CREDIT SCORING FOR SMALLHOLDER FARMERS
Lessons from Uganda

CGAP, PRIDE and Harvesting
June 20, 2018
Logistics

1. This is an audio broadcast. Attendee microphones will remain muted during the entire webinar session.

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3. To ensure your question is seen by the moderator, select “All Participants” from the drop down menu when sending your question.

4. The webinar recording will be emailed to all attendees and registrants.
Agenda

1. Introductions and agenda
2. Why lend to smallholders?
3. Challenges in scaling smallholder lending
4. Credit scoring as a solution
5. Key learnings from PRIDE initiative
6. Next steps
7. Q&A
Speakers

Nathan Were  
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PRIDE Microfinance
Why smallholders families?

500 million smallholder families with diverse financial needs

Largest client segment by livelihood living on less than $2/day

Photo: Allison Shelley
Challenges in scaling smallholder lending

**Understanding**: customer demand and behaviors

**Identification**: sorting high and low potential customers

**Digitization**: maximizing value of data

**Lack of data**: to understand rural and agricultural lives
What credit scoring can do

- Increased scale
- Improved accuracy
- Reduced costs
Credit scoring as a solution

Past

Repayment records
Transaction data

Present

Customer data

Future

Repayment risk
How to build a credit scoring model

Step 1: Data scoping
- Identifying potential data sources
- Mapping data flows and lending processes
- Evaluating potential usefulness of various data sources

Step 2: Data modeling
- Synthesizing all available data into one database
- Partitioning data set for modelling and testing
- Building initial regression models

Step 3: Testing and refinement
- Fitting model with FSPs’ lending criteria
- Back-testing against historical loan performance data
- Re-weighting variables to finalize scorecard

Step 4: Scorecard piloting
- Using scorecard in parallel with existing lending processes
- Gradually building scorecard into lending model
- Feeding new data in until requisite significance is reached
What types of data you can use?

- **Phase 1 – traditional data**
  - Historical loan data
  - Applicant data

- **Phase 2 – alternative agri-data**
  - Production data
  - Cashflow data
  - Value chain data
  - MNO data
  - Soil and water maps
  - Satellite imaging
  - Historical yields

- **Phase 3 – Remote sensing data**
  - Weather data

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Issues with data quantity and quality

- **Data quantity**
  - New variables
  - New data from value chain
  - Geospatial and remote sensing data

- **Data quality**
  - Improved loan origination systems
  - End-to-end digitization
  - Loan officer training
  - Process simplification
**PRIDE Microfinance Initiative**

Total Savers **521,117**
Portfolio **$34.5 million (USD)**
Deposits **$23.7 million (USD)**
Branches **34**
Contact Office **8**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Loan Size</th>
<th>Numbers</th>
<th>Disbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Below &lt;= $260</td>
<td>39%</td>
<td>12%</td>
</tr>
<tr>
<td>Small</td>
<td>&gt; $260 to &lt; $1,300</td>
<td>53%</td>
<td>49%</td>
</tr>
<tr>
<td>Medium</td>
<td>&gt;= $1,300 to &lt;= $2,600</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td>Upscale</td>
<td>Above $2,600</td>
<td>2%</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Segment**
- **Micro**: 521,117 savers
- **Small**: 272,447 savers
- **Medium**: 74,840 savers
- **Upscale**: 59,791 savers

**Branches**
- Central: 113,399
- Eastern: 159,605
- Northern: 98,035
- Western: 126,182
- Southern Sudan: 2,057

**Location**
- PRIDE Microfinance Initiative operates in Uganda with branches spanning from the Western to Eastern region.
Key learnings

1. Get everyone on board with the changes, not just executives.
2. Focus on collecting high-quality new data, not cleaning up old data.
3. Automate your data collection.
4. Get plenty of quick wins in data capture before building complex models.
5. More data is not always a good thing. Be careful of overfitting.
6. Recognize that data can discriminate.
Next steps

- Improve PRIDE’s data capturing
- Pilot the model on new loans
- Evaluate performance and tweak model
- Scale to new geographies/value chains

Photo: Allison Shelley
Q&A

Please share your comments and questions with “All Participants” using the chat box on the right side of your WebEx session.

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Thank you

To learn more about CGAP’s smallholders work and access additional resources, please visit

www.cgap.org/smallholders