were posed in a forced-choice manner between two alternatives to dig deeper into contrasts between one input provider vs. another, comparing present vs. past financial practices, and differences between African vs. Western perspectives of loan processes. The focus groups were all digitally recorded and conducted in the local language; professors from local business schools with expertise in input finance acted as translators. The average duration for the focus group discussions was 45-60 minutes. Where possible, copies of loan brochures and loan contracts were used as archetypes to both test comprehension and generate broader discussion.

Subsequent to collecting the data, all interviews and focus group recordings were reviewed and analyzed for recurrent themes. Additionally, specific quotes that illustrate these themes were transcribed for inclusion within the paper. While the objective of these analyses and illustrations is to demonstrate some degree of commonality, the inductive methodological design does not allow for drawing conclusive and generalizable findings. Rather, the findings presented highlight emerging trends within the data, and a broad spectrum of the types of factors which appear to influence smallholder farmers’ level of risk and comprehension.

Findings

A number of findings emerged from the study that are detailed below. The discussion of the findings will be structured using the two stated research questions.

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25 Amina Abdul, PhD Candidate and Lecturer, Finance Department, University of Dar es Salaam Business School; Rachel Mindra, PhD and Head, Finance Department, Makerere University
Research Question 1: To what extent do farmers understand the pricing structure and compulsory nature of input credit products?

The answer to this question is both ‘yes’ and ‘no’. The reason for such ambiguity is that there was a high degree of variance on two fronts: (1) certain sub-components of the typical ‘bundle’ were easier to understand than others; and (2) some farmers demonstrated a fairly proficient level of comprehension while others could barely recall the high level details of their loans. The bulk of this section will detail the points of divergence in level of comprehension of different loan components, and identify the key predictive variables that account for variance in farmer comprehension.

However, before drilling down into the specifics, there were two overall trends that emerged that are worthy of mention. The first is that the average level of comprehension regarding input credit products on the part of smallholder farmers appears to be increasing. Through either direct or indirect exposure, smallholder farmers are learning more about the different aspects of input loans. As one banker recounted:

“They ask a lot of questions now ... during the sensitization meeting. This is new. They used to not have the knowledge, but now they ask about cost, payback period, risk if they don’t pay, etc.”

While promising, it is equally important to note that on average comprehension remains at a relatively low level. As the Head of the Complaints Department for AMFIU noted:

“A bigger percentage of individuals [in Uganda] don’t understand. There’s been many complaints from clients, usually because of not understanding the loan conditions. As the population becomes more aware about these things, they start to ask more questions. It is still at a very small scale, but even rural clients ... some of them are aware that they have to understand the loan contract before they actually take the loan.”

But perhaps the strongest trend that emerged through the focus groups and field interviews was that smallholder farmers pay much less attention to the ‘price’ of input credit as compared to other features of the loan that they deem to be much more important. At a very basic level, because there are so few input credit products offered currently in Tanzania and

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26 Akiba Commercial Bank Interview
27 AMFIU Interview
Uganda, the primary factor for smallholder farmers is whether or not an input loan is even available for them to take:

“If you look at all of the mechanisms that are available for smallholder farmers to get access [to finance], the obvious one is no access ... and that’s what happens to the majority of them. So what we see there is very low input, very low output.”

“For most people, [availability] is the main thing. They do not calculate 1 percent ... 2 percent ... more or less as we think in case of banks. For them, getting the access is the main thing rather than [the percent]. Access is number one ... not the price. Fifty-six percent of them are excluded in Tanzania. No choice.”

“Number one is availability ... access. If they are giving the loan, I am going for them!”

“If it’s an agricultural loan, to find an institution that offers a typical agricultural loan is not easy. Most of them will fund a farmer which is actually business ... not a smallholder. So you’ll find that there are not many options for the farmer. They will just know that, 'okay ... [bank a] is the bank that gives loans to farmers ... and go there without looking at any other institution. It’s very rare that you’ll find the client comparing.”

Tanzania and Uganda, in general, have some of the lowest rates of financial inclusion throughout Africa, a situation that is even worse within certain parts of each country (i.e., Northern Uganda).

Just behind availability in terms of importance was the repayment structure of the input loan. Most multi-purpose loans offered by financial institutions are short-term in nature with weekly repayments – a structure that is ill-equipped for the borrowing needs of smallholder farmers. While, on average, input credit terms tend to be longer, they still have a broad range from six months up to one year. Similarly, the repayment frequency required with input credit loans can be weekly, monthly, or even in one large ‘bullet’ payment at the end of the term. Thus, the costs of the loan received far less attention as compared to the structure of the loan:

“Even if [bank A] was more expensive, they would still go for it because of the longer repayment period. At least you’re assured of two periods ... of two seasons of getting output ... so even if you lose in one, you have the other so you can repay.”

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28 Opportunity Bank Head Office Interview
29 BRAC Tanzania Interview
30 TAMFI Interview
31 AMFIU Interview
32 ERDC (2013), FinScope III: Unlocking Barriers to Financial Inclusion
33 CSFI (2014), Microfinance Banana Skins 2014
34 Masaka 2 Farmer Focus Group
“He would choose the 10 percent for six months ... even though it’s a big burden, the repayment period is longer. He knows that the [other] loan is a little bit cheaper, but the problem is the repayment period. There are so many things that have happened to people taking the short-term loans. They have run from their homes because they weren’t able to repay the loan, and some of them lose their assets. The short-term period loan has created so many problems.”

“Would you take the loan at 20 percent, 30 percent, 40 percent? They all said yes. So I asked at what point wouldn’t you take the loan? They said, ‘we’re taking the loan no matter what ... because of repayment .... in small amounts.’”

Finally, of relatively equal importance to the loan structure for farmers was the amount of time it took to receive the input loan. Farmers consider the speed of accessing funds to be more important than the fees associated with receiving such funds:

“We have some [private lenders]. They’re not SACCOs, they’re not MFIs ... these people charge exorbitant prices, but you’ll find many people run to them. Because they say banks and MFIs take a lot of time looking through paperwork ... how much security does the client have? Will this person be able to pay up as agreed? But for a [private lender], they put up signs ‘for urgent money ... call this number ... in five hours it will be done’. All they think about is the now.”

Of lesser importance than availability, structure, and speed, but still an important consideration, was the manner in which smallholder farmers felt they were treated by the financial institution. Indeed, this falls in line with prior research conducted in Kenya which found that the relationship between the farmer and financial institution was much more important than the cost. One farmer group in Uganda who had been taking input from loans from FINCA recounted:

“Other banks have not bothered to care for the very poor farmers. They feel that these people are not good enough for them. So that’s why ... even if they heard of other banks, and even if FINCA is expensive, they would still stick to them because they have come down to the people, they have created a relationship with them, and they’ve accepted them with their poverty and continuing to support them which other institutions have not bothered.”

35 Mbeya 2 Farmer Focus Group
36 Iringa 2 Farmer Focus Group
37 AMFIU Interview
38 Zollmann & Collins (2010), Financial Capability and the Poor – Are we Missing the Mark? FSD Kenya
39 Iganga 5 Farmer Focus Group
Therefore, while higher levels of comprehension regarding the fees associated with input credit bundles may create greater overall awareness, it is not a foregone conclusion that it will lead to behavioural change so long as other factors remain more salient. This is an important caveat for MCF to consider as part of its overall programming.

**Variance in sub-component comprehension**

As detailed in the background section of the report, input loans in Tanzania and Uganda are typically ‘bundled’ in that they are comprised of an array of different fees and services. The data suggest that some of these components were much easier for smallholder farmers to comprehend than others.

**Interest Rate Component**

By far the most difficult input credit component for smallholder farmers to understand is the interest rate. With the exception of a handful of focus group participants, none of the smallholder farmers demonstrated a good grasp of the concept (though most were familiar with the term). In many ways, it was a different language that they simply had not learned to speak:

“The language you are using now ... the percentage language ... the farmers do not understand.”40

“In terms of interest rates, virtually nobody understands this – and I mean ‘true’ interest rates here. Even in cases where some people can tell you what the stated interest rate is ... this is incorrect as it doesn’t take into account compound interest rate. They only tell them simply interest rate.”41

This is very much in line with prior studies which have found low levels of interest rate comprehension amongst impoverished populations – especially within rural areas.42

Thus, the typical practice was for the field staff of the financial institutions (or the few smallholder farmers that did understand) to translate the interest rate into a fixed dollar amount:

“We don’t talk about the interest. We tell them ‘this is it’ – you have taken $500K ... and you need to pay ‘x’. When we go into those calculations they got confused. It’s better to bring out the exact amount that somebody is going to add on instead of saying 2 percent ... 3 percent ... it’s clearer to them.”43

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40 Iringa 2 Farmer Focus Group  
41 FSDT Interview  
42 EPRC (2013), *FinScope III: Unlocking Barriers to Financial Inclusion*  
43 Iganga 2 Farmer Focus Group
“When it comes to farmers, if you talk about percentages, they wouldn’t even want to hear. They would say ‘tell me the total ... how much should I bring per month. If I borrowed 10,000 ... at the end of the day I will bring back 12,000. That is what they want to hear. If you talk about APR ... it’s just a burden to them.”44

“Typical the easiest to tell someone is ‘I give you 100, you give me back 110’. When you talk about paying 10 percent, 20 percent, this is when it gets confusing .... then it becomes much more complicated. But if you say, I give you 100, and you will give me 110 over three months ... people understand that.”45

“They want to know the total of what they are going to pay because the percentages and all the other things confuse them.”46

That doesn’t mean that efforts weren’t made to explain interest rates during the financial literacy training that most of the financial institutions provided as part of the input loan. It was simply a new language that didn’t seem to ‘stick’. Even after receiving such training, smallholder farmers asked to recall the interest rate for their input loan would often answer in a fixed dollar amount rather than a percentage. The use of such ‘rules of thumb’ by impoverished individuals in order to simplify complex financial information is very much in line with existing behavioural science research.47

There were also a number of anecdotal stories of smallholder farmers who avoided borrowing from financial institutions because the discussion of interest rates was so confusing. These individuals often continued to use private lenders, in part due to the simplicity in understanding the cost of the loan:

“Most of them don’t understand the interest rate. And many farmers they’re opting for ‘cut your head’. The farmers don’t have any knowledge of interest rate. So they opt for kukata kichwa for simplicity of the process. But going to the bank ... the process of understanding all the calculations of interest rates is tedious so it’s better you go to the kukata kichwa.”48

Very often, private lenders do not even require payback in cash, but rather in bags of crops, as discussed earlier. While extremely expensive if one were to convert to a rate of interest, it is nevertheless very easy for smallholder farmers to understand this exchange.

44 TAMFI Interview
45 FSDT Interview
46 Iganga 7 Farmer Focus Group
48 Mbeya 3 Farmer Focus Group
Insurance Component

Another compulsory component of input credit that smallholder farmers frequently had difficulty comprehending was insurance. In most input credit products, this would simply be a life insurance component to prevent against default in the event of a client’s death. However, many farmers struggled to understand why they were forced to pay such a fee and get nothing in return every year:

“The surprise cost they are still wondering about is insurance. Now ... when they don’t die ... that money is like they’re paying for free. They are not benefitting when they don’t die ... and yet they are paying that amount.”49

“The question they often ask [about life insurance] is, ‘Can I get my money back if something bad does not happen to me?’”50

Thus the entire concept of insurance runs counter to their existing heuristic in which they expect to receive something tangible in return for payment. Because insurance is a product in which they would only receive a tangible benefit in the event of a tragedy, it was very difficult for many smallholder farmers to understand the need for such a fee. As a result, most clients were upset that obtaining life insurance was a compulsory component in obtaining an input loan:

“For the client, when they are going for the loan, what they want is the expense ... the cost. Insurance is very important but clients pay for it grudgingly. The percentage of clients who have willingly purchased insurance in this country is like 1 percent. So the only reason they have it is because it’s compulsory and they’ve bundled it. If they were given an option not to pay for it, they would opt out.”51

There was also a crop insurance component in one of the input credit products studied. However, there was a high degree of confusion amongst farmers of this program regarding what exactly was insured under this product (and what the benefit would be). Some farmers believed that they were ‘insured’ if they personally had a bad crop for any reason. However, crop insurance products offered in Tanzania and Uganda use only rough, generalized approximations of weather patterns rather than gathering data at the smallholder farmer level. Thus, often individual farmers experiencing a low yield on their land are not eligible for reimbursement for idiosyncratic reasons. Additionally, some farmers felt that the total value of their crops was

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49 Iganga 4 Farmer Focus Group
50 TAMFI Interview
51 AMFIU Interview
insured with such a product. However, typically, it was only the cost of the inputs themselves that were insured as part of the input credit bundle.

Finally, in the course of this research, there were at least three financial institutions identified that had obtained insurance from a third-party provider in the event the client defaulted on their loan. Because the institutions were reluctant to tell smallholder farmers that their loan itself was insured (for fear it may lessen their sense of obligation to repay the loan), this charge was either subsumed within a general insurance fee, or labelled as a ‘utilization fee’. In instances where it was labeled a ‘utilization fee’, this caused a fair degree of confusion amongst the farmers as the financial institutions’ explanation was often unsatisfactory.

**Loan Security Fund**

While slightly less difficult to comprehend, smallholder farmers did experience some confusion regarding the loan security fund. Again, it was often the fault of the financial institution that the farmers were surprised by the fee. When the financial institutions’ loan structure permitted the deduction of the loan security fee at the time of disbursement rather than as an up-front cash deposit on the part of the farmer, field officers sometimes neglected to mention the fee to the farmer:

> “Many loan officers they prefer not to talk about [the compulsory savings]. Because they know that they may lose you if you have to look for that money and put it down ... you may not manage, so you may not get the loan and they have targets.”

The result is that farmers who were subject to such ‘deception’ were surprised (and disappointed) when the amount of money they ultimately received from the financial institution was less than the amount they agreed to borrow:

> “If you don’t have the money to put down, then they will deduct it from the loan that they are supposed to get ... and that has caused a very big problem also because the client says ‘I requested to borrow a loan of 10,000 and I receive 9,500.’”

**Application Fee**

Though much more infrequent, farmers were sometimes confused with a portion of the application fee. More specifically, in those rare instances where smallholder farmers compared the fees charged by two or more financial institutions, there was some confusion regarding one

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52 AMFIU Interview
53 AMFIU Interview
sub-component – the ‘search fee’. The search fee was to be paid to the appropriate credit agency (i.e., Compuscan, Credit Info) as a check on the farmer’s credit rating and the extent to which they had other outstanding loans. However, such ‘search’ fees could be very different amounts depending on the financial institution. Given that it was the same service being offered, farmers were confused when the fees differ by as much as 300 percent.

**Variance in smallholder farmer comprehension**

While the ‘average’ level of farmer comprehension regarding the pricing and compulsory nature of input credit products was fairly low, there was a tremendous degree of variance exhibited within the farmer focus groups. At times, certain farmers knew the details of the loans inside and out – including the cost breakdown of various sub-components and per annum interest rates. Other times, farmers only knew the total amount that needed to be paid each month – and nothing else. The following are the factors that appear to explain most of the variance in comprehension.

**Level of Education/Literacy**

Perhaps the most obvious, but also the most powerful predictor of comprehension, was the level of education and literacy possessed by the smallholder farmers. According to Finscope Tanzania (2013), two-thirds of the population of Tanzania has only been educated to a primary level; and some not even to that level within rural regions of the country.\(^{54}\) The implications of this are that farmers are often unable to read the loan brochures and contracts, and are left to rely solely upon verbal communication for comprehension:

“Across our 24,000 clients, there’s a huge spectrum of familiarity with financial institutions and also just levels of education. We have a lot of illiterate farmers ... more than 50 percent of our farmers are women ... our average age are 45 ... and so in this region you’re looking at a lot of women who didn’t go to school. And so talking about some of these [loan] components broken down ... you get to a point where it’s overwhelming.”\(^{55}\)

“And there’s a category that doesn’t know how to read and write ... so they’re just verbally told, and they will just believe what they’ve been told. And the next statement

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\(^{54}\) Financial Sector Deepening Trust (2013), *FinScope Tanzania 2013*

\(^{55}\) One Acre Fund Interview
they hear from a credit officer is ... please append your signature here ... and they sign.”\textsuperscript{56}

A lack of education seemed to create a particular challenge for understanding interest rates. For these individuals, it was a necessity for interest charges to be communicated in fixed amounts rather than percentage terms:

“Some of them do understand ... and others don’t understand. Because those who understand are educated. Those who don’t understand ... don’t understand the rates.”\textsuperscript{57}

“They prefer figures than percentages because it’s clearer to them since they did not go to school ... most of them.”\textsuperscript{58}

“For them, because they are a bit illiterate, writing may be a challenge. But a person came and told them how to go about the costing. What they understood was not the percentage ... but how much in total they pay for that loan.”\textsuperscript{59}

However, even when stated in fixed amounts, low levels of education and literacy could often lead to poor financial decision making with respect to input credit. Smallholder farmers with less education had developed basic ‘rules of thumb’ for making financial decisions that were often inefficient. When faced with decisions between two different loans, farmers may incorrectly look simply to the lower dollar amount per month rather than the total cost of the loan;

“If I went to Bank A and they say my repayment per month would be 200,000. And this Bank B, my repayment would be 100,000. That means Bank B is cheaper. They wouldn’t even look at the loan term. It’s a long time but they see it as don’t have to part with so much money.”\textsuperscript{60}

\textit{Group ‘Leader’ or ‘Follower’}

Within most of the focus groups that were conducted, the group executives (Chairperson, Secretary, Treasurer) had a much better level of comprehension than other regular members of the group (of which there could be 20, 50, or even 100 individuals). In addition to higher levels of literacy, the group executives seemed to have higher status within the community, greater levels of wealth, and more experience in dealing with financial matters than regular members. As

\textsuperscript{56} AMFIU Interview
\textsuperscript{57} Opportunity Bank Focus Group with Field Officers
\textsuperscript{58} Iganga 2 Farmer Focus Group
\textsuperscript{59} Iganga 1 Farmer Focus Group
\textsuperscript{60} TAMFI Interview
a result, the large number of ‘regular’ members appeared to rely primarily upon the executives for understanding the details of the input loans:

“The [Chairperson and common members] are not the same. There are some groups with high understanding, but the variations are there ... both among groups and within groups. Some may go throughout the season and not know anything that happens – they just follow what others are doing.”61

“So when they meet as a group, they have their leaders. So the leaders are the ones who tell them the best institution where we can easily access money is from [financial institution A]. So it is the leaders who source where they should be borrowing the money.”62

When the executives were asked to refrain from answering questions about the loan costs and components within the focus group discussions, there were often long periods of silence except for farmers murmuring quietly to one another in an attempt to come up with an answer. However, in the end, they would typically state they did not know the answer, or would hazard a guess that was often incorrect or incomplete.

While having a handful of members who comprehend input credit products as part of the borrower group would seem to be one of the main advantages of using a group structure, it can also present several drawbacks. The most significant of these is the opportunity for opportunism and corruption on the part of the executive members. Furthermore, having such heterogeneity between executive and non-executive group members also creates a significant challenge to financial institutions who are attempting to manage and grow what can be very large loan portfolios:

“There’s definitely someone in the group with acumen – someone that knows what’s going on. But what’s really tricky is trying to maintain our ability to serve 24,000 farmers ... driving towards scale ... but customizing and making sure that we’re having messaging that targets the ‘I’m going along for the ride’ person.”63

**Prior Experience with Formal Borrowing**

Farmers who had prior experience in dealing with formal financial institutions certainly exhibited a much higher level of comprehension than those who had not. In part, this appeared to be a result of a farmer being overwhelmed during their first formal borrowing experience to the

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61 Akiba Commercial Bank Interview
62 Iganga 6 Farmer Focus Group
63 One Acre Fund Interview
point that they made little effort to clarify any confusing details. When asked why farmers often
don’t ask questions so that they can understand the loan details, the response was:

“The reason is these people have a fear for themselves ... they are not so confident in
themselves. So when they enter [a financial institution] ... and see people sitting behind a
desk ... there is a telephone, and lighting ... they tend to fear them. They think these
people are so enlightened ... I cannot be able to speak freely to them. So that makes them
feel a bit uncomfortable and reserved. So when the officer says, ‘ok ... this is the loan ...
you’re going to sign here, and flips a page’. Because the paperwork alone makes the
person get stressed out and then they just append their signature. They would rarely ask
[questions] – except maybe ‘how long until I get my money.’”

Adjusting to the process of formal borrowing involved taking a number of steps that were new to
them, and caused them to focus less on pricing issues:

“The first time they [borrow] ... they’re just trying it and figuring it out.”

“[New borrowers] were surprised because the system they were used to ... there was
nothing like taking photo, opening accounts ... these processes are not there. They would
just march to the rich person ‘I need money ... come and sign here.’”

Such findings are very much in line with existing behavioural science research which
stresses that people who are subject to ongoing economic poverty often experience psychological
poverty as well. As a result, when placed in new situations, there is limited cognitive
bandwidth available to pay attention to all of the new information being presented. In situations
of this kind, individuals may focus more on aspects of the new experience that they are able to
grasp and that represent the biggest change from what they are used to (i.e., the need to take
photographs). It is only through active learning that routines are eventually built up that allow
individuals to pay attention to some of the more challenging aspects of the new experience (i.e.,
interest rates). While the financial training may have helped somewhat in this regard, it is
unlikely to have resulted in behavioural change without ongoing practice.

64 AMFIU Interview
65 Akiba Commercial Bank Interview
66 Iganga 4 Farmer Focus Group
70 Arnold & Rhyne (2016), A Change in Behavior: Innovations in Financial Capability, Center for Financial Inclusion
Level of Urgency

Another source of variance in farmers’ comprehension was the level of urgency for obtaining the loan. In instances where the farmers were fairly desperate to receive the money as quickly as possible, they paid very little attention to the pricing and other components of the input loan structure:

“Even enlightened clients we see that when they want money, they’ll just ask you ‘where do I sign’. For them when they come for money, they want money – they don’t care. They don’t read. Of course the regulation we are required to show, and to translate so the client understands. But when people come for money, very few people ask ‘how much interest’ … how much are charges?”\(^{71}\)

“In the beginning, people only want to see money. They won’t bother about the terms and conditions. It’s in the end they start thinking ‘how much am I going to pay in interest?’”\(^{72}\)

“They said they know it’s very important … but they didn’t pay attention before. They just overlook … they get all these brochures … but they don’t care. When they’re told that if you take a loan of half an acre you’ll pay this [total] amount of money. So they don’t care what it takes to have that kind of loan. ‘I have my half an acre, and I want this input … and I’ll pay this amount of money … it’s fine.’”\(^{73}\)

This focus on speedy access to money to the exclusion of paying attention to loan details was not only exhibited in the early stages of discussions with the financial institution, but also during the subsequent financial training sessions:

“Many of them … at the time they were training … some of them are not paying attention – what they wanted was the money. So they need to keep being reminded. But that fact that they wanted money so bad, they only wanted ‘what do I pay at the end. That’s it.’”\(^{74}\)

“When we conduct financial literacy, we are so transparent. We explain to the farmers all the costs of capital. Our officers train them on the charges, the interest rate, and everything to do with the loan. We then have a question and answer session just to make sure that they’re satisfied. I think it’s better than nothing. They may still have reservations, but they will still take the loan because they are desperate to take it.”\(^{75}\)

“For financial literacy, the customers must also be interested to know the terms of the facilities they are taking … so it can inform their decisions. But the majority of them have heard it from their peers, from their neighbours, their spouses, their friends. They don’t

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\(^{71}\) BRAC Uganda Interview
\(^{72}\) Akiba Commercial Bank Interview
\(^{73}\) Iringa 2 Farmer Focus Group
\(^{74}\) Iganga 2 Farmer Focus Group
\(^{75}\) Opportunity Bank Head Officer Interview
even do basic arithmetic to see how much does this weekly total at the end of the period. They don’t even bother to do that. In my experience, very very few do that. My estimation ... maybe less than 10 percent of customers really want to see how much you are going to charge.”

The observation that borrowers in desperate need do not take the time to examine the price and conditions of the loan has been corroborated in other studies. And again, such findings are highly consistent with work in behavioural science showing that individuals who are in dire need of money systematically neglect the resulting consequences of their actions. More specifically, when a single need becomes so important (i.e., money), a cognitive phenomenon called ‘tunneling’ takes place in which an individual’s mind is disproportionately focused on that singular objective to the exclusion of others.

However, it is also important to note that in at least some cases where smallholder farmers were desperate for the money, loan agents took advantage of the situation. More specifically, they failed to adequately disclose the terms of the loan unless explicitly questioned by the farmers. When pressed to identify whether it was the farmer’s fault or the agent’s fault that people in desperate need of a loan fail to pay attention to its details, the Executive Director of AMFIU responded:

“‘It’s both. It’s both. The loan officer has studied the behaviour of clients, and when they want a loan, [he knows] they want it. It doesn’t matter what you’re talking about. In fact sometime some of them say that ‘these people when they try to explain to them ... they just want to know where to sign and get this whole deal concluded.”

Quality of Field Agent:

In continuing on the prior theme, a great deal of whether or not the farmers understood the specifics of the input credit product was dependent upon the quality of the field agent explaining its components. Unfortunately, there is a real shortage of field agents within Tanzania and Uganda that understand both finance and farming. Because field agents serve as the primary conduit linking the smallholder farmer to the financial institution, the quality of information is highly dependent on the ability of the field agent:

76 BRAC Uganda Interview
77 ERDC (2013), FinScope III: Unlocking Barriers to Financial Inclusion
78 Dimova & Joshi (2016), Using Behavioural Science to Design a Customer-Centric Financial Management Training for Microentrepreneurs, CGAP
80 FSDT Interview
“If the field officer does a poor job of explaining any of these loan components, there’s opportunity to misunderstand, and opportunity for people to not join. We’re putting a lot of eggs in that basket.”

Much like the average farmer in Tanzania and Uganda has low levels of education, so too does the average field agent. This means that their depth of understanding of the material can be quite superficial:

“Even for [field] officers ... the ones we use are not graduates. They don’t even have high school. So we also try to make sure that we give them information that they can easily pass on to the client. So that’s how we try to simplify it.”

There were also a number of anecdotal stories of ‘bad teachers’ – field officers and financial literacy trainers who were not very good at explaining the details of the loan. In some instances, this may be a lack of ability. However, at times it also appeared to be intentional given the pressure that the field agents are under. With most of the financial institutions, field agents have specific quotas for the number of clients that they need to sign up every week. As a result, they may focus their discussions with potential borrowers on getting the farmer excited about what they could do with the money as compared to speaking about the details of the loan itself. Some may even engage in corrupt practices to try and meet their quotas:

“When there’s a complaint, we call the staff of these institutions and they tell us ‘you know ... we also have targets’. Our managers give us by the end of this week ... you should have brought in five loans. And because of that it causes [the agent] to ignore the most important things. So they’ll go down to these people’s homes ... explain to them verbally ‘if I gave you a loan, you can buy a chicken ... and you start rearing and in this month you’ll have this amount of money’. So that person is interested in the product that is coming out of the loan but they don’t focus on explaining to them the nitty gritty of getting the loan.”

“Other loan officers come to sell their products and the first thing they ask for is money ... a bribe for easy processing of their agreement.”

**Nature of Loan ‘Documents’**

Finally, whether or not farmers understand the pricing structure of input credit bundles is also largely a function of the documents (or lack thereof) that the financial institutions make
available to them. A number of the input credit products examined as part of this study did not have any written documents for communicating the loan, but rather relied solely upon verbal explanations. Furthermore, the majority of products that did have explanatory documentation that would break down the different fees and components of the loan were often in English (please see Exhibit A). Similarly, the loan contracts were almost always in English, and often clients do not even receive copies of the loan documents after they have been signed\(^85\).

Unfortunately, very few of the smallholder farmers in either Tanzania or Uganda were able to read English, and thus were unable to understand the material as presented:

“We need to get one that is translated ... [into] local languages. For sure ... we give them those papers and they can’t read them. They just sign them.”\(^86\)

At least in one instance in Tanzania, efforts were made to create documents in Swahili. Most smallholder farmers, however, are only capable of reading at a fairly high level in their local language, and were therefore unable to make sense of the document when asked within several of the focus group sessions (please see Exhibit B).

Compounding this confusion is the lack of uniformity with which different financial institutions in Tanzania and Uganda communicate the details of a loan.\(^87\) In fact, a recent survey found that only 34 percent of people in Uganda felt that the loan information provided to them was clear and understandable.\(^88\) This makes it extremely difficult for smallholder farmers to compare input credit products. Additionally, what little documentation is distributed to smallholder farmers in rural areas is often out of date,\(^89\) and the most important information is not disclosed in a way that is easy to recognize.\(^90\)

\(^{85}\) Brusky (2015), *State of the Practice: State of Client Protection in Uganda’s Microfinance Sector*, The SEEP Network

\(^{86}\) Anonymous Field Officer (2017)

\(^{87}\) Brusky (2015), *State of the Practice: State of Client Protection in Uganda’s Microfinance Sector*, The SEEP Network

\(^{88}\) ERDC (2013), *FinScope III: Unlocking Barriers to Financial Inclusion*

\(^{89}\) The Initiative for Smallholder Finance (2016), *Financial Inclusion Fit to Size: Customizing Digital Credit for Smallholder Farmers in Tanzania*

\(^{90}\) ERDC (2013), *FinScope III: Unlocking Barriers to Financial Inclusion*
Research Question 2: What kind of exposure and risks do smallholder farmers face when engaging with providers of agricultural finance?

Accepting input credit from financial institutions with the obligation to pay back an even higher amount at a future date undoubtedly carries with it some degree of risk. However, what exactly does the term ‘risk’ mean? Risk is defined as ‘exposing someone or something valued to danger, harm, or loss’\textsuperscript{91}. Thus, in order to answer this question, it is necessary to break it down into three parts: (1) What exactly does ‘danger, harm, or loss’ look like within this context for smallholder farmers considering input credit? (2) Do smallholder farmers evaluate such risks (given a number of them do not seem to evaluate the costs of input loans)? and (3) What factors predict the extent to which smallholder farmers will be exposed to higher or lower levels of risk when accepting input credit?

Nature of risk in this context

In the event that a smallholder farmer is unable to make payments as scheduled, they are exposed to a series of potential consequences. Because virtually all input credit products offered by financial institutions within Tanzania and Uganda require upfront collateral as a guarantee (either directly or indirectly by way of pledging collateral to the group), the farmer is at risk of repossession of the pledged asset. In some cases, these may be relatively low-value assets that are approximate in value to the amount owed (i.e., motorcycle, furniture, etc.) but can also be much larger in value (i.e., house, land, etc.).

In the course of this research, a number of stories arose that portrayed the repossession of assets as a very traumatic experience, not only in the loss of the asset, but also in the sense of humiliation that seemed to accompany such repossessions:

\textit{“They first get tough on the client. Even if you’re not home ... they will just go and grab property.”}\textsuperscript{92}

\textit{“We worked in a couple of villages where farmers were really really slow to enroll, because they said ‘you’re going to take our roof’ if we don’t repay. We have villages where [financial institution A] literally came in and took sheet metal off people’s roofs.”}\textsuperscript{93}

\textsuperscript{91} The Oxford Dictionary
\textsuperscript{92} AMFIU Interview
\textsuperscript{93} One Acre Fund Interview
“They’ll come and arrest you and also they’ll come and sell all your property that you put as security. [They] will come for your stuff and they will sell it and get their money – so you lose.”94

As the last quote illustrates, there was also a legitimate risk of imprisonment within Uganda where defaulting on loans can result in up to six months in prison. A recent report examining the risks of default in Uganda also found evidence of financial institutions bribing magistrates and police to issue seizure orders and jail clients who are in default.95

However, there is additional ‘danger, harm, or loss’ that can occur in the event of default. One is the potential damage to a farmer’s reputation within the community:

“If you can’t pay ... if you’re facing some problem ... you can just come meet the leaders and talk to them and start paying slowly slowly until you finish the loan. If you fail to repay even after the leader has visited your house, then people will start gossiping ... 'he has our money ... he has our money'. And then you will definitely pay the money because you don’t want to lose your reputation around the community.”96

Once a loan recipient has defaulted, it is also highly likely that he or she will be asked to leave the group, and will be unable to borrow again for the purchase of inputs – another source of embarrassment97. Within Uganda, it is not uncommon for smallholder farmers who default to run away from their village and take up residence in another village98. There have also been stories within Tanzania of people who default on loans resorting to suicide. One highly credible source who wished to remain anonymous recounted:

“There was a place [in Tanzania] ... I’m not going to say where ... that we visited where formal financial institutions started going there and they were giving out formal loans. So a lot of them took but were not fully aware of the requirements. So what happened was they couldn’t pay back ... couldn’t perform ... and then over-indebtedness kicked in very quickly ... so you had suicides going on. Yeah ... you have that. So now everyone is scared of getting a formal loan. It’s small ... but it happens here. It happened to so many people in this village.”

94 Iganga 6 Farmer Focus Group
96 Mbeya 4 Farmer Focus Group
97 Masaka 2 Farmer Focus Group
It should be noted that all of the financial institutions associated with this project reported extremely low default rates – often in the range of only 1-3 percent of their portfolio. However, this does not necessarily mean that there was no ‘danger, harm, or loss’ that was experienced by the smallholder farmers in taking input credit. In a number of instances, smallholder farmers relayed stories of voluntarily selling off livestock (i.e., chickens, goats, pigs) to repay a loan rather than risk default. There were also stories of being forced to borrow money from an informal private lender (i.e., kukata kichwa or mbata) in order to ensure that they fulfilled their loan commitment to the formal financial institution. Such anecdotes resonate with a recent report by Solli (2015) that discovered smallholder farmers often skip meals or even take their children out of school as a means of ensuring that their formal loans are repaid.

But perhaps of greatest concern with regards to ‘risk’ is that smallholder farmers may resort to taking a new loan to pay off another loan. In places like Uganda and Tanzania where the sharing of credit histories between financial institutions is rare, and credit agencies are still in their early stages of development, multiple borrowing often goes unnoticed. Thus, high repayment rates may simply be masking a large exposure to over-indebtedness. In fact, a recent study involving Compuscan that examined over-borrowing in Uganda classified 40 percent of all of the loans from one regulated microfinance institution as ‘high risk’ with a high likelihood of default.

There is one further risk of default affecting smallholder farmers that often goes unmentioned – that of ‘default’ on the part of a financial institution. At a minor level, this can involve the cancelling of an input credit program. Given that formal input credit is so new within Tanzania and Uganda, a lot of financial institutions have tried pilot projects which were subsequently cancelled, causing some smallholder farmers to become wary of such input credit products:

“We are doing something very new ... and some of them maybe were experimental. So after doing one year, nobody is there to support the farmers. So they say ‘maybe this is going to happen again’.”

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99 Iringa 2 Farmer Focus Group  
100 Masaka 4 Farmer Focus Group  
102 CIS Kenya (2013), *An Insight into Multi-Borrowing of Selected MDI Borrowers in Uganda*  
103 Akiba Commercial Bank Interview
Additionally, it was relayed that there are often a number of pyramid schemes that occur in which financial institutions collect initial loan deposits and then vanish.\textsuperscript{104} However, because smallholder farmers are in such need of financial access, they are often the ones to fall victim to scams:

\begin{quote}
“In the rural areas, we have heard cases of fraudulent microfinance institutions or cooperatives defrauding many people. But because of lack of access, whoever sets up shop in an area, and is willing to provide service, they will go there.”\textsuperscript{105}
\end{quote}

**Evaluation of input credit risk**

Given the potential damage and loss associated with taking input loans, one would naturally assume that smallholder farmers would pay careful attention to evaluating such risks prior to obtaining a loan. However, just as the degree to which smallholder farmers comprehend the pricing of input credit is highly varied, so too is the level of evaluation – some farmers do evaluate … and others do not.

There was certainly a great deal of support for the notion that smallholder farmers do in fact weigh the risks of taking a loan, and make decisions to forego such loans in the event that the risks are deemed too high. In many cases, financial institutions approach existing farming groups (established for the purpose of knowledge sharing or bulk purchasing) to gauge their level of interest in obtaining input credit. Very often, only a subset of the group would subsequently take an input loan:

\begin{quote}
“It was a very big group, but some people feared and they didn’t take money. So they had fear initially.”\textsuperscript{106}
\end{quote}

\begin{quote}
“Everyone they need money …. but when they hear about the conditions … some they drop out. 20-30 percent [of them].”\textsuperscript{107}
\end{quote}

\begin{quote}
“Most of them … they don’t want to have loans. They are scared to take loans because when the loan officer is coming to their house to make follow up on the loans they don’t like it.”\textsuperscript{108}
\end{quote}

\textsuperscript{105} AMFIU Interview
\textsuperscript{106} Iganga 2 Farmer Focus Group
\textsuperscript{107} Vision Fund Tanzania Interview
\textsuperscript{108} Iringa 3 Farmer Focus Group
Indeed, prior research has noted that farmers are often reluctant to take on additional financial risk given the enormous amount of risk already present in their everyday life. While the status quo is perhaps only tolerable (at best), taking a loan could make things even worse:

“People have survived, and are still surviving without the loans. At least then the downside risk is minimized. But if you take credit … and you’re not prepared … you have to be extremely careful.”

However, there is also support for the notion that farmers fail to evaluate the level of risk associated with taking input credit, though it was difficult to estimate how often this was the case given the inductive methodology employed:

“She said that they don’t think about whether or not they’ll be able to make enough money from the yield to pay back the money. They do know there’s a great deal of variance in how many bags they’ll get each year – and that some years … most of the harvest might be just to repay the loan. I guess there’s just so much uncertainty … they don’t think that far ahead.”

From a risk comprehension perspective, the observed variance could at least in part be explained by many of the same factors as pricing comprehension – level of education, nature of loan documents, etc. What was less clear from the data was why some farmers who did comprehend the high level of risk associated with input credit still chose to take loans. Of course one obvious factor that might help to explain such decisions is the level of economic hardship. Indeed, a number of focus group participants, when asked why they would take a loan if they could lose their land or their home, responded:

“It is risky but because of their standard of living they have to borrow. It is scary but we have to get out of poverty so we have to borrow money.”

“They said that they feel scared but still took the loan. ‘We are very poor … so we don’t have options.’

However, there were also a number of instances in which very poor farmers evaluated the risk of taking input credit as too great. These individuals saw (one would argue, correctly) that their lack of money put them at a very high risk of default and subsequent negative consequences:

110 FSDT Interview
111 Iringa Field Officer Interview
112 Iganga 6 Farmer Focus Group
113 Iganga 4 Farmer Focus Group
“They don’t have money ... they’re poor, they have little money. So they also fear to be arrested and locked up.”114

Furthermore, the majority of farmers accepting input credit could already be classified as ‘poor’ in these regions115, and yet – at least anecdotally – it seemed far less than half were willing to assume a high degree of risk.

Unfortunately, the data did not yield any additional patterns. There were cursory references to differing levels of exposure to the SACCO failures of the 70s and 80s, 116 and differing levels of first-hand exposure to seeing community members have their assets repossessed. Recent work has attempted to begin to segment smallholder farmers using a series of different characteristics (i.e., age, familiarity with finance, focus on farming, etc.) that may be a helpful foundation for future research to tease out these nuances. 117

Factors that predict extent of risk exposure

There were a number of different factors that emerged from the data that appear to significantly alter the level of risk a smallholder farmer faces when engaging with input credit. These included varying attributes of the environment, the financial institution, and the smallholder farmer themselves.

Variation in Weather

The most often cited risk during the smallholder farmer focus groups was weather. This is very much in line with recent smallholder surveys within Tanzania and Uganda in which 71 percent118 and 81 percent119 of farmers, respectively, identified the weather as the number one risk to crops. Similarly, weather is cited as the number one risk on the part of the financial institutions that lend to smallholder farmers.120 Given that most farmers rely heavily upon the

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114 Iganga 7 Farmer Focus Group
115 Anderson, Learch, & Gardner (2016), National Survey and Segmentation of Smallholder Households in Uganda, CGAP
117 The Initiative for Smallholder Finance (2016), Financial Inclusion Fit to Size: Customizing Digital Credit for Smallholder Farmers in Tanzania
118 Anderson, Marita, & Musiime (2016) National Survey and Segmentation of Smallholder Households in Tanzania, CGAP
119 Anderson, Learch, & Gardner (2016), National Survey and Segmentation of Smallholder Households in Uganda, CGAP
120 DeBruyne (2014), Perceived versus Real Challenges in Rural Finance: The Experience of AMT Members, African Microfinance Transparency
subsequent sale of the crops which had received the inputs to repay the loan, a reduction in quantity or quality of yield as a result of drought or floods would significantly jeopardize their ability to repay. Furthermore, while there are a limited number of crop insurance products being bundled into input loans in Tanzania and Uganda, the vast majority do not have such components. Farmers were very much aware of this risk, and weather was a constant source of stress as a result:

“They worry. *What will happen if the weather is bad? I have the loan ... I have to pay. What will happen if drought? What will happen? We are living with this experience.*”\(^\text{121}\)

“The very bad weather has affected the way they see the loan. If the weather was good and everything stayed as good as they would like, then the loan would not affect them so much. So the problem is the loan is now looked at as costly because of the bad drought” \(^\text{122}\)

While the farmers’ identification of changes in weather as an important risk was not at all surprising, it was surprising that many of them seemed to identify weather as the *only* factor affecting their level of risk:

“The only risk he sees in the loan is drought. *If it wasn’t for drought there wouldn’t be any other risk.*” \(^\text{123}\)

“Weather change stresses them. *When the drought spell continues, they get stressed because they are thinking ‘Where are we getting the bank’s money to pay for the loan’? That’s the only thing that stresses them.*” \(^\text{124}\)

“For her, she said she wouldn’t be worried of anything if the weather is good. But only she gets scared when the weather changes and there is drought. So she starts thinking ‘Where will I get money to pay to the bank’.” \(^\text{125}\)

As the remainder of this section will detail, there are a number of additional significant factors – both within and beyond the farmer’s control – that affect their level of risk. It appears that given the relative salience of weather, such factors receive very little attention from farmers when determining their ability to repay.

\(^{121}\) Mbeya 2 Farmer Focus Group
\(^{122}\) Iganga 1 Farmer Focus Group
\(^{123}\) Masaka 4 Farmer Focus Group
\(^{124}\) Masaka 2 Farmer Focus Group
\(^{125}\) Masaka 5 Farmer Focus Group
**Variance in Input Utility**

Variance in crop inputs (i.e., seeds, fertilizers, pesticides) was also a very important factor in determining the ultimate level of risk for a smallholder farmer for several reasons. Because the loan proceeds are used to purchase inputs, and the ability to repay the loan is often heavily dependent on the quality and quantity of the resulting crop yield, variance in input utility plays a very large role within the risk equation.

Inputs themselves differed a great deal in quality, and a number of farmers find it difficult to obtain high quality seeds, fertilizers, and pesticides. Additionally, there is a large problem of agro dealers selling ‘counterfeit inputs;”

“They got a problem ... because some buy these fake seeds and fake fertilizers. It’s why they also fail to produce.”

Even in the event that the inputs are genuine, often the agro dealers stock insufficient quantities, or are late in delivery – both of these factors significantly hamper the ability of farmers to maximize their yield. Additionally, the utility of inputs very much depends upon proper application, and it is not uncommon for farmers to apply less than the prescribed amount, or use one type of fertilizer for multiple types of crops which significantly lowers the yield.

**Variance in Crop Price**

The price for many types of crops grown by the smallholder farmers in Tanzania and Uganda can fluctuate a great deal from season to season, as well as throughout the year. In part, this is a function of fluctuation in overall supply and demand which directly affects the price that local buyers are willing to offer the farmers:

“We don’t have a fixed price for our crops. It’s up to the buyers to fix our prices here in Uganda. So every time [the farmers] expect changes. Those buyers tell us that there is no market – no way of selling ... so that’s why the lower the prices. They find you when you’re actually harvesting ... and say ‘this is the price’.”

Given the relatively high interest rates on input credit, price variation can significantly impact the ability of farmers to repay.

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127 One Acre Fund Interview
128 Vision Fund Tanzania Interview
129 Akiba Commercial Bank Interview
130 Masaka 2 Farmer Focus Group
However, perhaps because agriculture is such a significant part of the economy in Tanzania and Uganda in terms of access to food, government often plays a role in manipulating prices. Such political risk compounds the already significant economic risk associated with agricultural production and sales.\textsuperscript{131} And, given that crops are often global commodities that are bought and sold across country borders, the price smallholder farmers receive for their crops is often affected by the decisions made by foreign governments as well.

Not all smallholder farmers are subject to the same level of price risk. Some farmer groups are part of what is called a ‘closed’ value chain in which forward contracts are signed with off-takers at the beginning of the season, which involves the setting of a price floor. While such a contract helps to mitigate price risk to some degree, it certainly does not make farmers immune to price fluctuations from season to season. Additionally, the number of farmers who are connected to closed value chains remains very small.\textsuperscript{132}

**Level of Farmer Diversification**

As with all risk, diversification can significantly mitigate volatility – and the same is true in the case of smallholder farmers within Tanzania and Uganda:

“\textit{They have other activities they engage in to prepare for any eventuality, like other farming activities ... or sources of income ... so that you don’t just depend on one thing.}”\textsuperscript{133}

One of the primary ways that farmers ensured they had more stable cash flows was to cultivate multiple crops. The farmers were very much aware that different types of crops had different levels of resilience, different harvesting cycles, and different levels of price volatility\textsuperscript{134}. As a result, the average farmer in both countries grows approximately 2-3 different crops\textsuperscript{135}. Statistics show that while maize is the main staple crop in Tanzania, 73 percent of farmers also grew potatoes, 43 percent grew beans, and 35 percent grew rice.\textsuperscript{136} Similarly, most farmers in [Footnotes]

\textsuperscript{131} Fondazione Giordano Dell’Amore (2015), \textit{Improving Financial Inclusion of Smallholder Farmers}, Report on 2015 Conference
\textsuperscript{132} Anderson, Learch, & Gardner (2016), \textit{National Survey and Segmentation of Smallholder Households in Uganda}, CGAP
\textsuperscript{133} Masaka 6 Farmer Focus Group
\textsuperscript{134} Masaka 5 Farmer Focus Group & Masaka 3 Farmer Focus Group
\textsuperscript{135} FSDT Interview
\textsuperscript{136} Anderson & Ahmed (2016), \textit{Smallholder Diaries}, CGAP
Uganda grow multiple crops including maize, beans, cassava, and groundnuts.\textsuperscript{137} Unfortunately, not many smallholder farmers grow significant amounts of cash crops as they are often more expensive to cultivate, and subsistence farmers are more likely to focus on crops that are a significant source of food.\textsuperscript{138}

Another significant form of income diversification was operating a ‘side business’. This would often involve some sort of animal husbandry – in Tanzania half of smallholder farmers raise chickens, and a third raise goats and cattle\textsuperscript{139}, while in Uganda approximately 60 percent of smallholder farmers have livestock.\textsuperscript{140} In fact, a recent study conducted in Tanzania suggests that 74 percent of smallholder farmers earned the majority of their cash income from non-agricultural production.\textsuperscript{141} A number of the farmers that were interviewed indicated that they also operate other businesses such as selling charcoal, operating as a boda boda driver, or earned cash through manual labour such as getting paid to help another farmer to clear weeds. These alternative sources of income were not only highly useful for repaying installments of input credit, but also for purchasing a portion of the inputs during planting season so that the loan size was reduced. In many cases, farmers saw the direct link between diversification and input credit risk:

“If you opt to go for loan from a bank, you must not look at one source of income. You must look at different such that if this one fails ... you have to look for money from somewhere else and clear your loan.”\textsuperscript{142}

\textbf{Variance in Self-Control}

A somewhat less obvious, yet equally important factor, leading to varying degrees of risk for smallholder farmers was the level of self-control. As mentioned within the Background section, there existed at least the potential for using the cash/asset for a purpose other than purchasing crop inputs in all the programs studied. This misuse of funds, at least at times, could significantly decrease the farmer’s ability to adhere to the terms and conditions of the loan.

It appeared that most farmers were very aware of the fungibility that cash provides, and its associated temptations. In fact, a number of times farmers referred to cash as ‘evil’:

\begin{footnotesize}
\textsuperscript{137} Anderson, Learch, & Gardner (2016), \textit{National Survey and Segmentation of Smallholder Households in Uganda}, CGAP
\textsuperscript{138} Iganga 6 Farmer Focus Group
\textsuperscript{139} Anderson, Marita, & Musiime (2016) \textit{National Survey and Segmentation of Smallholder Households in Tanzania}, CGAP
\textsuperscript{140} Anderson, Learch, & Gardner (2016), \textit{National Survey and Segmentation of Smallholder Households in Uganda}, CGAP
\textsuperscript{141} Anderson & Ahmed (2016), \textit{Smallholder Diaries}, CGAP
\textsuperscript{142} Masaka 6 Farmer Focus Group
\end{footnotesize}
“Money is so evil. You can go to the local bar and you can have a drink, and then no money. You can buy meat. And you won’t buy inputs. You start doing luxury things, you start eating chips and chicken.”\textsuperscript{143}

“What they are saying is ‘money is evil’. You can divert the use of money and just buy something else. And then when it reaches a point that you are required to plant, you can’t have anything.”\textsuperscript{144}

“If you have cash inside the house, your husband will come and ask you for the money. And your kids will say ‘at school … there is this and this’ … then you use the money. Then some other problem … and you end up using all the money.”\textsuperscript{145}

As a result, at least some farmers avoided taking loans from financial institutions that provided cash to purchase inputs rather than providing inputs directly:

“He said he won’t take a loan from [financial institution A] because they’re giving out cash, and as we’ve said, cash is evil. Cash is not good. If you have your fertilizer, you have your seeds at home … it’s better. But cash you can use it.”\textsuperscript{146}

“Most farmers don’t love loans in terms of cash. If they go for loan … they go for input credit. Most of farmers don’t want cash. They’re very sensitive of misallocating – they have a lot of needs … if they’re given cash, chances are higher that they misallocate it.”\textsuperscript{147}

Prior development research grounded in behavioural science has noted that at least some impoverished individuals consciously look for ways to self-regulate when it comes to cash\textsuperscript{148}. This often involves converting cash back into some form of commitment device as quickly as possible\textsuperscript{149}. While some individuals give into temptation, others seek to purposefully limit their options as a means of self-control\textsuperscript{150}. In fact, research within Africa has shown that individuals who are able to avoid vices when cash is available are highly respected within their local communities\textsuperscript{151}.

\textsuperscript{143} Iringa 3 Farmer Focus Group
\textsuperscript{144} Iringa 2 Farmer Focus Group
\textsuperscript{145} Iringa 2 Farmer Focus Group
\textsuperscript{146} Iringa 3 Farmer Focus Group
\textsuperscript{147} AGRA Interview
\textsuperscript{148} Mas (2015), Money Resolutions, A Sketchbook, CGAP
\textsuperscript{149} Collins, Morduch, Rutherford, & Ruthven (2009), Portfolios of the Poor: How the World’s Poor Live on $2 Per Day, Princeton University Press, Princeton: NJ
\textsuperscript{150} Duflo, Kremer, & Robinson (2010), Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya, J-PAL
\textsuperscript{151} Zollmann & Collins (2010), Financial Capability and the Poor – Are we Missing the Mark?, FSD Kenya
One borrower group interviewed had purposefully changed the frequency of their loan repayment from once per month to once every two weeks in an effort to self-regulate:

“They changed it so they could pay every two weeks rather than every month which was the original requirement. They discovered that it can be sometimes difficult to have somebody to have all of the amount by the end of the month. It is easier for them to mobilize half the amount within the two weeks instead of paying at the end of the month. When they keep that money for a full month, anything can happen – somebody got sick ... you have a visitor ... so you spend that money. So instead of keeping it for the whole month it is better for them to save in the two weeks.”

While such instances of extreme self-control were certainly evident, they were not necessarily common (although may increase as a result of savings behavior associated with VSLA). Part of the reason for this may be that there are a limited number of individuals who are good at exercising self-control when resource scarcity is high. However, research in behavioural science has also shown that self-control is very much a ‘commodity’ in that the more individuals use it, the less of it is available for future decisions. Thus, the level of self-control remains a variable for all smallholder farmers, and subsequently an ongoing source of risk with respect to input credit.

**Creditworthiness of Group Members**

Given that the input credit products offered to smallholder farmers within Tanzania and Uganda are in groups, the level of risk any given farmer takes on is very much a function of the creditworthiness of the other members in their group. Financial institutions are only willing to offer loans to groups for two primary reasons: (1) lending to a group allows for greater economies of scale to offset the high transaction costs of serving rural farmers; and (2) the joint-liability provision that accompanies almost all group loans (except for BRAC as of 2016) allows financial institutions to lower their own risk.

There were a number of stories of certain group members not paying their portion of the loan. Such events not only increased the risk that other members may not be able to collectively repay the group loan, but also that the farmers may not qualify for another loan the following season:

152 Iganga 6 Farmer Focus Group
“He’s always worried of him completing his loan, and then the other group member has not paid on time, and so it will delay his way to get another loan. Because he is in a group, he can’t get a loan when others aren’t paying.”\(^{154}\)

However, one of the strongest themes from the focus groups was that the joint-liability provision not only decreased the risk for the financial institution, but could also significantly decrease the average risk for the smallholder farmers as well.

One of the primary reasons for this is that group members often perform due diligence on one another prior to agreeing to assume joint-liability. The result is that many of the members that end up forming the borrower group are considered fairly financially stable within the community:

“Before getting the supplies from the input fund, there’s a committee which does a kind of assessment of that farmer. They will go to his farm ... to his house as well ... and do all kinds of assessment just to make sure that he will repay the loan.”\(^{155}\)

“First they analyze and understand that this person is a resident from their area. Then ... they also look at whether they are trustworthy. Then hard work ... and does that person have any business – is he or she involved in any business activities? Then does that person have sympathy for other members?”\(^{156}\)

“They used to be a bigger group but part of the group is not part of [the borrower group]. To form the group for [financial institution A], from those members they selected those members whom they know...they know their discipline and where they operate, so they self-selected themselves. Plus the search information they get from the bank helps them. That’s part of why they haven’t had issues with anyone defaulting ... because of the self-section process and the help of the bank.”\(^{157}\)

“They first assess the person who would like to borrow, and they find out if he has the capacity to pay back on the loan.”\(^{158}\)

Additionally, groups often took into account not only the individual farmer, but also ties they had to wealthier family members. These family ties could be relied upon in the event that the farmer had insufficient funds at the time of repayment:

\(^{154}\) Masaka 5 Farmer Focus Group  
\(^{155}\) Mbeya 1 Farmer Focus Group  
\(^{156}\) Masaka 7 Farmer Focus Group  
\(^{157}\) Masaka 6 Farmer Focus Group  
\(^{158}\) Iganga 6 Farmer Focus Group
“Last year ... it happened. Two guys, they took a loan ... then they didn’t manage to pay. But at the end of the day he had a relative living somewhere else who managed to pay for him. And the other guy, he also had a relative that managed to pay.”

While such ‘community due diligence’ often helped to increase the creditworthiness of the overall group, one could certainly debate the ethics of such a process – whether excluding those who are likely most in need of a loan due to higher levels of poverty is virtuous or not. It was repeatedly stated that there were far more smallholder farmers in nearly every community who wanted to take input credit but were not allowed to join the group. However, there are a number of other features by the bank (i.e., credit check, requirement for loan security deposit, requirement for collateral, etc.) that may have precluded many of the same people regardless of the group’s due diligence. Additionally, those who are most poor may also be greater risk of reputations loss and even suicide as discussed earlier. Thus, this remains a fairly complex issue that resides at the intersection of credit risk and human rights.

**Variance in Financial Institution Aggressiveness**

Given that input loans are a dyadic relationship involving a smallholder farmer and a financial institution, it is logical that the amount of risk to one party (the farmer) would be largely a function of the other party’s (the financial institution) level of aggressiveness to pursue damages in the event of default. Participants recounted numerous instances involving financial institutions that acted very aggressively towards farmers in the event of late payment:

“*The methods [financial institution A] use to get back the payments is also harsh. They give someone a loan in a village who has three children, and they come convincing her about the good things she’s going to get form the loan, and then maybe three months down the road, she’s not able to pay back as promised in the beginning. So they just come to the ladies house and just pull her out of the house ... arrest her ... and threaten her ... and sometimes they sell stuff from her house.*”

“*We’ve had about 99 percent repayment for the last 4 seasons ... but last season was really tough towards the end. And I think that there was probably some customer harassment that went on.*”

“*With [financial institution A] ... when they don’t pay ... they use an iron hand to ask them to pay.*”

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159 AMFIU Interview  
160 Anonymous financial institution  
161 Iganga 7 Farmer Focus Group
This was particularly true within Uganda where, because of poor credit systems, the field agents are often unsure if the farmer has other outstanding loans, and thus wants to act quickly to repossess collateral before other institutions get a chance.\textsuperscript{162}

However, this was not necessarily always the case. There were also a number of respondents who recounted instances where financial institutions were much more forgiving:

“In their first loan cycle, it happened that there was a long drought, their crops were destroyed, so they talked to [financial institution A]... and they extended the loan period until when they had harvest in another season ... then they paid off the loan. If it happens, the bank can extend.”\textsuperscript{163}

“With [financial institution A]... if you fail because of climate – you can sit down and negotiate to carry forward. The problem if you carry forward, you can’t get more for the next year. They are also pushing it to the other season. They are charging 20 percent ... but they are taking the original amount plus the interest ... then it is the new principal ... and they are charging 20 percent.”

Additionally, there were some indications that financial institutions that used to be aggressive in the early stages of offering a product had become less so over time:

“In those days ... when they would see the FINCA motorbike, even women would leave their homes and run away. Initially, they use to pay in a shorter period, but nowadays they are given enough time. And even if an installment falls due, they still wait for them to connect. So they no longer run away like before.”\textsuperscript{164}

It is important, however, to not simply evaluate the risk of aggressiveness from financial institutions in a vacuum. In the event that a smallholder farmer did not take an input loan from a formal financial institution, there was a high likelihood they would borrow from a private lender instead. However, it was unclear from the data whether the level of aggressiveness by private lenders was greater or less than that of formal financial institutions;

“The kukata kichwa ... he is living within this community, so he knows each and every thing that is happening in the community. If there is bad weather ... he will understand if you tell him, ‘you know what ... this season is bad so I’ll pay you next season ... he will understand. Unlike the bank ... they’re not living in the community ... so it’s easier for the kukata kichwa to understand you ... in case of any problem.”\textsuperscript{165}

\begin{footnotesize}
\begin{enumerate}
\item Masaka 3 Farmer Focus Group
\item Iganga 2 Farmer Focus Group
\item Mbeya 4 Farmer Focus Group
\end{enumerate}
\end{footnotesize}
“They’re scared of kukata kichwa because they’re living in the same community. For a bank … if the bank comes in the village to look for you, you can just run away. The kukata kichwa will come to your house … they know [where you live].”\textsuperscript{166}

“Informal sources are much more understanding … more flexible. If you’re in the same group, you all see the weather conditions … you don’t have to explain much.”\textsuperscript{167}

“You know … if you take a loan from that institution, the officers will come and look for you. Of course, they fear …. just like they fear money sharks … they know that some institutions are very aggressive.”\textsuperscript{168}

Thus the level of risk a farmer faces associated with input credit is a varying function of both the aggressiveness of the financial institution, as well as other informal actors.

**Implications**

Based upon the data collected, it appears there may be a number of smallholder farmers who are indeed struggling to comprehend input credit bundles, and that the risks associated with taking input credit are relatively high … and yet highly varied. In turn, this means that there are likely smallholder farmers obtaining input credit who should not be – but also a number of smallholder farmers who would benefit from borrowing but are refraining from doing so. Correspondingly, it appears that at least several of the client protection principles prescribed by The Smart Campaign (i.e., prevention of over-indebtedness, transparency, fair and respectful treatment of clients) may be in need of further efforts to ensure input credit is being delivered in a responsible way.

Based on the nature of the data collected, and the stated desire of MCF to leverage work in behavioral science, the bulk of implications to be discussed will revolve around the heuristics and cognitive biases that smallholder farmers exhibit in making financial decisions regarding input credit. Using a behavioural science lens to explore such issues can help inform how input credit products can better be communicated and structured within the African context to improve comprehension and help mitigate risk.

\textsuperscript{166} Masaka 4 Farmer Focus Group
\textsuperscript{167} FSDT Interview
\textsuperscript{168} BRAC Uganda Interview
Behavioural Science Insights

Addressing ‘Old’ Heuristics

As referenced throughout the findings section, a great deal of work in the field of behavioural science has focused recently on financial decision making within contexts of poverty. This work has emphasized that, because of the financial instability linked to poverty, individuals living in such circumstances are forced to make financial decisions on a much more frequent basis than wealthier individuals.169 However, because making so many financial decisions is cognitively taxing, impoverished individuals often develop a series of simple heuristics to follow rather than analyzing every financial decision independently.170 While such ‘rules of thumb’ may at times result in the correct decision being made, they can also backfire in many situations.171

Unfortunately, the input credit system offered by financial institutions is quite different than the informal system they are used to dealing with, and yet they apply the same heuristics. Take, for instance, the case of the private lenders (kutata kichwa, mbata) where the system was very simple; they loan the farmer money to purchase inputs at the beginning of the growing season, and the farmer promises to sell them one or more bags when they harvest at a fixed (albeit very low) price.

Looking at this through a cognitive lens, it is not difficult to see why, for instance, the farmers see weather as really the only risk for input credit – all they needed to worry about previously was having enough product to give to the private lender. They didn’t need to worry about the credit-worthiness of other members because the loans from private lenders are done individually. They didn’t need to worry very much about the self-control to save for regular cash repayments because, again, all that was required was one or more bags of their crops rather than cash. And the same can be said for comprehension – all they needed to know within the ‘old’ input credit system was how many bags to provide; they didn’t need to consider insurance components, processing fees, and interest rates. Thus, the first step in seeking to improve smallholder farmer’s comprehension of pricing and risk with the ‘new’ input credit products is recognizing that it’s not simply a transfer of new knowledge – it’s the

169 Zollmann & Collins (2010), Financial Capability and the Poor – Are we Missing the Mark?, FSD Kenya
170 Mas (2015), Money Resolutions, A Sketchbook, CGAP
replacement of deeply rooted ‘old’ heuristics in making financial decisions associated with input credit.

Research has shown that the transition from one financial decision-making heuristic to a new one is often a slow and staged process. Individuals typically ‘sample’ new financial products in small amounts, learn through mistakes, and subsequently increase usage of the new process. For instance, in trying to increase uptake of formal savings products amongst impoverished individuals, behavioural science researchers have noted that ‘soft commitment devices’ that allow for easy backtracking if desired were most successful. Unfortunately, input credit products do not lend themselves well to this ‘sampling’ approach primarily because they are large in size and represent a significant up-front binding commitment. While one option for restructuring such products would be to allow first-time borrowers only small amounts from formal financial institutions, this route may be self-defeating as farmers would likely turn to informal sources for the remaining amount that they require:

“What forces them to apply from Mbata … from friends … is because sometimes they apply to [financial institution A] for an amount they think will help but then they are given less, and are told … ‘your capacity can manage to pay 1M instead of 2M that you applied for’… which makes them go for Mbata … which affects their incomes leading to bad payments to [financial institution A] because you’re paying the other one who has high interest.”

What seemed to be a more typical ‘sampling’ approach relayed within the farmer focus groups was a process in which they watched closely other farmers in their community who took the input credit, and subsequently took a loan themselves if what they observed was positive:

“Most of the ones that didn’t take a loan … they look at these ones as a pilot … as a demo. If they see any improvement, maybe then they will take a loan. Like an example.”

The danger in this approach is that most of the farmers who obtained input credit in earlier stages were likely also the ones who were the most educated, the least desperate, and could most afford to take risks. Thus, the ‘average’ smallholder farmer is again employing a heuristic incorrectly – ‘if it’s good for other farmers in my community, it must be good for me’. Without

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172 Zollmann & Collins (2010), Financial Capability and the Poor – Are we Missing the Mark?, FSD Kenya
173 Karlan, Ratan, & Zinman (2014), Savings by and for the poor – A research review and agenda, Review of Income and Wealth
174 Masaka 4 Farmer Focus Group
175 Iringa 3 Farmer Focus Group
being able to interpret the product’s features and understand the accompanying risks of the input credit product on an individual basis, farmers who adopt such an ‘emulation heuristic’ may be placing themselves at tremendous risk.

By including financial literacy training as part of the typical input credit bundles studied in Tanzania and Uganda, financial institutions are certainly demonstrating that they recognize this need. Unfortunately, the traditional classroom style approach which forms the core of such trainings has been shown to have questionable effects on improving overall financial literacy\textsuperscript{176}. Part of the reason for this is likely the wide gap that exists between many smallholder farmers’ existing levels of literacy and numeracy and the levels of comprehension the trainings are attempting to achieve. However, behavioural science research has increasingly demonstrated that low financial capability often has as much to do with psychology as with a lack of knowledge.\textsuperscript{177}

**Building ‘New’ Heuristics through Simulation**

Recent work grounded within behavioural science has stressed that financial training should first and foremost be about actively building new heuristics rather than passively transferring new knowledge.\textsuperscript{178} This typically means simulating actual events as opposed to simply explaining new terminology and mathematical techniques.\textsuperscript{179} Only by repeatedly enacting new behaviours in the contexts in which they are to be used can ‘old’ heuristics be replaced with ‘new’ heuristics. Having individuals actually make financial decisions, and learning through trial and error, is the most effective way for triggering long-term behavioural change.

So what does this mean for input credit products specifically? First, it means that the training that accompanies input credit loans should perhaps not be general ‘financial literacy training’ but rather ‘input loan training’\textsuperscript{180}. By focusing the training on the specific set of activities associated with taking an input loan, there is greater likelihood of replacing ‘old’ heuristics that typically govern behaviour in such contexts. Thus, rather than grounding the


\textsuperscript{178} Mazer, McKee, & Fiorillo (2014), *Applying Behavioural Insights in Consumer Protection Policy*, CGAP


\textsuperscript{180} It should be noted here that an extensive review of financial literacy training was not undertaken. Rather, the report relied upon more general characterizations of current financial literacy training practices which undoubtedly vary from program to program
training around different aspects of numeracy such as savings, accounting, and calculating interest rates, the training could be anchored using the different decision points involved with taking an input loan – linking new heuristics with traditional decision-making cues in the input credit process.

Additionally, rather than structure such trainings using a linear process that often includes: (1) instructor training; (2) group discussion; and (3) subsequent practice, the training could be structured iteratively as: (1) practice; (2) example skit; (3) practice again. The first practice would involve the field officer asking several random smallholder farmers to engage in a simulation of whether or not to take a loan, what to do with the loan proceeds, etc. Thus, it would be experientially based, and the smallholder farmers would need to verbally articulate to the group the reasons for each of their decisions. Subsequently, the instructors could then perform a skit in which they too undertake the same simulation, and explain to the group the reasons for each of their decisions. The focus of this exercise would not be so much on the differences in decisions, but rather on differences in information that was solicited and considered at each of the decision points. The process could then be repeated weekly, only each time with slightly different parameters (i.e., a flood rather than a drought occurs; the private lender in town offers to pay a higher price for a bag of maize if they borrow from him; etc.). Each time, the simulations would involve random members of the group such that all members participate multiple times. Keeping each simulation session relatively short, but taking place frequently, could also help to address the common problem researchers have noted of ‘scarcity of attention’ exhibited during many financial trainings sessions.181

Using Simulations to Address Cognitive Biases

There are a number of potential benefits in structuring ‘input credit trainings’ in this way. First and foremost, it would allow smallholder farmers to ‘sample’ an input loan, and thus aid them in their decision regarding whether or not the costs and risks associated with such loans are acceptable or unacceptable. Second, the repetition of the exercises allows for the building of new routines which are more likely to ‘stick’ even after the training has been completed. Third, it would hopefully bring issues of pricing and risk into greater salience as compared with the factors currently dominating such decisions (such as availability, the repayment period, and time

to receive the loan). And finally, by ensuring all group members repeatedly take part in the exercises, it lessens the likelihood of social loafing in which individuals often put forth less effort when they are able to hide in a group – a phenomenon that was frequently noted within the focus group discussions.  

Using simulations also has the potential to break down many of the cognitive biases smallholder farmers exhibit with respect to risk. First and foremost, it could help address the availability heuristic farmers have with respect to focusing solely on weather to the exclusion of other risks. Additionally, by having multiple simulations with slightly varying, yet realistic negative events (i.e., accidentally purchasing fake inputs; experiencing a significant drop in price for a particular group; having several group members who can’t repay; etc.), farmers may suffer less from an optimism bias in which individuals tend to make decisions incorrectly based upon a best case rather than a realistic scenario. Similarly, simulations could effectively demonstrate that sometimes accepting the input loan can leave farmers in a worse financial situation even when they are desperate. This could help to address farmers’ susceptibility to hyperbolic discounting in which individuals make hasty choices that their future selves would not make.

Using repeated simulations could also potentially improve problems associated with comprehension. The simulations could involve the use of a mock currency with subsequent role-playing exercises in which the trainer demands loan security deposits, application fees, and monthly payments. The simulation could also involve scenarios in which one of the participating farmers ‘dies’ unexpectedly, and subsequently the details of the life insurance component could be acted out.

While the use of repeated simulations to improve financial literacy is not completely new, they remain relatively rare in the development context. What is more common is a shift towards ‘storytelling’ rather than ‘lecturing’. For instance, one of the financial institutions in the study described a pilot project they recently undertook that explored the use of a ‘soap opera’ to improve financial literacy. Specifically, the story followed the lives of several families engaged

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184 Mazer, McKee, & Fiorillo (2014), Applying Behavioural Insights in Consumer Protection Policy, CGAP
in taking formal financial loans and was recorded on DVD. While such examples of ‘vicarious learning’ are undoubtedly more effective than raw knowledge transfer, it remains to be seen if they are as effective as ‘experiential learning’ in which the recipient is also a direct participant.

**Optimizing Levels of Transparency**

In addition to the use of simulations to address some of the challenges associated with comprehension and risk, the basic details of an input loan (i.e., fees, components, etc.) still needs to be communicated to smallholder farmers in a way that is easy for them to understand. As the data suggest, smallholder farmers struggled a great deal with how to calculate ‘interest rate’, and most desired simply to have the total amount owed communicated rather than trying to understand the rate of interest. Existing approaches did not appear to be effectively building the bridge between traditional informal processes and new formal processes:

> “[The farmers] have to understand what it means when you say 20 percent. What does it mean when you say I will pay one bucket ..., one bucket ... how much is it worth? And 20 percent ... it’s equivalent to how much? So there must be something like a simple language for them to understand.”

While the goal of using interest rate language (and especially annual percentage rate) may be to allow for simple comparison between competing input credit products, it appears that language of this sort may be resulting in more confusion than clarification at the present time. Prior research involving low literate populations has similarly found that such individuals often make worse financial decisions when terms are communicated in interest rate form rather than absolute amounts. Thus, at least until there is greater competition between financial institutions, it would seem most prudent to communicate interest costs in monetary amounts rather than percentage terms.

A number of farmers indicated that they did not even want interest (and other fees) broken out into separate dollar amounts, but preferred simply to have the total cost of the loan communicated as a single amount. To such individuals, greater transparency of all of the costs associated with the loan was again more confusing than clarifying. This echoes a number of recent behavioural science studies that have found that simplicity is the keystone of effective

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187 Mbeya 3 Farmer Focus Group
188 AMFIU Interview
microfinance. Subsequently, more financial disclosure is not always better; often it can lead to
greater inaction, incorrectly basing decisions on less relevant information, and increased
decision conflict. Correspondingly, some of the smallholder farmers participating in the study
indicated that they had elected not to take a loan because they felt overwhelmed by the
information. Thus, it would seem that for at least some individuals, providing less information
would help to simplify their decision-making process.

At the same time, there were a number of instances in which smallholder farmers stressed
that they did want to know the details of the input credit bundles. It should be noted that these
farmers were typically better educated, had more experience with formal loans, and were often
leaders within the group. However, at least some of the field agents also expressed a desire for
greater disclosure as a means of justifying the total amount of money to be repaid. Knowing that
the costs of input loans are often perceived as fairly high by the farmers, itemizing each of the
loan’s components served as an important communication tool for defending such high costs.

Thus, it seems that a balance needs to be reached in terms of how the loan details are
initially communicated both verbally and visually. Given that most individuals are subject to an
anchoring effect in which they weigh the first piece of information they receive more heavily
than subsequent information, field agents should ensure that the total cost of the loan is the
first and most prominent feature mentioned in both their initial pitches and promotion materials.
From a visual perspective, the total amount to be repaid should also be bigger and bolder than all
other figures that are displayed. Subsequently, the detailed components of the loan (and
accompanying costs) could be listed in smaller but easier to read bullets on one sheet or less. In
verbal meetings, such details could be held as part of a secondary discussion for those farmers
who just want information to participate. This could potentially allow those who are interested in
these details to have access to them, but not overly confuse those who have no such interest.
With the subsequent use of simulations, all farmers would slowly become aware of the costs and
features of the loans – it would simply be a matter of staging.

190 Armendariz & Morduch (2010), The Economics of Microfinance, MIT Press: Cambridge
191 Bertrand, Mullainathan, & Shafir (2006), Behavioural Economics and Marketing in Aid of Decision Making
Among the Poor, Journal of Public Policy and Marketing, 25(1): 8-23
192 Mazer, McKee, & Fiorillo (2014), Applying Behavioural Insights in Consumer Protection Policy, CGAP
and Marketing, 25(1): 24-38
194 Strack & Mussweiler (1997), Explaining the Enigmatic Anchoring Effect: Mechanisms of Selective
At a basic level, all of the input credit related documentation needs to be translated into the local languages, and kept up-to-date with current pricing information. As mentioned previously, a number of financial institutions involved in the study did not have any written material. For those that did, the information was often in English or the information was out-of-date. Other studies conducted in Africa have reported similar patterns where loan documentation was of little value to potential borrowers in its current form. While a significant portion of smallholder farmers are illiterate, and would therefore find such documents difficult to read, it was often mentioned within the focus group sessions that they have friends or family who are literate and would be able to help them to interpret such documentation.

**Dealing with Poor Self-Control**

One issue that has yet to be addressed is the challenge surrounding self-control in the context of smallholder lending. While examples of what exercising ‘good’ self-control looks like could also be integrated into simulation exercises, self-control is easily drained and in need of frequent replenishment. A number of studies grounded in behavioural science have noted that something as simple as constant reminders can significantly reinforce desired financial behaviours. Prior research has also found that timely reminders can be helpful in reinforcing adherence to goals. Thus, perhaps leveraging basic SMS platforms to sporadically remind smallholder farmers about the importance of exercising good self-control could be effective. Specifically, electronic content that emphasizes the link between self-control and achieving their goals, and examples of people who have successful achieved their goals by exercising self-control may be particularly effective.

Additionally, financial institutions may want to offer rewards for certain activities that demonstrate good self-control (i.e., a small discount for early repayment). At present, the ubiquitous approach for financial institutions in attempting to influence the behaviour of smallholder farmers is the use of a ‘stick’ rather than a ‘carrot’. A number of recent studies have

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196 Atkinson, de Janvry, McIntosh, & Sadoulet (2010), *Creating Incentives to Save among Microfinance Borrowers: A Behavioural Experiment from Guatemala*, University of California Berkley
198 Mattern & Tarazi (2015), *Designing Digital Financial Services for Smallholder Farmers*, CGAP
demonstrated that incentives can be particularly useful for changing mental heuristics\textsuperscript{199}, and can be just as effective as using punishment when it comes to loan repayments and savings contributions.\textsuperscript{200}

Non-Behavioural Insights;

Many of the ‘non-behavioural’ factors responsible for the challenges identified in the study are highly complex. For instance, the growing volatility in crop prices and the upsurge in counterfeit input products are the result of many intertwined political, economic, and legal forces. Similarly, issues of low education levels, low farmer diversification, and low creditworthiness of borrower group members are entangled with perpetual cultural, social, and other multifarious forces that are extremely complicated to address. That being said, two potential implications involving such ‘non-behavioural’ issues will be briefly discussed.

Alternatives to Focus on Smallholder Financing

It should be noted briefly, however, that the sheer number of factors influencing the riskiness of agricultural financing certainly lends credence to a more comprehensive value chain approach such as that being taken by One Acre Fund and AgriFin Accelerate. Approaches such as these recognize that a lack of financial capital on the part of the farmer is only one source of uncertainty. As one expert in agricultural value chains noted:

\begin{quote}
“Is the bottleneck credit? Is the bottleneck the market? What is the bottleneck? I think there is an element of risk beyond the credit. There’s enough risk out there that credit is not the only solution. It’s like a symptom and a cause. I’ll use malaria as an example. People say I have a fever … I have a headache … my knees hurt. So we’re trying [to cure] the fever and the headache and the knees with Panadol … and the guy has malaria. I think there’s more to it than just credit. Usually what you find in agriculture … at least how it’s done here … the issue of risk is usually pushed all the way down to the smallholder. No one else wants to carry any risk, so all the risk is carried by the one person who is not able to deal with the risk.”\textsuperscript{201}
\end{quote}

Recognizing this disproportionate allocation, such programs have launched a coordinated attack on mitigating risk throughout the supply chain: crop insurance to mitigate weather risk; forward

\textsuperscript{200} Mattern & Tarazi (2015), \textit{Designing Digital Financial Services for Smallholder Farmers}, CGAP
\textsuperscript{201} FSDT Interview
contracts with off-takers to mitigate price risk; agreements with large input suppliers to mitigate risk of counterfeit products; etc. However, it should also be noted that attempting to deal with an interconnected web of risks through central planning often comes with coordination difficulties and inefficiencies.

It was also interesting to see that very few financial institutions have looked at the possibility of providing input credit to smallholder farmers in partnership with reputable local input suppliers. Much the same way that automobile companies or farm equipment companies often partner with banks to offer financing options on their products, so too could local input suppliers offer credit terms. In speaking with several input suppliers, it was clear that they were firmly embedded within the communities where they operate (thus lowering information costs, transaction costs, etc.) and would be willing to provide credit for sale of their products to local farmers if they had the financial capacity. While such partnerships are beginning to arise at a more macro level with large input suppliers, perhaps a closer look at also leveraging local input suppliers may be warranted.

**Dealing with ‘Bad’ Financial Institutions**

Finally, a brief note on the ‘bad’ behaviour of financial institutions is warranted. As detailed previously, there were a number of examples provided of financial institutions being part of the reason for poor farmer comprehension (i.e., offering bribes, purposefully not disclosing information, etc.), as well as a key source of heightened risk (including excessive pressure in demanding repayment, aggressive repossession, etc.). Given the poor state of consumer protection legislation throughout Tanzania and Uganda (and indeed throughout much of Africa), such behaviour is likely a common, yet unwanted, occurrence. While dealing with this issue is highly complex, there are perhaps some basic changes that could be made.

The behaviour of the field agents appears very much to be a function of the incentive systems that financial institutions have in place. By focusing constantly on metrics surrounding number of ‘loans signed’, or ‘default rate’ to the exclusion of metrics such as ‘number of borrower complaints’ many of the bad behaviours being exhibited are a direct result of what is being rewarded. Thus, one possibility for MCF is to demand the tracking of additional metrics (i.e., level of farmer satisfaction) as part of its ongoing support to financial institutions. Future tranches of funding could either be contingent upon maintaining what are considered acceptable
levels (a ‘stick’), or alternatively additional top-up funding could be granted (a ‘carrot’) in such instances. Given the potential for falsification of data, it would be most prudent to have such metrics obtained from a third-party evaluator, as well as augmented with an ongoing ‘mystery shopping’ program in which randomly selected farmers are asked to report on their input credit experience in return for a small payment (i.e., cell phone credit). These sorts of tracking mechanisms are becoming more commonplace in the financial sector within Africa.  

Conclusion

The purpose of this report was to provide general insight into the levels of comprehension and risk that smallholder farmers exhibit with regard to input credit bundles. Through a series of focus groups, interviews, and review of relevant literature, a number of underlying challenges were identified. Consequently, potential ideas for addressing such challenges were discussed to help trigger further thoughts and suggestions.

Most of the ideas for addressing such challenges were focused on the cognitive biases and heuristics of smallholder farmers. In keeping with a behavioural science orientation, it should be stressed that any potential changes to MCF programming with respect to smallholder farmers should be subject to rigorous pilot testing. There are undoubtedly a host of cultural, country, and other confounding factors that would likely affect the outcome of the ideas for improving comprehension and decreasing risk that were discussed herein. Thus, to ensure that these changes are warranted and prudent, the next step in the process should be to undertake a series of field experiments with smallholder farmers.

However, there were also several eco-system level issues identified that MCF could take more immediate steps to address. For example, MCF could encourage governments to; (1) establish price ceilings and price floors on agricultural products to help mitigate price volatility, (2) relax current restrictions on microfinance institutions so that they can accept deposits, and thus expand their capital base beyond private investors, (3) create a certification program for crop inputs to help smallholder farmers more easily recognize and avoid counterfeit products, and (4) set up a formalized customer complaints department where smallholder farmers could voice their concerns with financial service providers. Such changes could create a much more enabling environment for future growth in smallholder credit.

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MCF could also work directly with financial institutions to modify and improve upon existing input credit products. For example, MCF could encourage financial institutions to not simply impose penalties for late repayment, but also to provide incentives for early repayment. Adding such a feature may not only help reduce delinquency rates for financial institutions, but also help to replenish their capital base more frequently. Efforts could also be made to encourage greater diversity among borrowing groups. Borrowing groups targeted by financial institutions under the current model are largely homogeneous (i.e. all farmers). Encouraging more diversified groups (i.e. farmers and traders) could help to lower systematic risk for financial institutions (and by extension, for smallholder farmers). Finally, MCF could encourage financial institutions to provide a more comprehensive set of credit products that targets all entities within the agricultural value chains they serve (i.e. input suppliers, farmers, buyers, warehouse owners, etc.). Because such value chains are so highly interconnected, failing to provide credit to all entities is more likely to result in financial bottlenecks rather than the desired economic gains.
Appendix A: List of Interview/Focus Group Participants

Tanzania

- Jan 30, 2017 (Dar es Salaam):
  - Interview: TAMFI - Tanzania Association of Microfinance Institutions (Winnie Terry, Executive Secretary)
  - Interview: TADB - Tanzania Agricultural Development Bank (Francis Assenga, Managing Director; Albert Ngusaru, Director of Treasury and Funding; Adam Kamanda, Head of Risk & Compliance; Geoffrey Mtawa, Business Development Manager)
  - Interview: Mercy Corps/ AgriFin Accelerate (Amanyisye Luvanda, Program Office Tanzania)
  - Interview: BRAC Tanzania (Sazzad Hossain, Program Manager Microfinance)
  - Interview: Vision Fund (Yunus Elihudy, Branch Manager)
- Jan 31, 2017 (Dar es Salaam/Mbeya):
  - Interview: FSDT (Financial Sector Deepening Trust) – Mwombeki Baregu (Head, Agricultural & Rural Finance)
  - Interview: Akiba Commercial Bank (John Temu, Mbeya Branch Manager; Aloys Yamala, Agribusiness Manager)
- Feb 1, 2017 (Mbeya):
  - Farmer Focus Group: Mbeya 1 (8 cooperative members)
  - Farmer Focus Group: Mbeya 2 (10 Sacco members)
  - Farmer Focus Group: Mbeya 3 (6 cooperative members)
  - Farmer Focus Group: Mbeya 4 (12 cooperative members)
  - Interview: Mbeya Agro Dealer
- Feb 2, 2017 (Mbeya/Iringa):
  - Interview: AGRA (Aloys Kamuzora, Mbozi representative)
  - Interview: One Acre Fund (Emma Impink, Impact Director, Ivan Josephat, Field Officer)
- Feb 3, 2017 (Iringa):
  - Farmer Focus Group: Iringa 1 (6 cooperative members)
  - Farmer Focus Group: Iringa 2 (8 cooperative members + 3 non-members)
  - Interview: Iringa Credit Officer
  - Farmer Focus Group: Iringa 3 (8 cooperative members)

Uganda

- Feb 6, 2017 (Kampala):
  - Interview: FINCA Head Office (Joseph Nsenge, Credit Manager)
  - Interview: Opportunity Bank (Emmanuel Lubwama, Rural Finance Manager; Guma Gilbert Muthemba, Projects Manager; John Magnay, Head of Agriculture;
Tamsin Scurfield, Business Development & Partnerships Manager; Tim Strong, Regional Agricultura Advisor

- Interview: BRAC Uganda (Emmanuel Emaasit, Chief Operations Officer Microfinance, and Chief Credit Officer)
- Interview: AMFIU - Association of Microfinance Institutions of Uganda (Jackie Mbabazi, Executive Director, and the Director of Complaints Department)

- Feb 7, 2017 (Masaka):
  - Interview: Opportunity Bank Masaka Branch – Central/Western Region of Uganda (Samson Musana, Branch Manager; Kholeb, Field Officer)
  - Farmer Focus Group: Masaka 1 (10 cooperative members)
  - Farmer Focus Group: Masaka 2 (6 cooperative members)
  - Credit Officer Focus Group: (10 relationship managers from Opportunity Bank)

- Feb 8, 2017 (Masaka):
  - Farmer Focus Group: Masaka 3 (10 cooperative farmers)
  - Farmer Focus Group: Masaka 4 (11 cooperative farmers)
  - Farmer Focus Group: Masaka 5 (8 cooperative farmers)
  - Farmer Focus Group: Masaka 6 (5 cooperative farmers)
  - Farmer Focus Group: Masaka 7 (10 cooperative farmers)

- Feb 9, 2017 (Iganga):
  - Interview: FINCA Iganga Branch – Eastern Region Uganda (Jonathan & Francis)
  - Farmer Focus Group: Iganga 1 (11 cooperative farmers)
  - Farmer Focus Group: Iganga 2 (15 cooperative farmers)
  - Farmer Focus Group: Iganga 3 (3 farmers representing new potential loan group)
  - Farmer Focus Group: Iganga 4 (9 cooperative farmers)
  - Farmer Focus Group: Iganga 5 (21 cooperative farmers)

- Feb 10, 2017 (Iganga):
  - Farmer Focus Group: Iganga 6 (14 cooperative farmers)
  - Farmer Focus Group: Iganga 7 (12 cooperative farmers)

Remote Interview

- Feb 28, 2017:
  - Tom Carroll, Director of the AgEnterprise portfolio at GDI
Appendix B: Grand Tour Questions

1. How many farmers used inputs on their crops this past planting season?
2. And how do you get the money to buy such inputs?
3. Before [insert financial institution name] provided you with input credit, how did you used to get the money for such inputs?
4. Have any of you ever borrowed money before from [insert financial institution name] to purchase inputs? What was the cost of borrowing from these sources? If you haven’t ever borrowed before, how come?
5. How much did each farmer borrow from [insert financial institution name], and how much do you need to pay back? What is the repayment schedule?
6. Do you know how many bags of [insert appropriate crop name] it would take to pay back the loan to [insert financial institution name]?
7. What are the most important reasons why you decided to take a loan from [insert financial institution name]?
8. What are all the costs associated with borrowing from [insert financial institution name]?
   a. Prohibit executive leadership from answering these questions first
9. What is the interest rate? Additional fees?
10. Do you think the input loan is expensive, cheap, or priced normally?
11. And what do you receive in addition to the cash itself? What do each of these additional services/benefits cost?
12. What was your initial impression when [insert financial institution name] told you about the loan – excited or apprehensive?
13. What happens if you don’t pay back the money to a SACCO/VSLA/Private Lender?
14. And what happens if you don’t pay back the money to [insert financial institution name]?
15. Would you be more afraid to default to [insert financial institution name] or to a SACCO/VSLA/Private Lender?
16. What does the group do if one of its members can’t pay back their share of the loan to [insert financial institution name]?
17. Do you think taking a loan is risky? As compared to other things in life like getting married, moving villages, how does it compare? If so, why do you do it anyways?
18. Why doesn’t everyone in the village take a loan from [insert financial institution name]?
   What do they think of your group taking a loan?
19. What has been the biggest surprise with the loan from [insert financial institution name]?
20. Have you ever spoken to another financial institution about getting an input loan? Ever considered switching to another financial institution? Why or why not?
21. Would you still take the loan if the interest rate increased to 30 percent per year? 40 percent per year? 50 percent per year? At what price would you say ‘no’?
22. How would you like to see the details of the loan communicated so that they’re very clear to you? How do other alternatives (SACCO/VSLA/Private Lender) communicate the costs and risks of their loans?
Exhibit A: Sample Loan Summary Document

O.Pportunity Bank Uganda Limited

(Licensed and Supervised by Bank of Uganda)

Ref No: 21050-18

Key Facts Document – Loans

This Key Facts Document is Important to You. It summarises the product you are considering. Please only sign after you have read, understood and agreed to the content of this document.

1. Type of Loan
   Agriculture Group Loan

2. Aims and Benefits
   To purchase fertilizers

3. Commitment
   a) Loan amount in Ugx: 600,000/=.
   By taking this loan, you commit to providing security against the money the financial institution lends you, making timely repayments (including interest), and paying interest on your loan as well as any additional fees.
   b) Duration: from 05-Aug-16 to 03-Aug-17
   Kibanza at Kabanja-Nakigwa LC1
   16,408.34/= for 9 months and 216,408.34/= for 3 months
   and to be paid at a weekly basis.
   c) Security: you have to provide the following security:
   d) Loan instalments: Repayments of
   e) For more details, please consult your repayment schedule
   f) Grace period: Two weeks
   g) Fees:

<table>
<thead>
<tr>
<th>Description of fees</th>
<th>Amount over the duration of the loan in Ugx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Interest paid</td>
<td>196,900.08</td>
</tr>
<tr>
<td>Administrative fees of 1% of the loan amount</td>
<td>6,000</td>
</tr>
<tr>
<td>Insurance (1%) of the loan amount</td>
<td>6,000</td>
</tr>
<tr>
<td>Security-related charges</td>
<td>0</td>
</tr>
<tr>
<td>Utilisation fee (1%) of the loan amount</td>
<td>6,000</td>
</tr>
<tr>
<td>Application fee</td>
<td>5,000</td>
</tr>
<tr>
<td>Search fee</td>
<td>10,000</td>
</tr>
<tr>
<td>Commissioning fee</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL COST OF CREDIT</td>
<td>229,900.08</td>
</tr>
</tbody>
</table>

The TOTAL COST OF CREDIT is the total amount you pay for your loan. It is calculated by adding together all costs you will need to pay over the period of the loan. Note that this is based on the terms above and may be subject to change. Also remember that you will also have to pay back the sum you borrowed (see 3.b. above).
4. **RISKS**

a) Late repayments: if you delay repaying by more than 3 days, you will be charged 3%.

b) If you fail to repay the loan, you can lose your security.

c) If you fail to repay the loan, you risk losing your reputation in your community and in front of your family.

d) Failure to repay can harm your chances of accessing loans in the future.

e) In case of default, you will have to meet the costs of loan recovery.

f) The interest rate is variable so the amount of interest you have to pay may increase. We will immediately inform you of any changes.

5. **FURTHER POINTS TO CONSIDER**

- **The right to cool off:** You have up to 10 working days from when you sign the contract to “cool off”, i.e. to cancel the loan by terminating the contract. To “cool off”, you have to provide written notice to the lender and return all the borrowed money. The lender may charge you a fee not exceeding 5% of the value of the loan. The right to “cool off” applies only to loans of UGX 3,000,000 or above with a duration of at least one year.

- **Early redemption:** This loan allows you to pay back the money you borrowed before the agreed date at a fee of 5% on outstanding balance.

- **How to complain:** If you are dissatisfied with our services, we welcome you to communicate this to us at the Customer care desk or complaints registers in banking halls. We will acknowledge receipt of your complaint, investigate and give you an answer within two weeks.

- **Credit Reference Bureau:** Every borrower must be registered and requires a financial card.

- **Also remember to ask about:**
  a) Insurance (risks insured, premiums, and benefits that accrue to the borrower).
  b) Security concepts (professional valuation, forced sale value, security margin and cash margin).
  c) Measures taken in case of failure to repay.
  d) Guarantor policy (if applicable) and the risks to the guarantor.
  e) Security liquidation policy/process.
  f) Security release process and associated costs.

**Future communications**

It is important for us to be able to communicate with you. Below, please tick at least two preferred means of communication and provide details (and update us in case of any changes):

<table>
<thead>
<tr>
<th>Mobile Phone</th>
<th>Email</th>
<th>Post</th>
<th>Over the counter</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1</td>
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<td></td>
<td></td>
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</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature

Name: TWINEMATISO COLEB
Relationship Officer

Name: NAKIMWERO RESTY
Client

**Date**

*Where can I find out more about this loan product?* If you want more information on the terms used in this KFD or product, please contact **TEL: 0414236724**

www.opportunitybank.co.ug


**Exhibit B: Sample Loan Brochure**

**Jiandikishe kwa ajili ya kifuruhsia**

Pembejeo ni nafuu mwaka huu! Hii inamaanisha unaweza kuokoa fedha zaidi katika kifuru kwa chako cha mahindi. Pia tuna punguzo maalum la ekari 2 ambapo utaokoa TSH 20,000.

<table>
<thead>
<tr>
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<th>Bei ya 2015</th>
<th>Bei ya 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 kg DAP</td>
<td>TSH 75,000</td>
<td>TSH 65,000</td>
</tr>
<tr>
<td>50 kg CAN</td>
<td>TSH 57,000</td>
<td>TSH 52,000</td>
</tr>
<tr>
<td>10 kg Mbegu</td>
<td>TSH 45,000</td>
<td>TSH 50,000</td>
</tr>
<tr>
<td>Bima &amp; Uletaji</td>
<td>TSH 12,000</td>
<td>TSH 12,000</td>
</tr>
<tr>
<td>Huduma ya uendeshaji</td>
<td>TSH 34,000</td>
<td>TSH 34,000</td>
</tr>
<tr>
<td>Mafunzo &amp; huduma ya wateja</td>
<td>TSH 22,000</td>
<td>TSH 22,000</td>
</tr>
<tr>
<td><strong>Jumla ya bei na akiba mwaka huu</strong></td>
<td><strong>TSH 245,000</strong></td>
<td><strong>TSH 235,000</strong></td>
</tr>
</tbody>
</table>

**Mbolela ya bei rahisi!**

**Imepungua TSH 10,000 zaidi ya mwaka jana!**

---

**Mahindi: Ukuwawa wa Kifuruhi na Bei Zake**

<table>
<thead>
<tr>
<th>Ukubwa ya kifuruhi</th>
<th>1/2 ekari</th>
<th>1 ekari</th>
<th>1.5 ekari</th>
<th>2 ekari (nafuu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumla ya bei ya kifuruhi</td>
<td>TSH 128,500</td>
<td>TSH 235,000</td>
<td>TSH 341,500</td>
<td>TSH 448,000</td>
</tr>
</tbody>
</table>

**Punguzo ya ekari 2**

- TSH 20,000

<table>
<thead>
<tr>
<th>Ukubwa ya kifuruhi</th>
<th>2.5 ekari</th>
<th>3 ekari</th>
<th>3.5 ekari</th>
<th>4 ekari</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumla ya bei ya kifuruhi</td>
<td>TSH 534,500</td>
<td>TSH 641,000</td>
<td>TSH 747,500</td>
<td>TSH 854,000</td>
</tr>
</tbody>
</table>