Agricultural finance for smallholder farmers: Rethinking traditional microfinance risk and cost management approaches

With evidence from Uganda, Kenya, Benin and Cameroon

Daniela Röttger
Luxembourg, 13 September 2013
Outline

Background & Research Design

Findings
Lack of agricultural finance for smallholder farmers

Doran et al (2009). The missing middle in agricultural finance. Relieving the capital constraint on smallholder groups and other agricultural SMEs. Oxfam

Source: modified from Doran et al 2009: 9
High risk & cost perception

- Additional risks and costs of rural areas and agriculture:
  - external production and yield risks: natural disaster, plant/animal diseases
  - market and price risks: weak input and output markets, volatile prices
  - constraints in rural areas: high incidences of poverty, low productivity, low (financial) literacy
  - high costs due to dispersed clients and poor infrastructure
  - ..... 

- Incompatibility of some traditional microfinance risk & cost reducing mechanisms with agricultural investments
## Traditional microfinance features increase agricultural lending risk

### Typical MF features / requirements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Investment amount</th>
<th>Delay between investment &amp; return</th>
<th>% Return on investment</th>
<th>Lump size of return</th>
<th>Centrality of investment to hh income</th>
<th>Time sensitivity of investment</th>
<th>Distance between clients</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small loan amount</td>
<td>Small</td>
<td>Short</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Short</td>
<td>Good</td>
</tr>
<tr>
<td>Quick repayments</td>
<td></td>
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<tr>
<td>Cost covering interest rates</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Frequent repayments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Diversified hh income</td>
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<td></td>
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<tr>
<td>Staggered loan disbursement within group</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>High volumes per loan officers</td>
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<td></td>
</tr>
</tbody>
</table>

### Requirements for borrowers / investments

<table>
<thead>
<tr>
<th>Petty trade</th>
<th>Milking cow</th>
<th>Crop loan</th>
<th>Agric. equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>Medium</td>
<td>Small/ Medium</td>
<td>Large</td>
</tr>
<tr>
<td>Short</td>
<td>Medium to Short</td>
<td>Long</td>
<td>Very Long</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
<td>Medium to Low</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Medium to High</td>
<td>Medium to High</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Short</td>
<td>depends</td>
<td>Long (mostly)</td>
<td>Long (mostly)</td>
</tr>
<tr>
<td>Short</td>
<td>depends</td>
<td>Bad (mostly)</td>
<td>Bad (mostly)</td>
</tr>
<tr>
<td>Good</td>
<td>depends</td>
<td>Bad (mostly)</td>
<td>Bad (mostly)</td>
</tr>
</tbody>
</table>
How can MFIs adapt their traditional **loan features** and **lending procedures** to mitigate **credit risk** and manage **transaction costs** when providing agricultural finance for smallholder farmers?

- How to adapt traditional microfinance features and mechanism without increasing risks?
- How to manage additional risks and costs of agricultural lending?
### Interviewed MFIs

<table>
<thead>
<tr>
<th>MFI/ country</th>
<th>Age (years)</th>
<th>GLP (MM USD)</th>
<th>Deposit (MM USD)</th>
<th>Clients (thousands)</th>
<th>Branches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CB</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity Bank KE</td>
<td>20 - 29</td>
<td>1,301</td>
<td>1,501</td>
<td>7,151</td>
<td>186</td>
</tr>
<tr>
<td>CRDB UG</td>
<td>20 - 30</td>
<td>215</td>
<td>284</td>
<td>1,134</td>
<td>39</td>
</tr>
<tr>
<td><strong>MFC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faulu KE</td>
<td>22</td>
<td>40</td>
<td>7</td>
<td>226</td>
<td>96</td>
</tr>
<tr>
<td>RUCREF UG</td>
<td>13 - 20</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Juhudi Kilimo KE</td>
<td>4 - 9</td>
<td>2</td>
<td>0</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td><strong>MBFI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agaru SACCO UG</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>FECECAM BJ</td>
<td>37</td>
<td>56</td>
<td>85</td>
<td>641</td>
<td>108</td>
</tr>
<tr>
<td>MC²s CM</td>
<td>21</td>
<td>28</td>
<td>62</td>
<td>132</td>
<td>90</td>
</tr>
</tbody>
</table>

4 countries: Kenya, Uganda, Benin, Cameroon

<table>
<thead>
<tr>
<th>Agric. loan portfolio (MM USD)</th>
<th>As % of GLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.5</td>
<td>3%</td>
</tr>
<tr>
<td>26.5</td>
<td>12%</td>
</tr>
<tr>
<td>0.6</td>
<td>2%</td>
</tr>
<tr>
<td>2.1</td>
<td>100%</td>
</tr>
<tr>
<td>0.4</td>
<td>42%</td>
</tr>
<tr>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>4.5</td>
<td>16%</td>
</tr>
</tbody>
</table>

+ several experts and consultants in the field of agricultural finance
Outline

Background & Research Design

Findings
Loan features that fit smallholder farmers and agricultural product

- Repayment schedules fitting the seasonal cashflow of smallholder household (hh); grace periods
- No staggered disbursements within joint liability groups
- Frequent interest repayments
- Partial disbursements
- Linkage of loan with insurance product (life/ animal/ weather)
- Cooperation with value chain actors (e.g. vouchers instead of cash)
- Warehouse receipt system to reduce market price risk

“Know your client and know your crop”
Interest rates

- Different strategies: 3 MFIs lower, 3 higher than commercial interest rates
- Quoted interest rates: 10 - 46 % p.a.
- Effective interest rates: 18 - 68 % p.a.; PTI between 50 - 80%

**Effect of interest rates on income:**

**Example of a cotton smallholder farmer**

- 1 percentage point *change of interest rate* $\rightarrow$ 0.79 US $ income change
- 0.01 US $ *farm gate price change* $\rightarrow$ 5 US $ income change
Choosing the “right” farmers is key for success

- Commercial smallholders
- Adequate agricultural experience

Assessment of

- 6 C’s: 5 C’s of traditional microfinance
  - plus Crop
- Cash flow of the whole hh/ all hh activities
- Individual assessment by loan officer
- Use of joint liability groups for information gathering (internal credit committees & group discussion in absence of loan applicant)

“Good farmers can even harvest reasonable yields in unfavorable weather conditions & have high enough yields to make some profits even in case of market price drops”

Sound agricultural knowledge of specific crops & value chains is crucial
Loan monitoring & repayment

**Loan monitoring**

- Regular visits by loan officer according to crop cycle / animal lifecycle → partial disbursements based on successful completion of previous step
- Sometimes technical support/ agricultural advices

**Loan repayment**

- Group repayments
- Monthly interest payments
- Tough recovery processes in first year(s) to break distorted credit culture
Qualified staff with agricultural background

✔ Qualified staff with background in agriculture/ agricultural economics

- **at headquarter**: crucial for loan development & strategic decisions
- **as loan officer**: crucial for loan assessment and monitoring
  - able to properly analyze agricultural projects and validity of farmers’ information
  - be up to date with agriculturally relevant data of specific area
  - right attitude & motivation to work in the field
  - able to technically advise smallholders

“You can’t turn a banker into a farmer, but an agriculturalist into a banker”
Farmers’ integration in value chains can be used for cost and risk mitigation

✓ Understanding the respective value chain:
  ▪ understand the risks of the particular agricultural product and thus the farmer
  ▪ address financial constraints of the whole value chain
  ▪ tailor financial products to the needs of chain participants

✓ Cooperation between MFIs and other value chain players:
  ▪ to reduce costs, e.g. for loan assessment & repayment collection \(\rightarrow\) reduce interest rates
  ▪ reduce risks of non-repayment
Comprehensive cooperation with NGOs, development agencies, governments, extension services, insurance companies etc.

- Technical assistance (e.g. loan product development; training)
- Guarantee funds
- Research & development of tools to mitigate external risks, e.g. index based weather insurance/ yield insurance
- Make smallholder farmers “bankable”
Cost effective outreach

✓ Innovative technology can reduce outreach costs
  - mobile banking branches
  - branch “outlets”
  - agency banking
  - mobile money (M-Pesa; M-kesho)

Profitability of agricultural lending
Agricultural microfinance for smallholder farmers is possible!

- adaption of loan features and lending procedures necessary
- agricultural knowledge is crucial
- value chain finance can help mitigate risks and costs

→ strong commitment and well thought out business strategy!
Thank you for your attention

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