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# The Economics of Agri-SME Lending in East Africa

SUMMARY DOCUMENT

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ceniarth

ON OMIDYAR NETWORK

Smallfoundation

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# Executive summary: Challenges and knowledge gaps in Agri-SME finance

- **Small and Medium Enterprises (SMEs) are important generators of employment and GDP in emerging economies, but chronic lack of access to credit limits their growth and impact.** Despite employing 50-80% of the workforce, less than half of the East African SMEs in most countries and size segments have access to formal bank finance. Lenders often find it difficult to assess the bankability of SMEs, given their less-formal business practices and small size. Local commercial banks serve larger enterprises, and microfinance models have emerged to address "micro" and small SMEs, but mainstream models to address the needs of the "missing middle" – which in various sectors and economies may be from $20K or $100K up to $500K or $1-2m in borrowing needs – have not yet emerged.

- **Agri-SMEs in East Africa face an acute need for finance tailored to their specific requirements.** While agriculture contributes to 25-30% of the GDP in the countries covered in this report (Kenya, Rwanda, Tanzania, Uganda, and Zambia), it receives only 2-7% of total bank credit. This is similar to the situation across Africa, where a recent Dalberg-KfW report estimated that there is an annual $180Bn agri-SME lending gap, of which ~$65Bn is for medium-sized value chain businesses[1] with revenue of $200k - $15m. Lenders find financing agricultural SMEs especially difficult due to external risks (such as price volatility, climate change, and government regulations), business risks (such as management capacity and inadequate financial records), product mis-alignment (caused by the seasonal nature of cashflows and lack of favoured types of collateral), and the expense involved in serving businesses in rural locations.

- **There is limited evidence available on the economics of financing SMEs – especially agricultural SMEs - making it difficult to identify where market interventions are required and how they should be calibrated to incentivize increased lending without distorting markets**. Quantitative assessments of lenders' and investors' financial performance are challenging to conduct because of data security and competition concerns, plus the complexity of standardizing and analysing the data. Absent information on financial institutions' profitability, operating costs, and credit losses, calibrating effective support packages can be a guessing game.

- **This data gap is problematic, as development actors have prioritised blended finance as a tool for catalysing private investment in developing countries and could likely mobilize significant amounts of funding to close the agri-SME finance gap if it could be properly targeted.** The count of blended finance deals has grown from 35 in 2005 to at least 314 in 2017, representing $100Bn in funding mobilized to date. With initiatives such as the EU-funded AgriFi blended finance facility and the US government's new International Development Finance Corporation, the use of public and philanthropic resources to mobilise investment in emerging market businesses seems likely only to grow.

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# Executive summary: The market structure of agricultural lending in East Africa

- We have sought to close this information gap with two reports. A globally-focused report looking at social lenders ("Phase 1"), supported by USAID[1] and in collaboration with CSAF[2], demonstrated that social lenders have pioneered previously-overlooked agri-SME markets but faced significant economic challenges along the way. Focusing on 9 social lenders, the study showed that loans to the "missing middle" of the SME market (defined there as financing needs between ~$50k and $1M) were unprofitable in many cases for these lenders – especially in the early years of their operations in a given market.

- This follow-up ("Phase 2") seeks to analyse East African lending in greater depth to understand the variety of operating models and lending economics seen in a given region. To do this, we reached out to 29 lenders of various types across Kenya, Rwanda, Tanzania, Uganda, and Zambia, ultimately gathering quantitative data on lending economics or qualitative data on challenges and support needs from 17 local lenders and 2 additional global social lenders. The banks engaged represent an estimated 36% of bank agri-lending across Kenya, Tanzania, Uganda, and Zambia.

- We found three broad categories of actors currently serving financing needs of different agri-SME segments:

  1. Global social lenders, a group of impact-oriented actors that use capital from socially-minded investors to lend to agri-SME segments. These lenders tend to lend in hard currency to address financing needs in export oriented value chains and typically target SMEs with borrowing needs over $200K. They often have substantial agricultural expertise, appropriate lending terms, and access to lower-cost, impact-focused capital, but have limited in-country presence to service loans cost-effectively.
  2. The agriculture, SME, or agri-SME business units of local deposit-taking banks. These business units typically provide a range of lending and other products to SMEs of various sizes, although the units in our study all focused on loans smaller than $100K. Banks had varying levels of agricultural specialization; lenders with no agri-unit mostly considered only loans to producers as "agricultural loans" and served other types of agri-SMEs out of general SME or corporate units. Lenders with a strategic agriculture focus typically showed a broader understanding of the sector and offered tailored products to agri-SMEs across the value chain.
  3. Other local non-banking financing institutions (NBFIs), a more diverse category of lenders with a local operational footprint (although international origin and funding base in all but one case in our sample) that are active in agriculture or SME finance. NBFIs in our study were generally smaller than banks or global social lenders, spanned the range of social and commercial interests, and tended to focus on specific product offerings (e.g., asset leasing or short-term credit lines) or on specific borrower segments (e.g., producer groups or certain value chains). They generally targeted borrowers with needs of between $10K and $100K, in rare cases lending up to $500K.

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- **Lenders providing data were able to lend below $100k and above $1.5M profitably.** The units of local banks we examined appeared to break even on loans of $40-50k and for loans of $100k earned modelled returns of 5-9%[1] – although this cannot be extrapolated above $100k, and revenue estimates might be biased upwards by the small median loan size in our dataset[2]. Local NBFIs generally appeared to make a small loss on small and medium-sized loans, as high interest yields were offset by a high cost of funds and sub-scale operating platforms dragged down efficiency. Global social lenders, which focused on $200k-$1M[3] loans in our dataset, had a modelled breakeven of ~$1.2M, although some break even closer to $750k.

- **However, the economics of commercial bank agri-loans >$100k remain opaque.** The bank BUs who were willing and able to provide data only focused on sub-$100k loans, aimed at primary producers and producer organizations, and did not share corporate loan data. Local NBFIs also had 70% of loans falling in the $10k - $100k range. The limited quantitative sample of NBFI loans above $100k were largely unprofitable after accounting for their high cost of funds.

- **While we know there is bank agri-SME lending activity in the $100k+ segment outside our dataset, we believe it is insufficient to meet demand and not always designed appropriately.** First, a review of CSAF borrower records reveals that fully 63% of borrowers in East Africa had no other source of finance when CSAF lenders began working with them. Second, interviews with social lender loan officers highlight a clear gap in bank activity in the $100k-500k segment specifically. Finally, we see a trend among lenders without specific "agri-units" to accept a smaller range of collateral and to not offer specially-designed agri products. Overall, we infer from this information that bank lending to agri-SMEs requiring $100k+ is limited, heavily collateralized, and not tailored to agri-SMEs' seasonal cash flows and other needs.

- **In aggregate, lenders reported a range of different challenges in terms of growing their agri-SME lending portfolio, overall leading to an inability to expand the frontiers of agri-SME finance and fully serve agri-SMEs with mid-range borrowing needs:**
  - **Market challenges** include agriculture-specific risks such as price volatility and climate shocks; adverse government policies such as sudden export bans; and low borrower capacity, which makes building a bankable pipeline very expensive, especially for small loans. These risks drive some lenders to tightly limit agri-exposure, and other lenders to focus only on a narrow set of value chains and markets they know well.
  - **Strategic limitations** varied by lender type, but included limited physical presence in rural areas for NBFIs, and a limited domestic presence for global social lenders, both of which drive up operating costs and make small borrowers difficult to serve. Banks had fewer cost challenges, but faced significant pressure to limit exposure, in the form of tight risk caps and limited executive buy-in.
  - **Capacity gaps** included for some banks and NBFIs a lack of products with agri-specific terms and low ability to assess creditworthiness in the sector, and for global social lenders limited comfort outside well-known VCs like coffee and cocoa.

(1) A range is provided as not all banks were able to estimate operating costs with certainty. (2) The average revenue yield, including fees, was 22% for banks, but on a median loan size of $30-35k; loans closer to $100k may thus have lower yields on a percentage basis. (3) Interquartile range was c. $180K to $850K for social lenders.
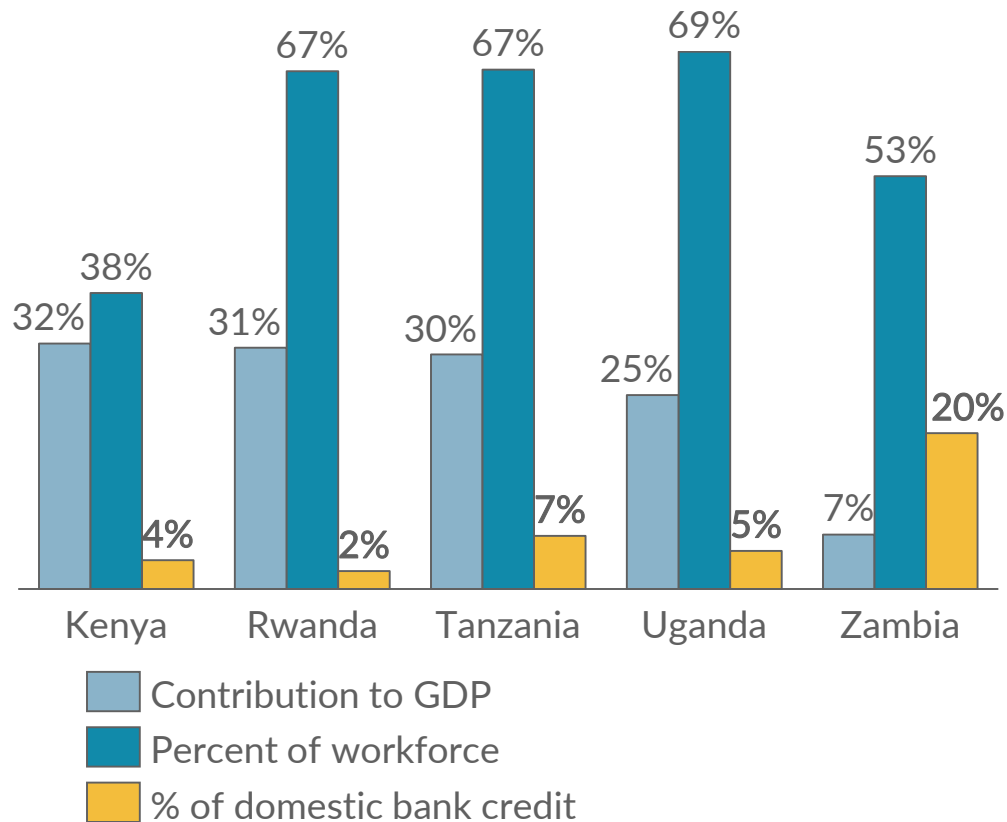
# Executive summary: Takeaways and next steps

- **Overall, lenders showed a high degree of demand for new ways of supporting agri-SME lending.** Interest in the study was high and a large number of lenders (9 in Phase 1 and 20 in Phase 2[1]) participated in either a qualitative or quantitative form despite receiving no tangible benefits other than a customized benchmarking report. Interviews revealed that in part this may be because existing risk-sharing facilities are all similarly structured (i.e., 50% pari passu loan guarantees) and do not always meet lenders' operational and risk management needs – so lenders welcomed the chance to share knowledge that might bring new support mechanisms to market.

- **A multi-faceted support model, targeted at lenders with a strategic commitment to the agriculture sector and tailored through senior executive engagement and light-touch calibration, may be the best way forward.** When presented with a menu of support options broader than the traditional partial risk-share, each option was ranked highly by at least one lender – which is not surprising given the variety of financial and institutional challenges they face. **Recommended interventions include:**
  - **Risk-sharing mechanisms** that provide a first-loss cover rather than a partial pro rata share, to give lenders confidence that the full potential losses from entering new sectors will be covered.
  - **Borrower capacity-building** to increase the pipeline of bankable deals, thus reducing origination costs (a pain point for global social lenders especially) and reducing the perception of risk.
  - **Low-cost capital,** either as **concessional debt** to reduce the cost of funds (a major issue for local NBFIs) or as **innovation grants** to help sub-scale lenders with potentially catalytic business models overcome the challenges of high operating costs.
  - **Lender capacity-building** and senior management engagement to help banks in particular tailor products to the agri-SME market and overcome the perception of high risk that limits engagement. A different type of capacity-building could focus on exploring **local shared service provision** to reduce high costs associated with origination, due diligence[2], monitoring loans and assessing collateral, and managing impaired loans.

- **Finally, an iterative approach to support provision may be most effective at catalysing agri-lending for local banks.** Despite months of engagement, data gaps still remain for local banks. However, while further quantitative analysis may help pin down exactly what type and degree of intervention is required to support a given type of lending, we believe the bigger obstacles to overcome are executive buy-in and agri-specific capability development. Rather than waiting for "perfect" data, we believe it is better to test and learn - piloting various forms of incentives and creating a "pull mechanism" for lenders to invest more in the agri-SME market - in close collaboration with motivated lenders, adjusting as needed.

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# Context: Agri-SMEs attract little bank credit relative to their importance in the economy...

## Agriculture's economic role in East Africa vs. its share of bank lending (2017)



Chart: Agriculture's economic role in East Africa vs. its share of bank lending (2017)

- Kenya: Contribution to GDP 32%, Percent of workforce 38%, % of domestic bank credit 4%
- Rwanda: Contribution to GDP 31%, Percent of workforce 67%, % of domestic bank credit 2%
- Tanzania: Contribution to GDP 30%, Percent of workforce 67%, % of domestic bank credit 7%
- Uganda: Contribution to GDP 25%, Percent of workforce 69%, % of domestic bank credit 5%
- Zambia: Contribution to GDP 7%, Percent of workforce 53%, % of domestic bank credit 20%

Legend:
- Contribution to GDP
- Percent of workforce
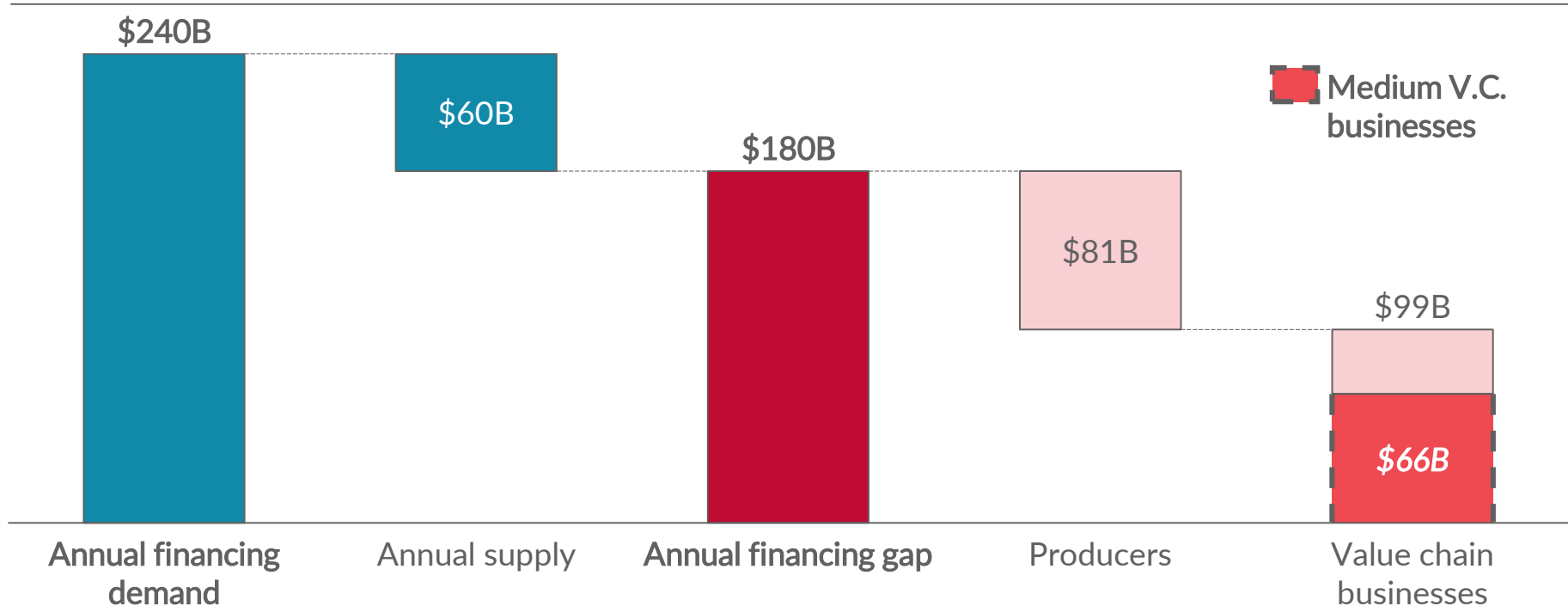- % of domestic bank credit

### Key challenges discouraging lenders from serving agri-SMEs:

1. Unpredictable external risk factors such as weather shocks and crop disease
2. High cost to serve in low population density areas with poor infrastructure
3. Low understanding of agricultural enterprises and risks
4. Weak enabling environment with inadequate institutional coverage of property rights
5. Irregular cash flow cycles due to crop seasonality

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# Context: ...And overall face a significant gap in finance across Africa

## Estimated annual gap in agricultural finance in Sub-Saharan Africa
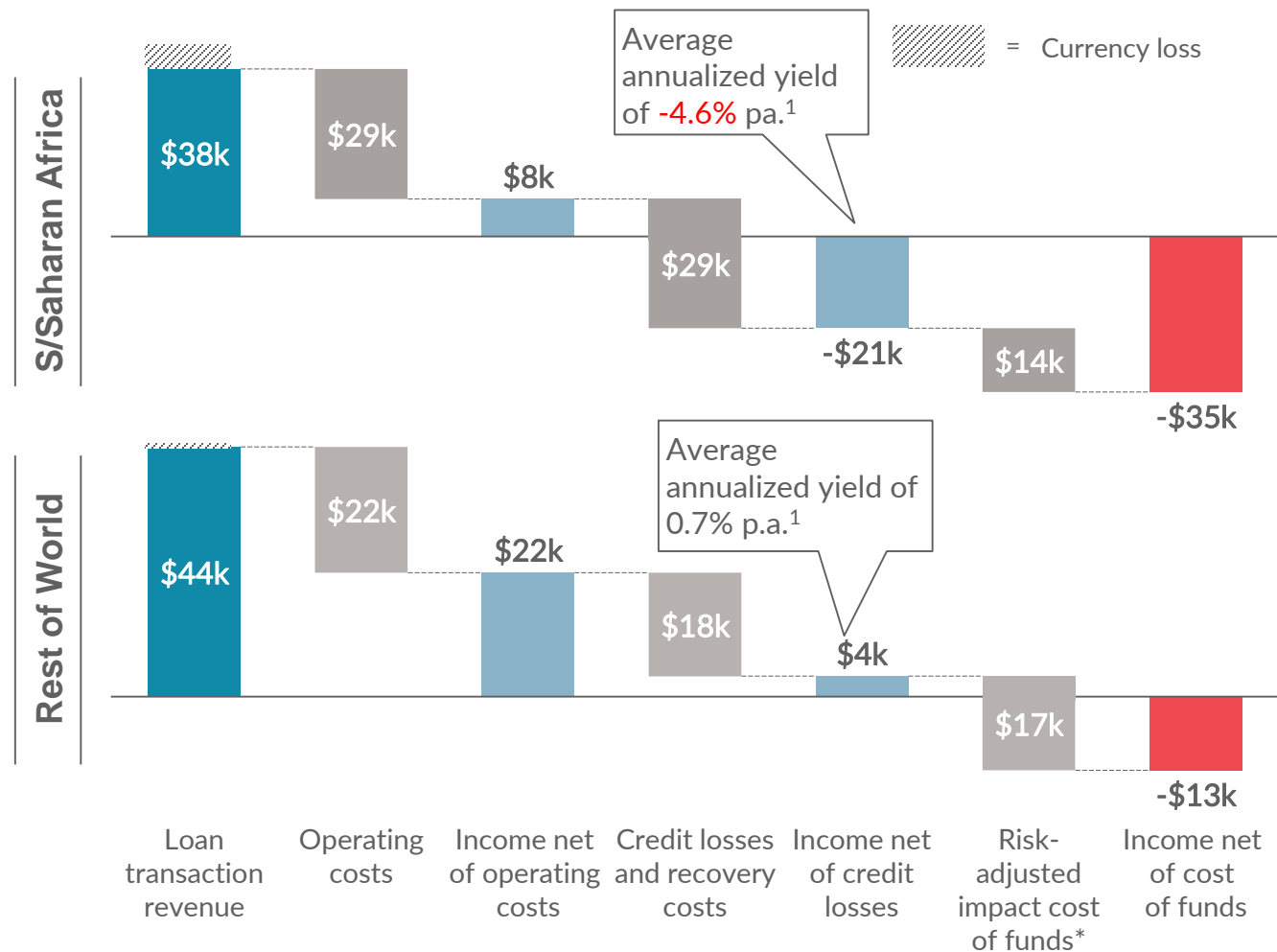(USD, 2017)



$240B

$60B

$180B

$81B

$99B

$66B

Medium V.C. businesses

Annual financing demand

Annual supply

Annual financing gap

Producers

Value chain businesses

- "**Medium**" enterprises in value-chain businesses (i.e. traders, processors, and other non-producers) were defined by **financing needs of $250k-$5m** and **revenues of $200k - $15m**
- Note that "**Small**" enterprises with financing needs of $10-100k had **a further $15B annual gap**

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# Phase 1 Recap: We previously learned that loans in Sub-Saharan Africa were less profitable than loans by CSAF members in other regions

**Loan economics averages for all CSAF loans analysed, Africa vs Rest of World**
USD thousands, over the life of the loan



Average annualized yield of **-4.6%** pa.[1]

Average annualized yield of 0.7% p.a.[1]

⬚⬚⬚ = Currency loss

**S/Saharan Africa**
$38k | $29k | $8k | $29k | -$21k | $14k | -$35k

**Rest of World**
$44k | $22k | $22k | $18k | $4k | $17k | -$13k

Loan transaction revenue | Operating costs | Income net of operating costs | Credit losses and recovery costs | Income net of credit losses | Risk-adjusted impact cost of funds* | Income net of cost of funds
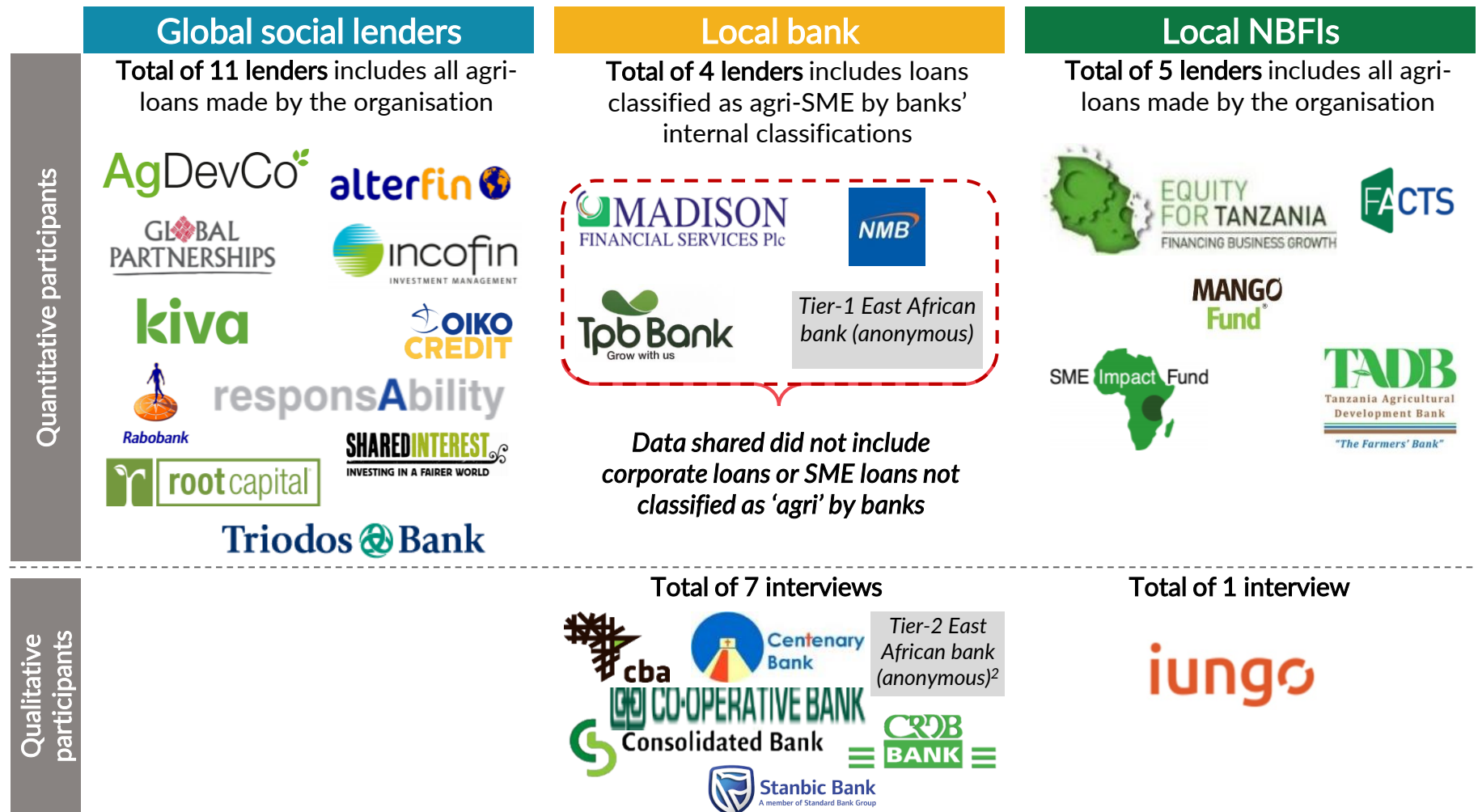
**Differences in profitability were driven by:**

1. Lower income from fees and interest
2. Higher operating costs
3. More impaired loans and higher credit losses

Note: (*) Impact cost of funds used is 3%
Source: Dalberg and USAID financial benchmarking exercise of CSAF lenders conducted between April – June, 2018 of 3,556 individual loan transactions

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# We gathered quantitative data from 20 lenders and held interviews with a further 8 from across East Africa

| **Global social lenders** | **Local bank** | **Local NBFIs** |
|---|---|---|

**Quantitative participants**

**Global social lenders**
Total of 11 lenders includes all agri-loans made by the organisation



**Local bank**
Total of 4 lenders includes loans classified as agri-SME by banks' internal classifications



*Tier-1 East African bank (anonymous)*

*Data shared did not include corporate loans or SME loans not classified as 'agri' by banks*

**Local NBFIs**
Total of 5 lenders includes all agri-loans made by the organisation



**Qualitative participants**

Total of 7 interviews



*Tier-2 East African bank (anonymous)[2]*

Total of 1 interview



Over the course of Phases 1 and 2, we collected data on 3,959 loans and a loan volume of $2.7B globally; in East Africa, we collected data on 876 loans and a loan volume of $327M
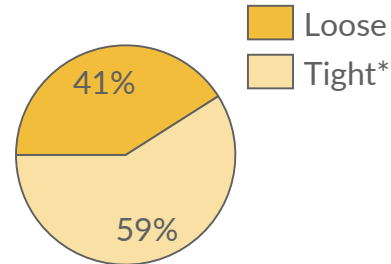
Note: (1) Figures for banks' overall and agricultural loans and advances were calculated based on financial statements, where possible; otherwise, figures were calculated based on numbers provided in interviews or based on analysis of data provided by the bank. Numbers for banks not engaged calculated through central bank numbers.

# The loans we analysed were focused mainly on working capital for SMEs / cooperatives in primary production and processing
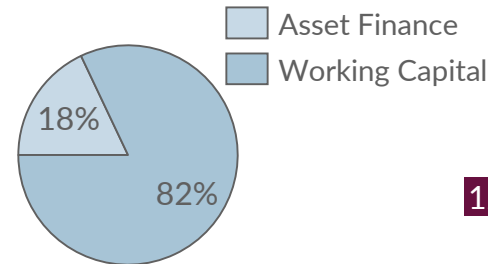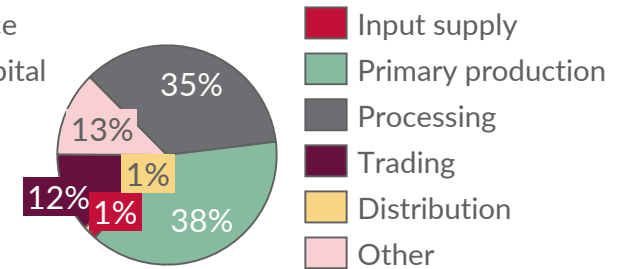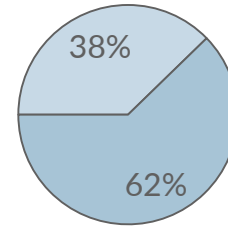
## Portfolio characteristics

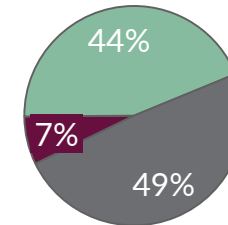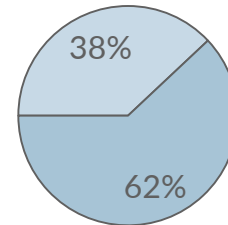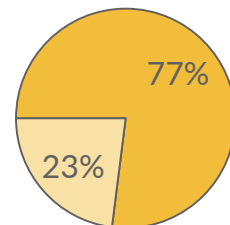| | Value chain type | Product type | Borrower value chain position |
|---|---|---|---|
| **Global social lenders** *(10 CSAF members; 1 non-CSAF member)* | Loose 41% / Tight* 59% | Asset Finance 18% / Working Capital 82% | Processing 35%, Primary production 38%, Other 13%, Trading 12%, Input supply 1%, Distribution 1% |
| **Local banks** *(2 TZ; 1 KE; 1 ZB)* | 87% / 13% | 38% / 62% | Insufficient data provided by local banks on borrower value chain position |
| **Local NBFIs** *(3TZ; 1 KE; 1 UG)* | 77% / 23% | 38% / 62% | Primary production 44%, Processing 49%, Trading 7% |
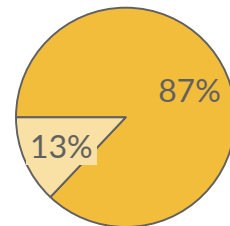
**Legend:**
- Value chain type: Loose, Tight*
- Product type: Asset Finance, Working Capital
- Borrower value chain position: Input supply, Primary production, Processing, Trading, Distribution, Other
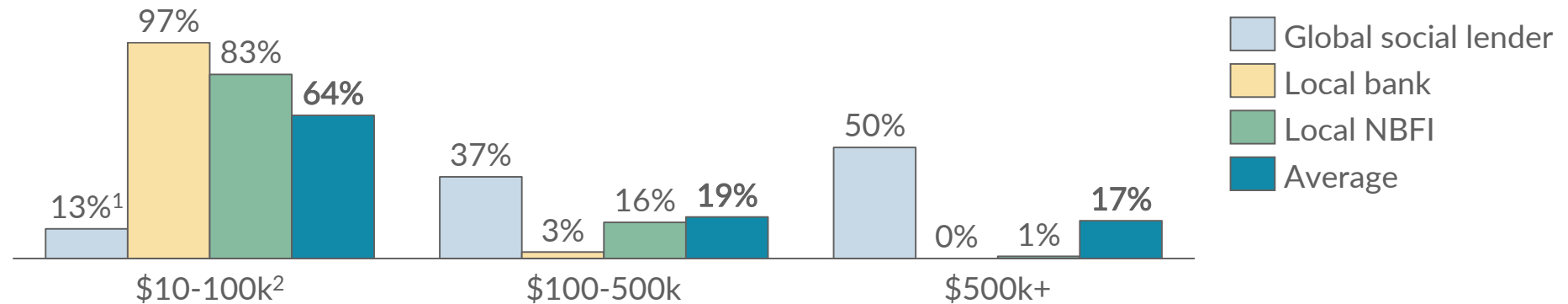
*"Tight" here means predominately loans in coffee and cocoa value chains, and to a lesser extent loans in nuts, sugarcane, cotton, honey, and vanilla value chains. "Loose" value chains are all other value chains.
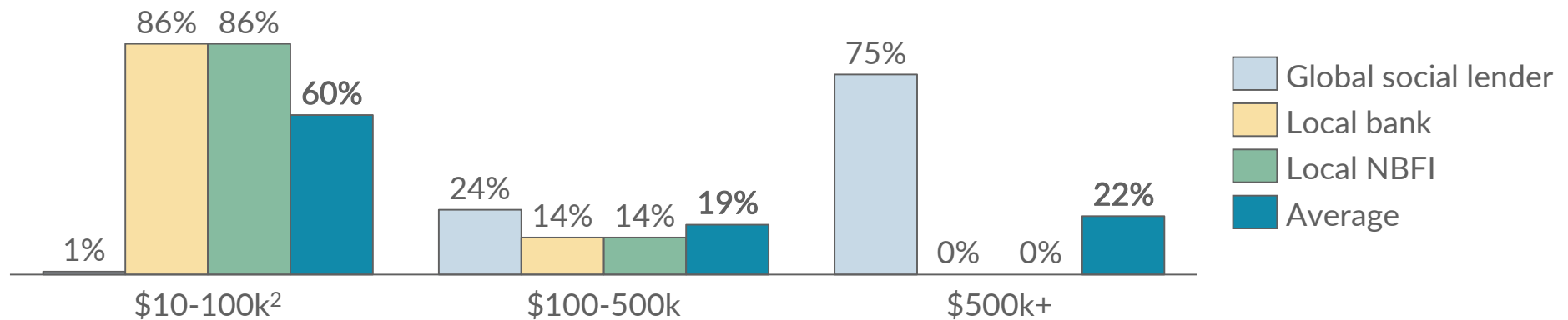
Source: Lender 2017 Annual Reports, Lender interviews and survey responses; Dalberg analysis

# Local banks shared "Agri" portfolios, which were mainly small-ticket, non-corporate loans; NBFIs and global lenders shared full portfolios

## Average portfolio split by size segment (# of loans)

Legend:
- Global social lender
- Local bank
- Local NBFI
- Average

$10-100k[2]
- Global social lender: 13%[1]
- Local bank: 97%
- Local NBFI: 83%
- Average: 64%

$100-500k
- Global social lender: 37%
- Local bank: 3%
- Local NBFI: 16%
- Average: 19%

$500k+
- Global social lender: 50%
- Local bank: 0%
- Local NBFI: 1%
- Average: 17%

## Average portfolio split by size segment ($)

Legend:
- Global social lender
- Local bank
- Local NBFI
- Average

$10-100k[2]
- Global social lender: 1%
- Local bank: 86%
- Local NBFI: 86%
- Average: 60%

$100-500k
- Global social lender: 24%
- Local bank: 14%
- Local NBFI: 14%
- Average: 19%

$500k+
- Global social lender: 75%
- Local bank: 0%
- Local NBFI: 0%
- Average: 22%
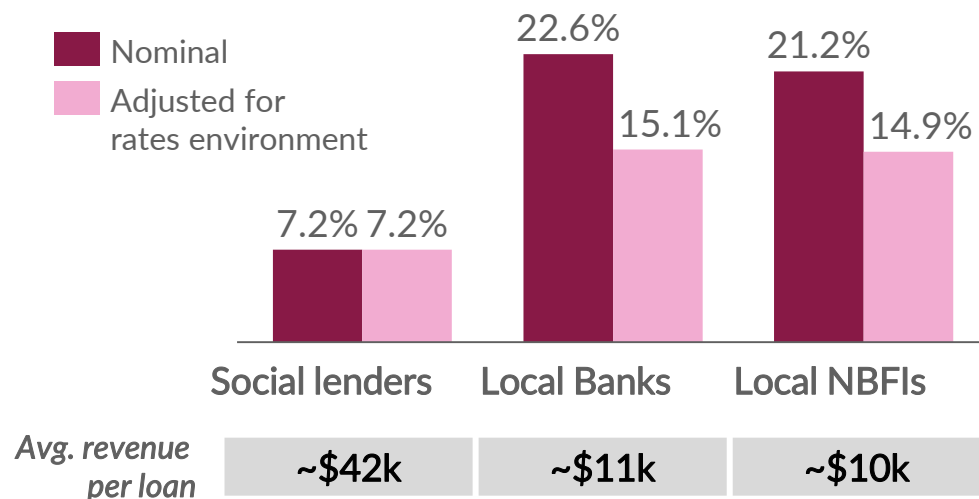
- *Note: bank loans to agri-SMEs not classified by the bank as "agri" were not included in our data set; it is likely that banks made loans at higher ticket sizes through their SME or commercial units but did not tag them as agri*

(1) Predominantly served by one lender in the data set (without which the average is ~6%); (2) loans below $25k were excluded from a majority of the global social lenders; some may make loans in the size segment that aren't captured

# Local lenders earned higher revenue in our dataset, even after adjusting for differences in interest rate environments

## Average realized revenue yields[1]

Legend:
- **Nominal** (dark)
- **Adjusted for rates environment** (light)

| Social lenders | Local Banks | Local NBFIs |
|---|---|---|
| 7.2% / 7.2% | 22.6% / 15.1% | 21.2% / 14.9% |

*Avg. revenue per loan*

| ~$42k | ~$11k | ~$10k |
|---|---|---|

## Example interest rates charged by local lenders

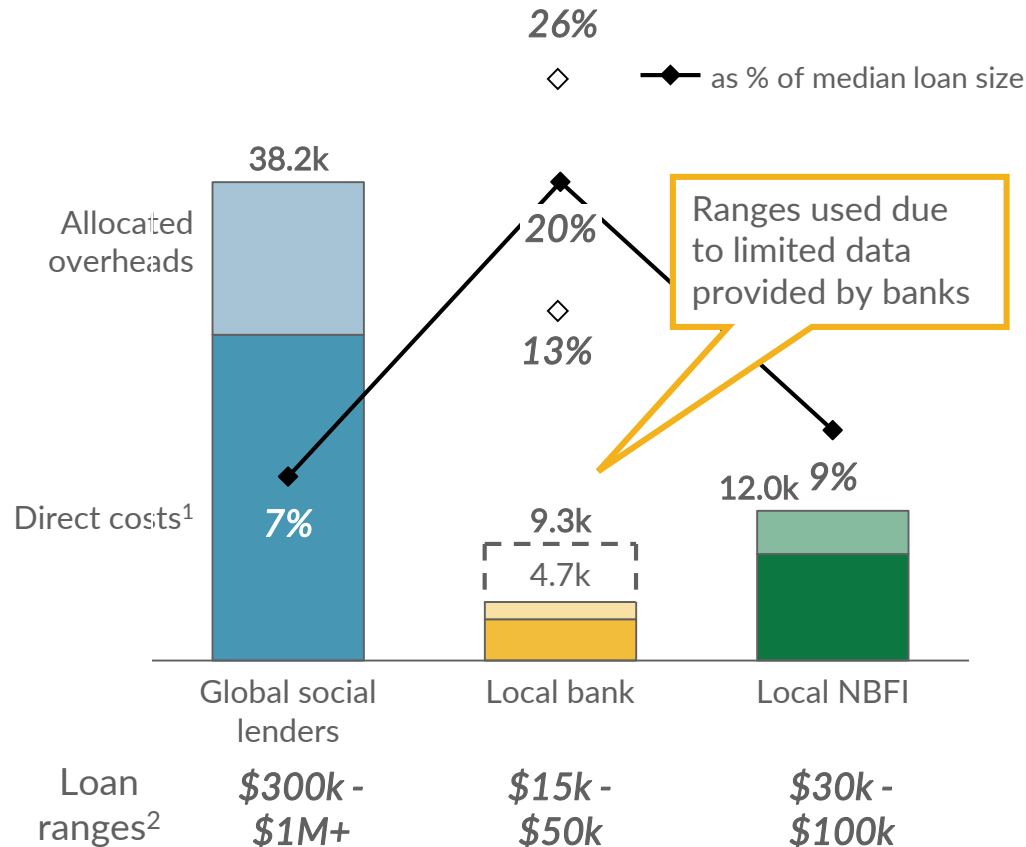| Lender | Headline interest rate | Lender | Headline interest rate |
|---|---|---|---|
| Bank 1 | 13% (Local currency) | NBFI 1 | 35% (Local currency) |
| Bank 2 | 40% (Local currency)[2] | NBFI 2 | 29% (Local currency) |
| Bank 3 | 19% (Local currency) | NBFI 3 | 26% (Local currency) |

| Lender | Headline interest rate |
|---|---|
| CSAF Average | 10.5% (Hard currency) |

- Local lenders charged higher headline rates than global lenders, perhaps due to:
  - A risk premium for lending to riskier segments such as informal businesses and loose value chains
  - Compensating for smaller loans that yield lower overall interest income
  - Compensating for shorter tenors that yield lower overall income

- Global lenders mainly served exporters in tight value chains, and may have faced more competition in making loans in hard currency – leading to lower interest rates

(1) FX adjusted yields are adjusted down based on the difference between 1-year local currency bond yields of the respective countries against the US 1-year T-bills
(2) headline interest rates of this bank may be exceptionally high due to its small ticket sizes and high interest environment

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# Local lenders' operating costs were low in absolute terms, although this must be weighed against smaller loan sizes

## Average operating cost per loan



Allocated overheads

Direct costs[1]

26%

◇ ——◆—— as % of median loan size

38.2k

20%

◇

13%

Ranges used due to limited data provided by banks

7%

9.3k

4.7k

12.0k  9%

| | Global social lenders | Local bank | Local NBFI |
|---|---|---|---|
| Loan ranges[2] | $300k - $1M+ | $15k - $50k | $30k - $100k |

- Global social lenders had higher absolute operating costs; likely due to:
  - Origination of higher value loans requiring more diligence efforts
  - Higher direct costs of servicing due to travel from overseas, plus higher indirect costs due to significant presence in higher-cost countries
  - Overhead burden due to lower-scale East Africa operations

- Local banks leverage existing infrastructure and branch networks and originate small loans at a low marginal cost
  - Note: larger agri-loans are likely serviced by units with different cost structures
  - Overall "cost to assets" ratios for large African banks is estimated at 3.6% by McKinsey[3], although this would include corporate lending as well and is thus not directly comparable

- Local NBFIs benefit from low-cost local staffing and operating models, but still incur more travel costs than banks due to smaller scale

1) Average direct costs include origination and servicing costs
2) 2) Approximate 20th percentile to 80th percentile ranges
3) "Roaring to Life: Growth and Innovation in African Retail Banking", McKinsey 2018

# However, social lenders and NBFIs in our sample showed steadily improving cost efficiency over the time period analysed

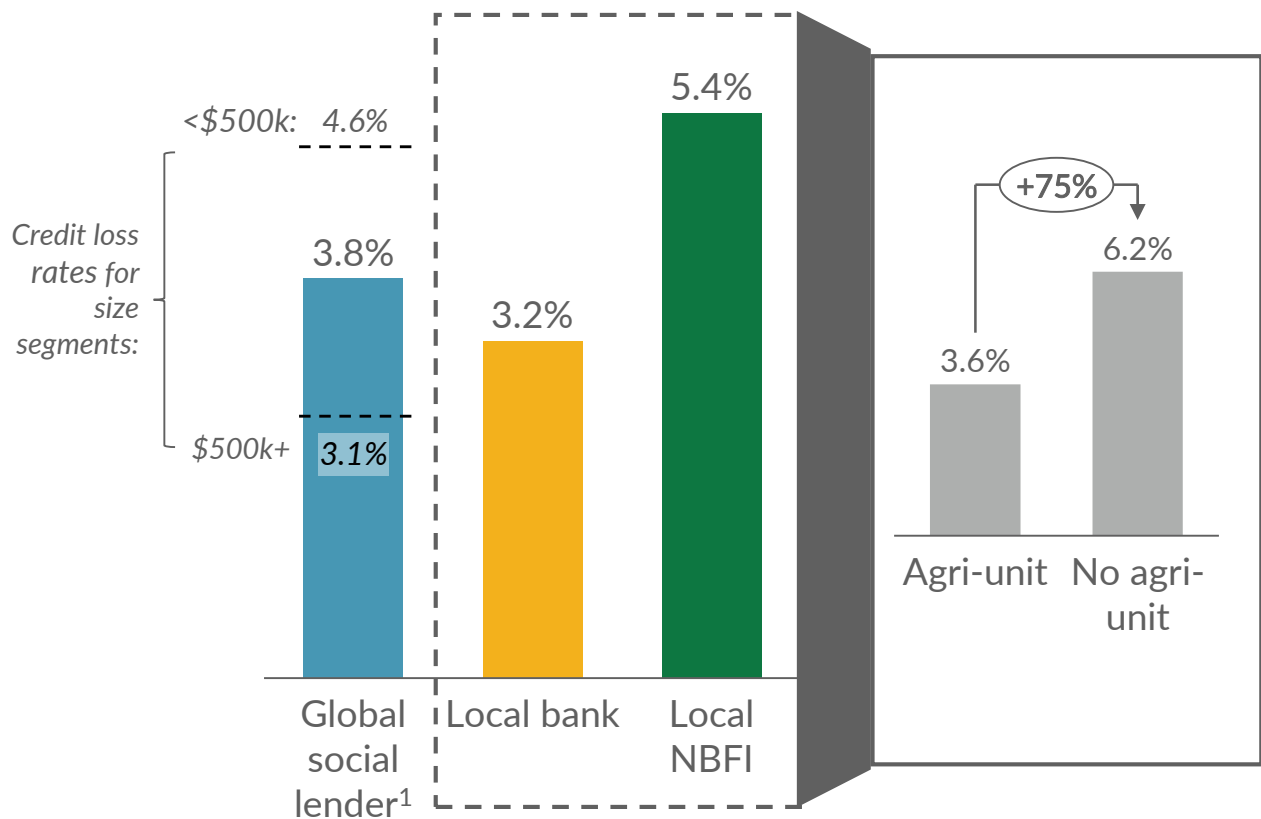## Average operating costs of lenders over time
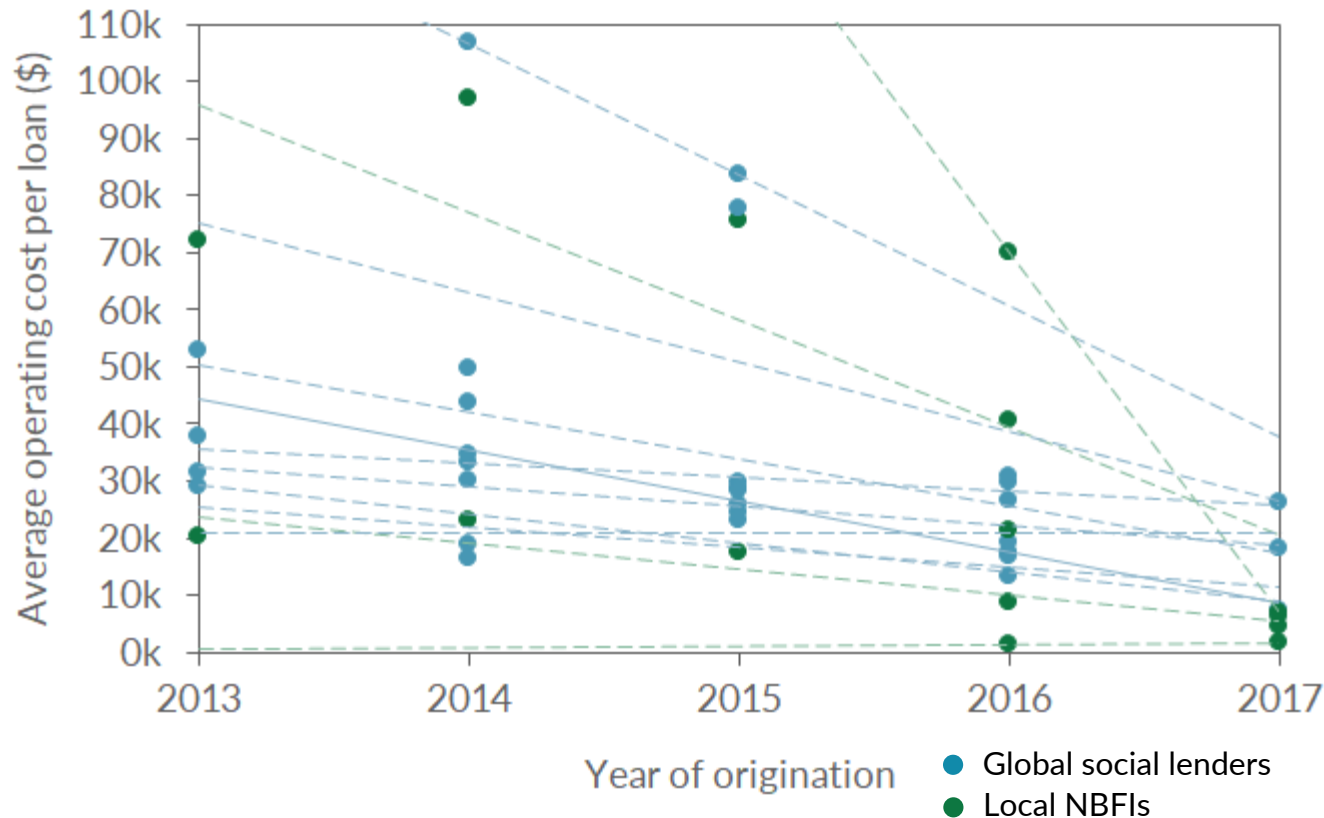


- Cost / loan for both local NBFIs and global social lenders decreased over time – **by an average of 55% and 74%, respectively –** as lending activity increased

- As lenders grew, average operating cost dropped, possibly because:

  - Staff were better utilised

  - Overhead costs per loan decreased with economies of scale

● Global social lenders
● Local NBFIs

**While the sample is small, cost reductions observed imply that supporting sub-scale lenders while they grow could make some currently marginal types of lending more profitable**

Note: NBFIs in the data set are younger than the global social lenders, and hence may see a steeper decrease in operating costs than relatively more mature lenders

# Local banks realized lower credit losses than global lenders and local NBFIs; losses were even lower for local lenders with agri-units

**Annualized credit losses by lender type (2013-2017 data)**



*Credit loss rates for size segments:*

<$500k: 4.6%

$500k+ 3.1%

3.8%

3.2%

5.4%

Global social lender[1]

Local bank

Local NBFI

+75%

3.6%

6.2%

Agri-unit

No agri-unit

- Global social lenders had higher credit losses on loans **under $500k (4.6%)** than on those **above $500k (3.1%)**

- In our sample, local lenders with dedicated agri-units saw lower credit losses than local lenders without agri-units

Note: CSAF lenders analysed in Phase 1 showed an average annualised credit loss rate of 3.3% in all other regions outside sub-Saharan Africa (primarily Latin America)

# Profitable lending under $100k and over ~$1m can be found, but many lenders appear to struggle at various size ranges

## Evolution of expected net profitability by loan size and lender type

*Curves below show expected annualized profit margin for a 12-month loan of a given size. They are based on average data submitted by lenders and thus may not reflect any individual lender's economics or the economics of loans outside the size segments shown*
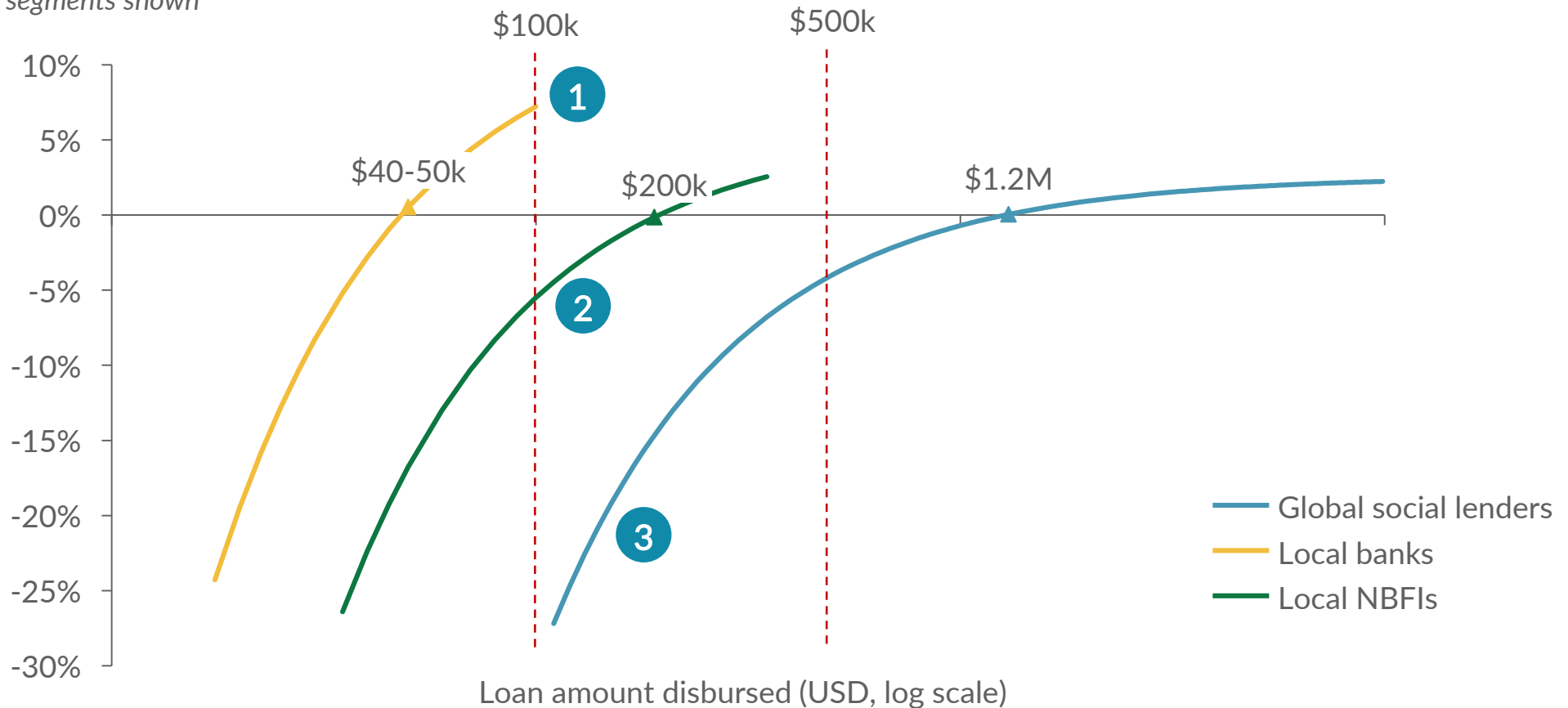


Note: Calculation use average economics for lender categories on their portfolios between 2015-17, when most lenders' portfolios were in the early stages of growth, and does not account for variations in profitability parameters for different loan size segments. These variations impact in particular local NBFIs' loans above 100k, which are mainly made by NBFIs with a higher cost of funds than the NBFIs offering smaller loans. Therefore, the NBFI break-even shown above is at a higher loan size than the true breakeven for NBFIs making smaller loans. For bank loans, there is some uncertainty over true operating cost burden, so the actual breakeven may vary up or down by $5-10k from what is shown here.

# While the profitability curves imply that local lenders have an advantage in serving agri-SMEs, this data must be put in context

## Current state: Key differences between local and global lenders

**Differences in risk appetite**

- Local banks' profitability may be a reflection of who they currently serve –with strict underwriting standards and collateral requirements that exclude all but the top level of SME borrowers
- While local NBFIs can grow to serve borrowers needing up to $250-500k in the next few years, their small size means they may not have the capacity in the medium term to provide loans over $500k that larger SMEs need

**Differences in geographic coverage**

- Local banks and local NBFIs are generally limited to one country each; while major banks have cross-region presences, their agri units are run separately in each
- In contrast, the typical social lender in the dataset has borrowers in 11 countries in Africa

**Differences in product and service offerings**

- While product customization is improving at local banks and NBFIs, global social lenders bring a set of products more tailored to agri-SME needs – but this product flexibility imposes costs on social lenders through lower income and higher back office costs
- In addition, interviews highlight that speed of service – critical given the seasonality of agri-SME borrowing needs - is better social lenders than local banks, and this service level likely also has cost implications

### Implications

- Structural differences in the attractiveness of agriculture vs lending to industry and domestic government may naturally impose an upper limit on bank engagement with the sector
- While local NBFIs offer promising solutions, their small scale may mean a long path to full coverage of the sector, and significant coordination costs for donors to achieve pan-Africa coverage
- Overall, impact trade-offs between low-cost and high-customization / high-service models need to be understood; a successful agri-SME finance market likely benefits from both specialized global lenders and diversified local commercial lenders, with specialized local lenders also filling an important niche for smaller loans

While recognizing the cost advantages of local lenders, donors should encourage competition and participation in agri-SME lending by lenders of all types, keeping in mind the short-term limitations of each lender archetype and creating the enabling conditions for the market to mature over time

# Drivers of low profitability for NBFIs and global lenders varied; bank loans were profitable on average in our data but have limited reach

| Challenge | Local banks | | Local NBFIs | | Global lenders | |
|---|---|---|---|---|---|---|
| | (<$100k) | ($100k+) | (<$100k) | ($100-500k) | ($100-500k) | ($500k+) |
| **1** **Low income** *(lower interest and fee revenue)* | | *Unknown – data not shared* | | ☑ Low interest and fee yields | | |
| **2** **High cost** *(higher operating costs)* | | | | | ☑ Higher operating cost structure | |
| **3** **High risk** *(more frequent and larger credit losses or provisions)* | | | ☑ Higher credit loss experience | | ☑ Higher credit loss experience | |
| **4** **High cost of funds** *(higher interest on lending capital)* | | | ☑ High cost of funds | | | |

Dalberg

# We believe lender constraints drive agri-SME lending gaps across size ranges, both in scale and in product design

**Insights from our research on lending gaps**

1. Limited presence of $100k+ loans made by bank agri-units in our dataset – the true economics and scale of engagement by banks in this segment remains unclear

2. Lending through agri-units likely provides greater value to agri-SMEs and lenders with agri-units seem to be more successful at growing agri-lending
   - Banks and local NBFIs with agri-units were more likely to offer custom products and a greater variety of collateral options to agri-SMEs
   - All 6 local banks and NBFIs with agri-units saw their agri-lending portfolios increase in recent years, compared to 2 of 6 local lenders without

3. All lenders report challenges fully serving the agri-SME market, and banks face additional strategic and operational challenges
   - Despite evidence of profitability in certain segments, all lenders highlighted strategic, market, and institutional capacity challenges in expanding agri-lending
   - Banks also reported that securing executive buy-in for agri-lending is a major challenge, partly due to the risk perception of the agriculture sector, and risk exposure limits can also constrain their growth
   - Research conducted on the additionality of loans provided by social lenders in CSAF[1] revealed that 63% of CSAF borrowers had no other sources of finance when CSAF first began serving them
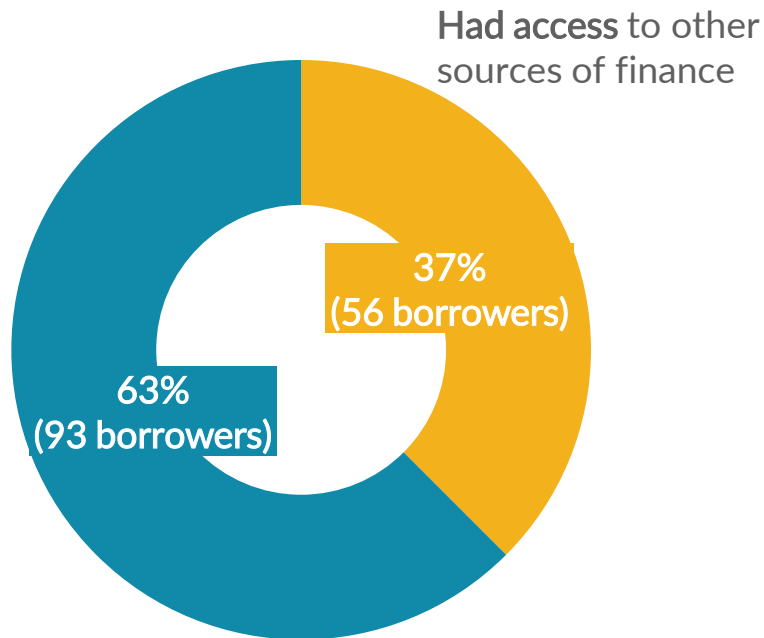
# 63% of new CSAF borrowers only had access to their CSAF lender's loan; many of the rest were only served by other CSAF members

*Results from Dalberg and USAID analysis of 149 CSAF borrowers in East Africa and their CSAF and non-CSAF sources of finance…*

**Did borrower have access to other sources of finance >$50k?**
*149 borrowers,[1] beginning of the relationship*

**Who else served CSAF borrowers?[2]**
*Of the 56 borrowers with other access, the # served by each type of lender (a borrower may be served by multiple lenders)*

**Had access** to other sources of finance

37%
(56 borrowers)

63%
(93 borrowers)

**Did not have access** to other sources of finance

33*

30

8

8

Commercial Bank or NBFI

Social Lender

Dev't Bank or Gov't

Buyer
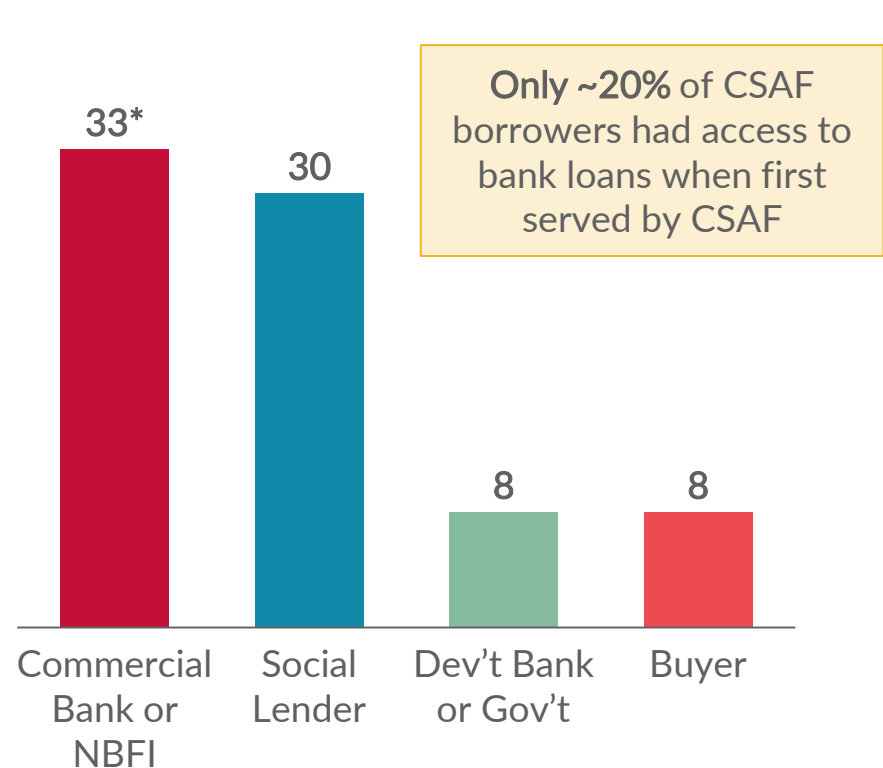
**Only ~20%** of CSAF borrowers had access to bank loans when first served by CSAF

* Data from 12 borrowers in this set was from after the beginning of the relationship, so the true number of borrowers with access to bank loans at the beginning of CSAF relationship is likely less than 33.
[1] 149 borrowers from 5 CSAF lenders. [2] Based on the 56 borrowers served by other lenders.

# All lenders report challenges in serving the agri-SME market; banks also face challenges of executive buy-in and risk limits

Frequently-cited challenges to scaling agri-SME lending, by area and lender type

| | Local banks | Local NBFIs | Global social lenders |
|---|---|---|---|
| **A** **Market challenges** | ☑ Inherent agriculture sector risks (e.g., price volatility and climate change) | | |
| | ☑ Unpredictable and/or unsupportive government interventions[1] (e.g., commodity export bans, interest rate caps) | | |
| | ☑ Low bankability of agri-SMEs (due to, e.g., informal management processes and systems) | | |
| **B** **Strategic limitations** | ☑ Low executive buy-in for agri-lending | ☑ Limited physical presence in rural areas | ☑ Limited local presence in countries of operation |
| | ☑ Tight risk limits[2] on agriculture exposure | | |
| **C** **Capability gaps** | ☑ Low agri-specific credit assessment capabilities (especially for lenders without agri-units) | | ☑ Limited lending in new value chains |
| | ☑ Lack of agri-tailored product terms (especially for lenders without agri-units) | | ☑ Limited range of product offerings |

**Dalberg**

# Donor-led action on three fronts can address challenges that prevent lenders from increasing agri-SME lending

| Intervention area | Recommended interventions | Drivers addressed |
|---|---|---|
| **Capacity building and TA** | **Lender technical assistance:** Programs that support lenders to develop policies and processes to measure/manage their agri-lending portfolio, or upskill staff with agriculture expertise and design risk evaluation methodologies for agri-lending | 3 · C |
| | **Borrower technical assistance:** Programs that support agri-SMEs with financial reporting, accounting, governance, and growth strategy: | A |
| **Blended finance instruments** | **Results-based incentive payments:** Additional revenue payments that make low-margin, high-impact loans sustainable for lenders | 1 · 2 · B |
| | **Risk mitigation:** First-loss cover to absorb a certain percentage of portfolio losses, to incentivize lenders to target under-served segments with higher systemic risk | 3 · B |
| | **Direct funding:** concessional capital providing net asset infusion to lend in the sector, or challenge grants for innovative lending models to scale | 3 · 4 · B |
| **Other supporting mechanisms** | **Shared services provision:** making available a suite of providers with negotiated rates for lenders to outsource high-cost operating expenses, such as legal services | 2 · B |
| | **Value chain studies:** Mapping of market dynamics and risks in key value chains with high unmet financing demands | C |
| | **Advocacy and policy dialogues:** Engaging partners to collaborate with actors such as NGOs or int'l organizations to influence enabling policies and funding mechanisms | A |

Profitability: 1 Low income  2 High cost  3 High risk  4 Cost of funds
Other: A Market challenges  B Strategic limitations  C Capability gaps

# Lenders will require support mechanisms calibrated to address their economic and non-economic constraints to agri-lending

**Results from Dalberg interviews with 8 participating lenders**

*How do you rank each of these support options from 1 – 5?*

| Support option | Value |
|---|---|
| Incentive payments | 3 |
| First-loss protection | 4 |
| Technical assistance | 3 |
| Concesional debt | 4 |
| Recoverable grants | 3 |
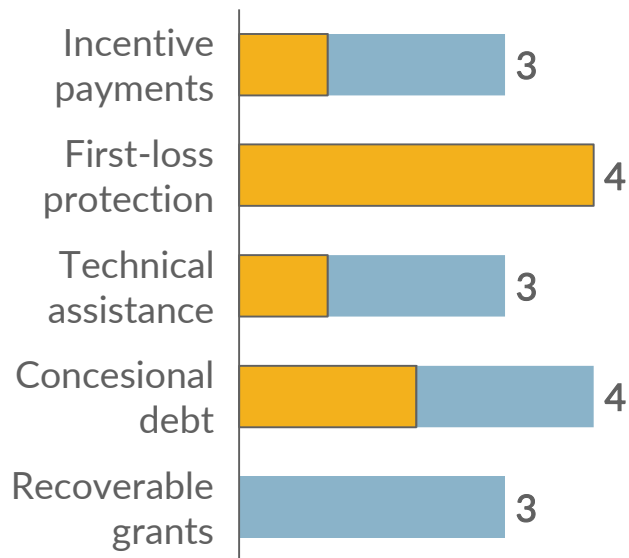
*How do you rank these challenges to increasing agri-lending?*

| Challenge | Value |
|---|---|
| Risk | 8 |
| Cost | 6 |
| Income | 2 |

■ 1st rank   ■ 2nd rank

- Range of views on the ideal form of support mean **a targeted menu of support options covering risk, cost, and lender/ borrower capacity is desirable** to maximize impact

- Some mismatches between risk perception and actual risks mean **engagement of lender senior leadership is needed** to drive uptake

- Data gaps mean **some light-touch calibration will be required** to finalize the support package for a given lender

**A structured, menu-driven support process with light calibration should strike the right balance between lender uptake, effective use of donor funds, and feasibility**

# Mobilising agri-SME finance is a vital priority - we recommend piloting support packages and learning by doing

## A clear case for action

- Closing the agri-SME financing gap is a vital development priority given the importance of agriculture and SMEs to developing economies

- Despite some data gaps, we know from engagement with lenders of all types that greater support is needed

- Donor interventions can be catalytic in mobilising greater private sector finance

## Next steps: learning by doing

- Donors have sufficient information to **pilot support packages now,** even though incentives will not be perfectly calibrated on Day 1

- Support pilots can be cost-effective and efficient as long as donors **make data collection for calibration a condition of receiving support** and **learn & adapt** based on experience

**Our work in East Africa has revealed wide range of lenders that are motivated and well-positioned, with assistance, to increase agri-SME lending – there is a clear opportunity for catalytic donor support to the sector**

# Annex

## METHODOLOGY AND ADDITIONAL ANALYSIS

# **Methodology:** We collected, standardized, and analysed data from 9 local lenders, and 11 social lenders to assess agri-lending performance

| Collect data | Standardize | Analyse |
|---|---|---|

### Collect data

- Dalberg surveyed 9 local lenders and 11 global social lenders, of which 10 are CSAF members, to gather the following data on their agriculture lending portfolio from 2013-2017 in three areas:
  - Loan-level time series data: schedule of loan disbursements and repayments, including fees, interest, and credit losses
  - Portfolio breakdown of loan characteristics: borrower details such as country, value chain, facility type, etc.
  - Operating cost data: annual cost data by region / business unit where possible, including compensation, legal and professional fees, back-office resources, and other overheads

### Standardize

- Dalberg cleaned the loan data to arrive at 1,476 in-scope loans, categorizing value chains, facility types, etc.

- A weighting factor (dollar duration) was utilized to allow a like-for-like comparisons of profitability drivers

- The total annual operating costs were divided across the originated and active portfolio for each year, and allocated across the stages of the loan lifecycle

- Dalberg validated initial loan analyses as well as cost allocations with each lender through bilateral conversations, surveys, and other validation exercises

### Analyse

- Using the cleaned, standardized data, Dalberg determined the financial profit and accounting profit for each of the loans provided by the commercial lenders

- Dalberg also calculated the commercial cost of funds for local lenders based on respective lender discussions and reviewing their financial statements. The same impact-oriented cost of funds from phase 1 was used for the global social lenders. The income net by lender type was determined using this combination of cost of funds

- This resulted in unique and anonymized database that allowed analyses of the lending economics for serving agriculture SMEs across by segments collected in the portfolio

# Methodology: Though largely similar to past work, some methods were adjusted in this phase due to data quality challenges

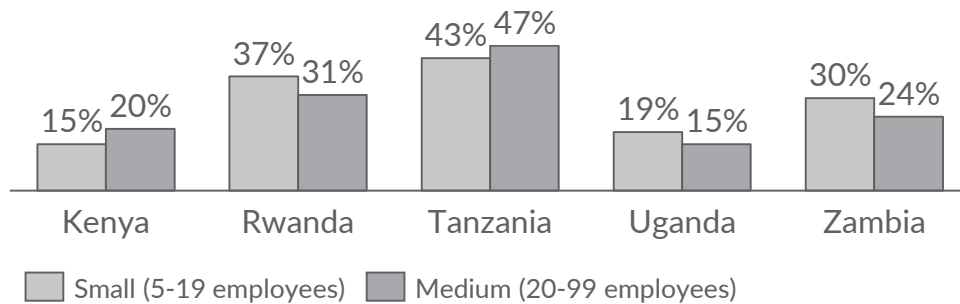| | Phase 1 (CSAF-only benchmarking) approach | Phase 2 data constraints | Phase 2 approach |
|---|---|---|---|
| **Transaction revenue** | • Total amount of income as a proportion of the total dollar-duration[1] of the portfolio.<br>• Income may be fees, interest, and other banks charges | • Non-exhaustive sample of local banks; Local banks may lend via other BUs at bigger ticket sizes to agri-market<br>• Limited borrower value chain and crop data provided by all lenders | • Same as phase 1, but calculated annualized average revenue for each lenders and represented results across 3 loan sizes[2]<br>• Supplemented results with lender financial statement analysis |
| **Operating costs** | • **Origination cost** for loan based on average expense in origination year<br>• **Servicing cost** for each active month of loan for duration of tenor<br>• **Recovery costs** assigned as lifetime cost of a loan to its year of origination | • Limited data provide by local banks to conclusively assess operating profit<br>• Lenders are predominantly CSAF members (10 out of 11), which may introduce some bias | • Same as phase 1, but determined average annualized operating costs for each lender, and aggregated for each lender type across 3 loan sizes[2]<br>• Local bank cost range based on financial statements analysis |
| **Credit losses** | • All write-offs are modelled at the full amount within transaction data<br>• 0% recovery for active loans 365+ days past due (DPD); 25% for 180–365 DPD; 50% for 90–180 DPD; and 75% for 30–90 DPD | • 4 of 8 local banks provided quantitative data which limits results accuracy<br>• 2 of 5 NBFIs have significant larger portfolio's on a number of loans basis which introduces bias | • Same as phase 1, but determined average annualized credit losses for each lender, and aggregated for each lender type across 3 loan sizes[3]<br>• Reduced result accuracy for local banks and NBFIs due to limited data |
| **Risk-adjusted cost of funds** | • Used Basel III Advanced IRB risk-weighted assets formula to determine risk adjusted cost of funds. | • Only 2 of 5 NBFIs participated in study provided a cost of funds | • Developed commercial cost of funds model for local lenders based on discussions, financial statements and 1-year bond rates<br>• Used phase 1 results for all global social lenders |

(1) Product of the average number of months that a given dollar of principal is outstanding of the loan and the total amount disbursed
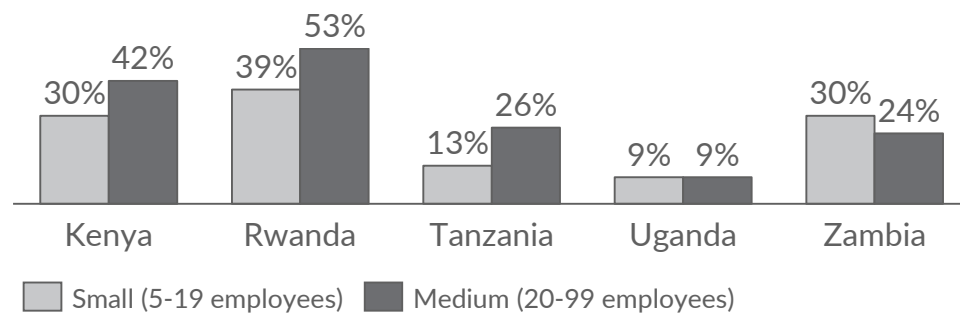(2) (3) (4) Typical loans size segmentations were $100k, $250k, and $1m

**Dalberg**

# Context: SMEs in East Africa report facing major constraints in access to adequate financing ...

## Percent of firms identifying access to finance as a major constraint

| | Kenya | Rwanda | Tanzania | Uganda | Zambia |
|---|---|---|---|---|---|
| Small (5-19 employees) | 15% | 37% | 43% | 19% | 30% |
| Medium (20-99 employees) | 20% | 31% | 47% | 15% | 24% |

■ Small (5-19 employees)　■ Medium (20-99 employees)

## Percent of firms with a bank loan/line of credit

| | Kenya | Rwanda | Tanzania | Uganda | Zambia |
|---|---|---|---|---|---|
| Small (5-19 employees) | 30% | 39% | 13% | 9% | 30% |
| Medium (20-99 employees) | 42% | 53% | 26% | 9% | 24% |

■ Small (5-19 employees)　■ Medium (20-99 employees)

- Globally, constraints exist across SME financing ecosystems, such as:

  - *Demand*: SMEs are often informal, poorly managed, operate in risky environments, and lack access to collateral

  - *Supply*: Financial sectors in developing countries are small and banks have limited SME or agriculture experience

  - *Policies, laws, and support functions*: Contracts are difficult to enforce and little credit information is available

- Strict collateral requirements for all SMEs surveyed also prevented them from accessing the required finance – while collateral requirements were not correlated exactly with access, SMEs in some countries in East Africa reported requirements in excess of 200%, with a country average of 216%.

Note: Staff sizes for small and medium enterprises based on World Bank classifications; agri-SMEs are often on the smaller end of the spectrum if measured by employees

# Loan economics: Serving the under $100k size segment appears profitable for local banks due to higher interest income and lower OpEx

**<$100k (% loans)**

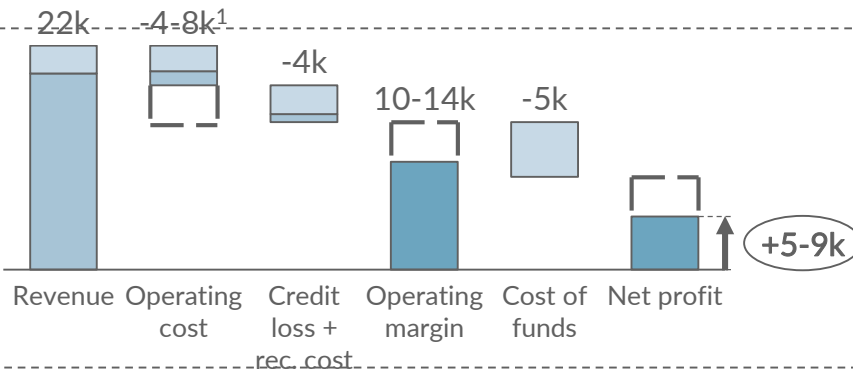**Breakdown of expected economics for a $100k, 12-month loan**

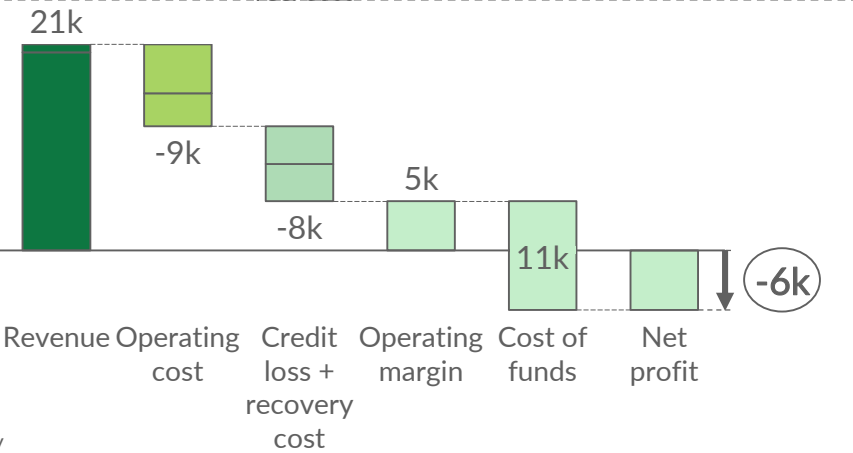| | | |
|---|---|---|
| **Global social lenders** | **~13%** of total loans | *Loans in this size segment were predominantly served by one lender, whose operating model is not representative of the group of global social lenders in this study* |

**Local banks[1]** — **~97%** of total loans

22k   -4-8k[1]   -4k   10-14k   -5k   +5-9k

Revenue   Operating cost   Credit loss + rec. cost   Operating margin   Cost of funds   Net profit

- The units of local banks providing data mostly made loans below $100k, with low incremental operating costs to originate small-ticket loans, and high revenue
- Note: there is high uncertainty on the operating cost data provided, illustrated by the range

**Local NBFIs** — **70%** of total loans

21k   -9k   -8k   5k   11k   -6k

Revenue   Operating cost   Credit loss + recovery cost   Operating margin   Cost of funds   Net profit

- Participating local NBFIs earned high interest yields on small-ticket loans, resulting in profitable lending at the operating and net margin levels
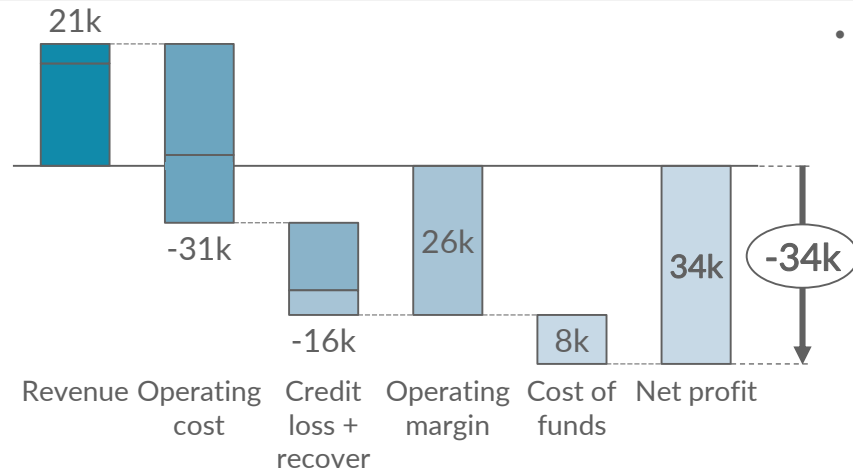
[1] Low fidelity of operating cost data provided by local banks; range provided to reflect uncertainty

# Loan economics: After cost of funds, both global and local lenders we analysed experienced losses on loans in the $100k to $500k range

**$100-500k (% loans)**

**Breakdown of expected economics for a $250k, 12-month loan**

## Global social lenders

**~37%** *of total loans*

21k — Revenue
-31k — Operating cost
-16k — Credit loss + recover
26k — Operating margin
8k — Cost of funds
34k — Net profit
**-34k**

- Global lenders with largely international operations, and early entrants into the segment, see lower operating efficiencies for smaller-ticket loans

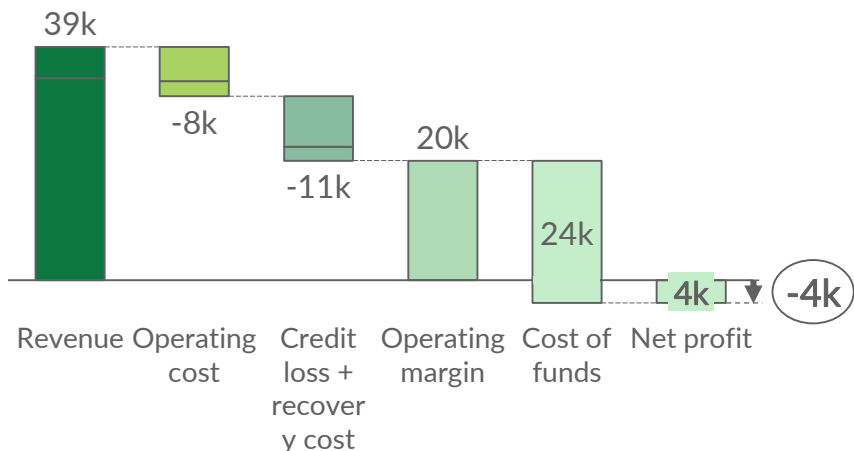- Credit loss rates were also significantly higher (4.6% vs. 3.1%) for this size segment compared to loans over $500k

## Local banks

**~3%** *of total loans*

*Participating local banks did not make agri-loans in this size range within the business units that shared data.*
*Note: some medium-sized agri-loans were noted to have been made by commercial business units*

## Local NBFIs

**~21%** *of total loans*

39k — Revenue
-8k — Operating cost
-11k — Credit loss + recovery cost
20k — Operating margin
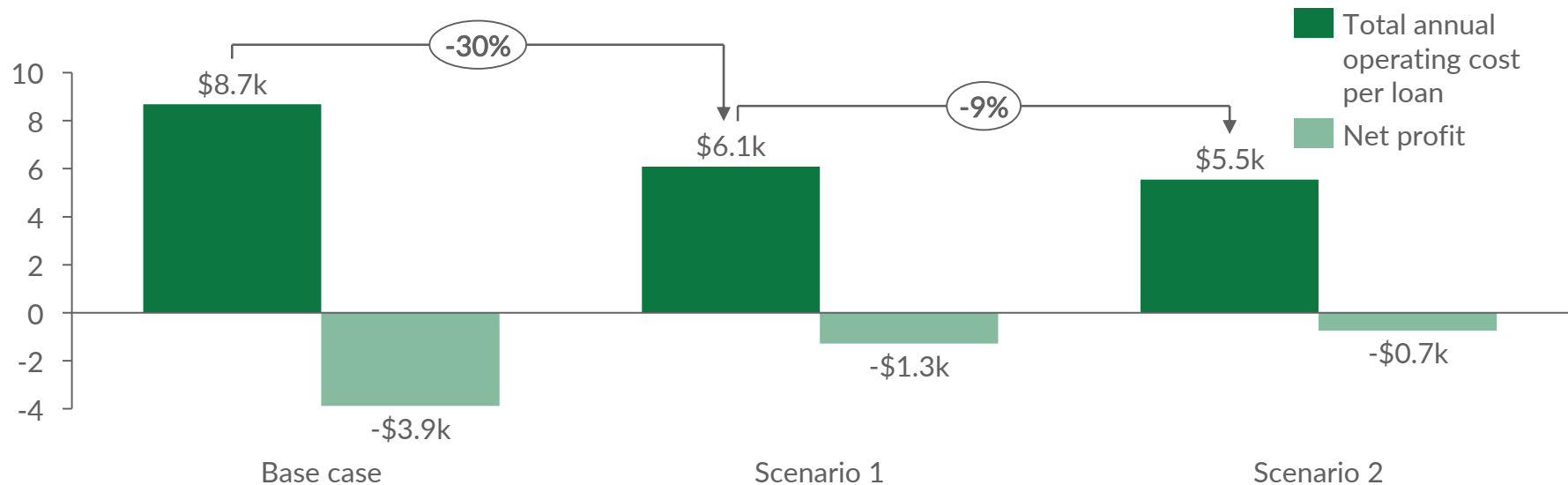24k — Cost of funds
4k — Net profit
**-4k**

- Local NBFIs performed better than social lenders but were still unprofitable in this size range
- NBFIs' interest yields in this segment were low compared to their high cost of funds
- NBFIs tended to focus on the smaller end of this loan segment; only one participating NBFI had loans of more than $200k

# Loan economics: Looking to the future, the fairly new and sub-scale NBFIs may approach breakeven on $250k loans with some efficiency gains

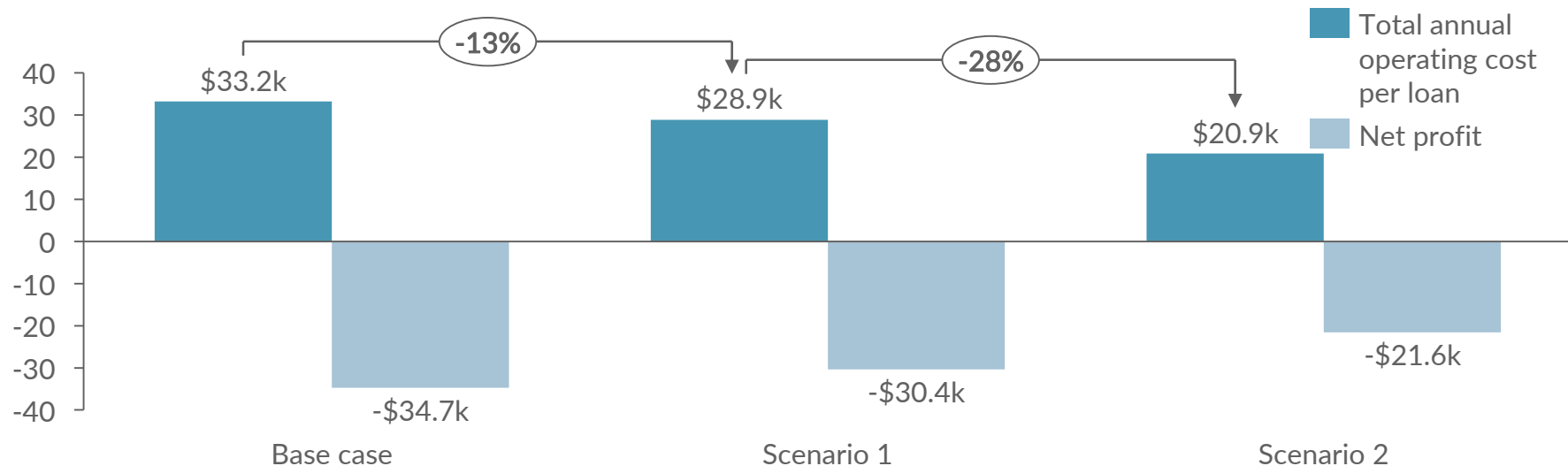| Base Case | Scenario 1 | Scenario 2 |
|---|---|---|
| • Current average annual operating cost per loan and operating profit for the global social lenders in the data set provided | • **Increased:** Volume of loans by 30%<br><br>• **Held constant:** total overhead costs and direct costs per loan | • **Increased:** Volume of loans by 50% with overheads direct cost per loans constant for each lender<br><br>• Set direct costs to the 75th percentile of all NBFIs<br><br>• **Held constant:** Overheads |

## Operating economics of a $250k 12-month loan



Legend:
- **Total annual operating cost per loan** (dark green)
- **Net profit** (light green)

Base case: $8.7k / -$3.9k
Scenario 1: $6.1k / -$1.3k (-30%)
Scenario 2: $5.5k / -$0.7k (-9%)

# Loan economics: For global social lenders, reaching breakeven at $250k will likely remain difficult even with efficiency gains

| Base Case | Scenario 1 | Scenario 2 |
|---|---|---|
| • Current average annual operating cost per loan and operating profit for the global social lenders in the data set provided | • **Increased:** Volume of loans by 30%<br>• **Increased:** origination efficiency by 10%<br>• **Held constant:** total overhead costs and direct costs per loan | • **Increased:** Volume of loans by 30%<br>• **Increased:** origination efficiency by 10%<br>• Set direct and overhead costs per loan to a maximum of the 75th percentile of all global social lenders |

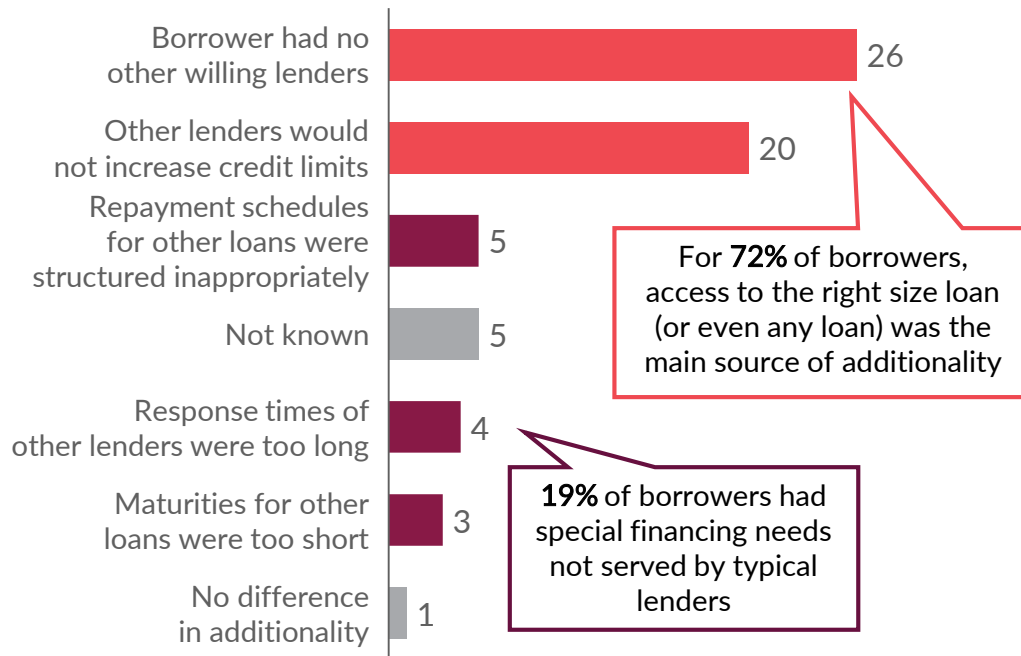## Operating economics of a $250k 12-month loan



Legend:
- Total annual operating cost per loan
- Net profit

Base case: $33.2k / -$34.7k
Scenario 1: $28.9k / -$30.4k
Scenario 2: $20.9k / -$21.6k

-13% (Base case to Scenario 1)
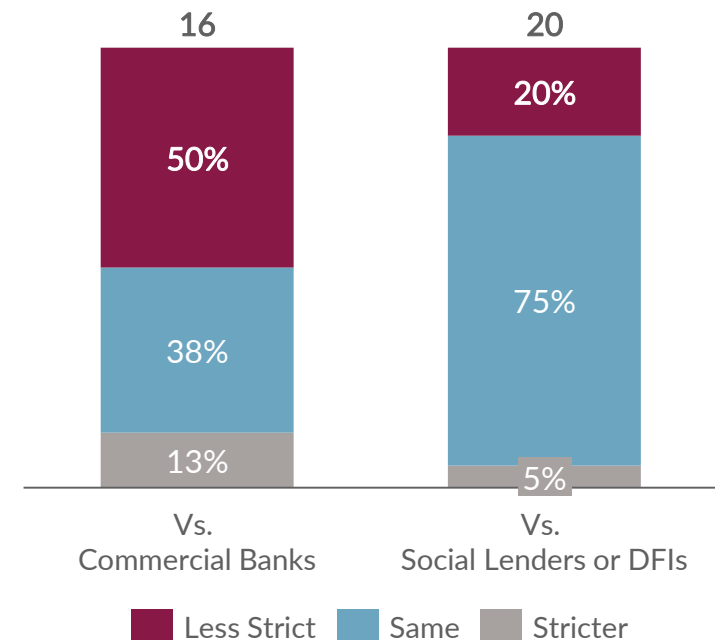-28% (Scenario 1 to Scenario 2)

# CSAF Additionality: Additional research in East Africa reinforced that both access and product design are issues facing agri-SMEs seeking finance

*In the same survey, CSAF lenders also provided estimates on how their loans to East African borrowers compared to the loans of other lenders, on collateral requirements and other dimensions of additionality...*

**CSAF lenders' characterization of the additionality of their first loans to various borrowers[1] (n=64)**

| | |
|---|---|
| Borrower had no other willing lenders | 26 |
| Other lenders would not increase credit limits | 20 |
| Repayment schedules for other loans were structured inappropriately | 5 |
| Not known | 5 |
| Response times of other lenders were too long | 4 |
| Maturities for other loans were too short | 3 |
| No difference in additionality | 1 |

For **72%** of borrowers, access to the right size loan (or even any loan) was the main source of additionality

**19%** of borrowers had special financing needs not served by typical lenders

**CSAF lenders' comparison of security requirements for their first loan vs other lenders' loans[2] (n=36)**

| | Vs. Commercial Banks | Vs. Social Lenders or DFIs |
|---|---|---|
| | 16 | 20 |
| Less Strict | 50% | 20% |
| Same | 38% | 75% |
| Stricter | 13% | 5% |

Legend: ■ Less Strict ■ Same ■ Stricter

**Social lenders highlighted lack of access to other sources as a major challenge for their borrowers; in addition, social lenders' collateral requirements were less strict than those of banks about half the time**

(1) The sample is a mixture of borrowers that are served by other lenders and by CSAF lenders only. 2) Question only relevant for the 39 borrowers who had a loan from another lender; excludes 3 with no data. Source: CSAF and Dalberg "Research on CSAF Lenders Additionality in East Africa"

**Dalberg**