

Financial Education through SACCOs program

Economic Policy Research Network (EPRN)

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Kigali



Agenda



- 1. Introduction: Financial Education through SACCOs Program**
2. Research questions and objectives
3. Methodology
4. Impact Evaluation Findings
5. Recommendations & next steps



Problem statement and policy context



- Limited financial knowledge, skills, and confidence is associated with suboptimal financial behavior such as low rate of formal savings, poor usage of bank accounts, and over-indebtedness.
- Increasing the breadth and depth of financial education was established as a high priority in Rwanda's Financial Sector Development Plan (FSDP) II, as a key means to reach the country's goal of 100 percent financial inclusion by 2020. In December 2013, the Government launched its National Financial Education Strategy (NFES) following the FSDP II's recommendations.
- Given their wide reach in Rwanda and their disproportionately rural and newly-banked member base, *Umurenge* SACCOs ('Umurenge' is a Kinyarwanda word for 'sector', an administrative unit) were identified in the NFES as critical implementing partners for the delivery of financial education.

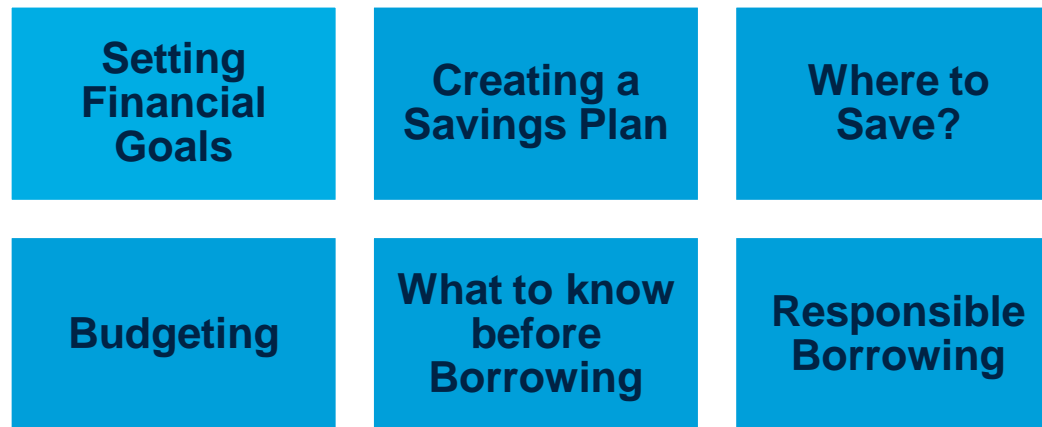
Program Objective & Approach



- **Program objective:** enhance the financial capabilities - knowledge, attitudes, skills, and behaviors - of Rwandan adults
- **Target population:** SACCO members and potential members
- **Delivery mechanism:** Face-to-face trainings delivered to end users by SACCO management, staff, and community leaders
- **Training approach:** Cascading training with SACCO leaders trained by Master Trainers via a centralized Training Institute, Rwanda Institute of Cooperatives, Entrepreneurship and Microfinance (RICEM)
- **Phase One:** 135 SACCOs, at least 500 members trained per SACCO

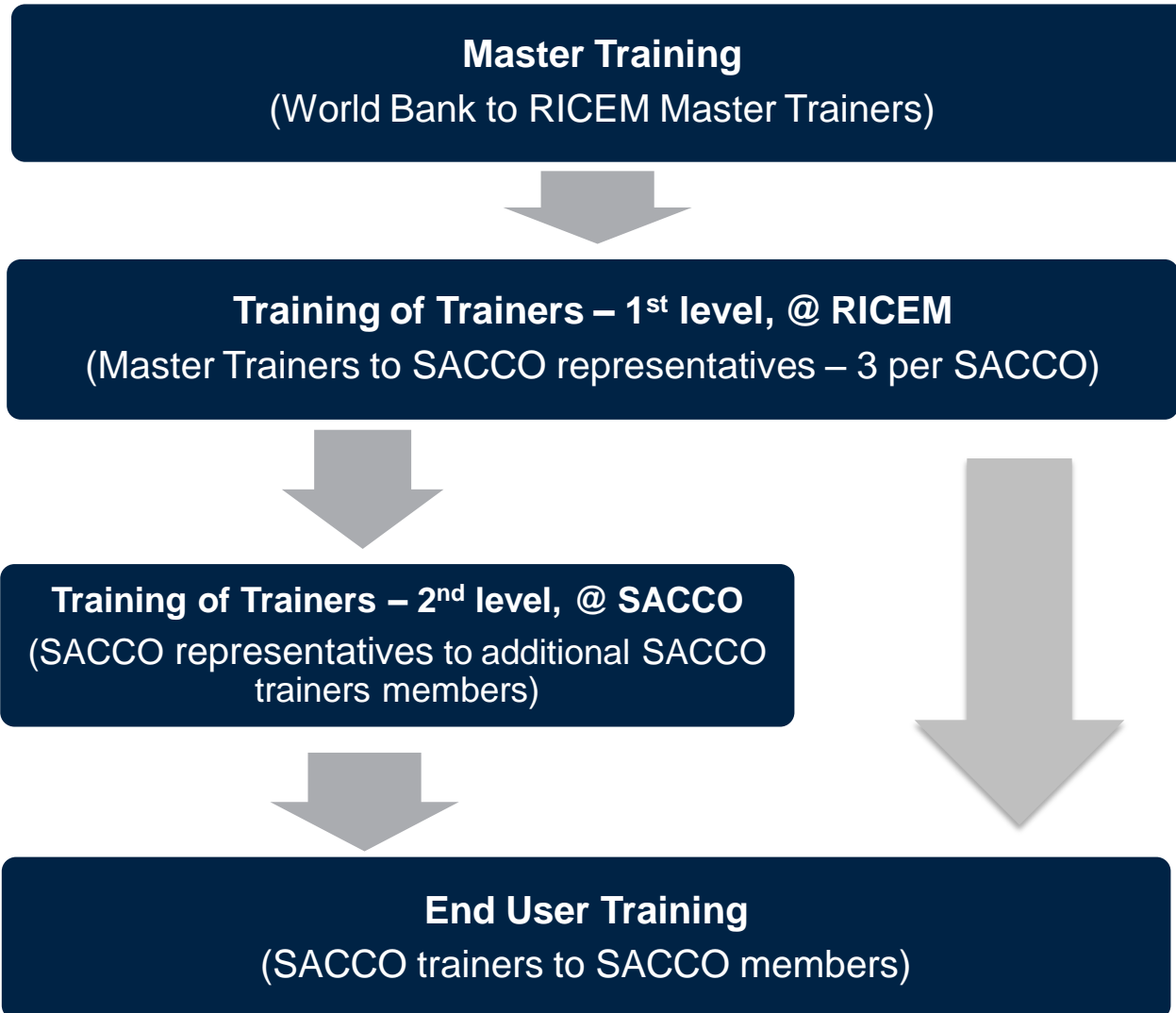
Financial Education Curriculum: *Nawe Birakureba*

- A multifaceted, interactive, six-part curriculum developed (2015-2016), piloted (2016) by World Bank, MINECOFIN, and Enclude Ltd. - named *Nawe Birakureba*, or *It's Up to You!*
- The *Nawe Birakureba* curriculum is built around six key themes:



- 'Consumer Rights and Responsibilities' embedded as cross-cutting theme
- Leverage financial education program design elements that have **PROVEN** (e.g. via impact evaluation) to be effective, namely:
 - Edutainment
 - Rules of Thumb
 - Teachable Moments
- General Principles for Curriculum Design: **Simplicity, Relevance, Sustainability**

Cascading Training Approach



Accomplishments



- Over **70,000 adults trained** as of December 2016 (over 100% of target of 65,000)
- 54% of trainees were women
- Trainees attended an average of 3.5 sessions
- Trainings carried out in **135 SACCOs** (100% of target)
- **397 SACCO representatives** (board members, managers, staff) trained at RICEM and certified to deliver *Financial Education through SACCOs* program
- **15 Master Trainers** trained by World Bank and Jessica Massie and certified to serve as Master Trainers for deliver *Financial Education through SACCOs* program

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Evaluation Objective and Questions



- **Objective:** Assess the impact of the *Financial Education through SACCOs* program on financial capabilities of SACCO members

- **Evaluation Questions**
 - What are the impacts of the financial education program on the financial knowledge, attitudes, and skills of SACCO members?
 - What are the impacts of the financial education program on the financial behaviors of SACCO members?
 - What are the impacts of the financial education program on the financial security and welfare of the SACCO members?

- **Approach:** Impact evaluation via randomized-controlled trial

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Methodology: why impact evaluation



Impact and the average size of the impact

- Understand if policies work
 - Justification for program
 - Scale up
 - (Lack of evidence)
- Understand the distribution of gains/losses

→ Valid counterfactual/control group

Methodology: why impact evaluation



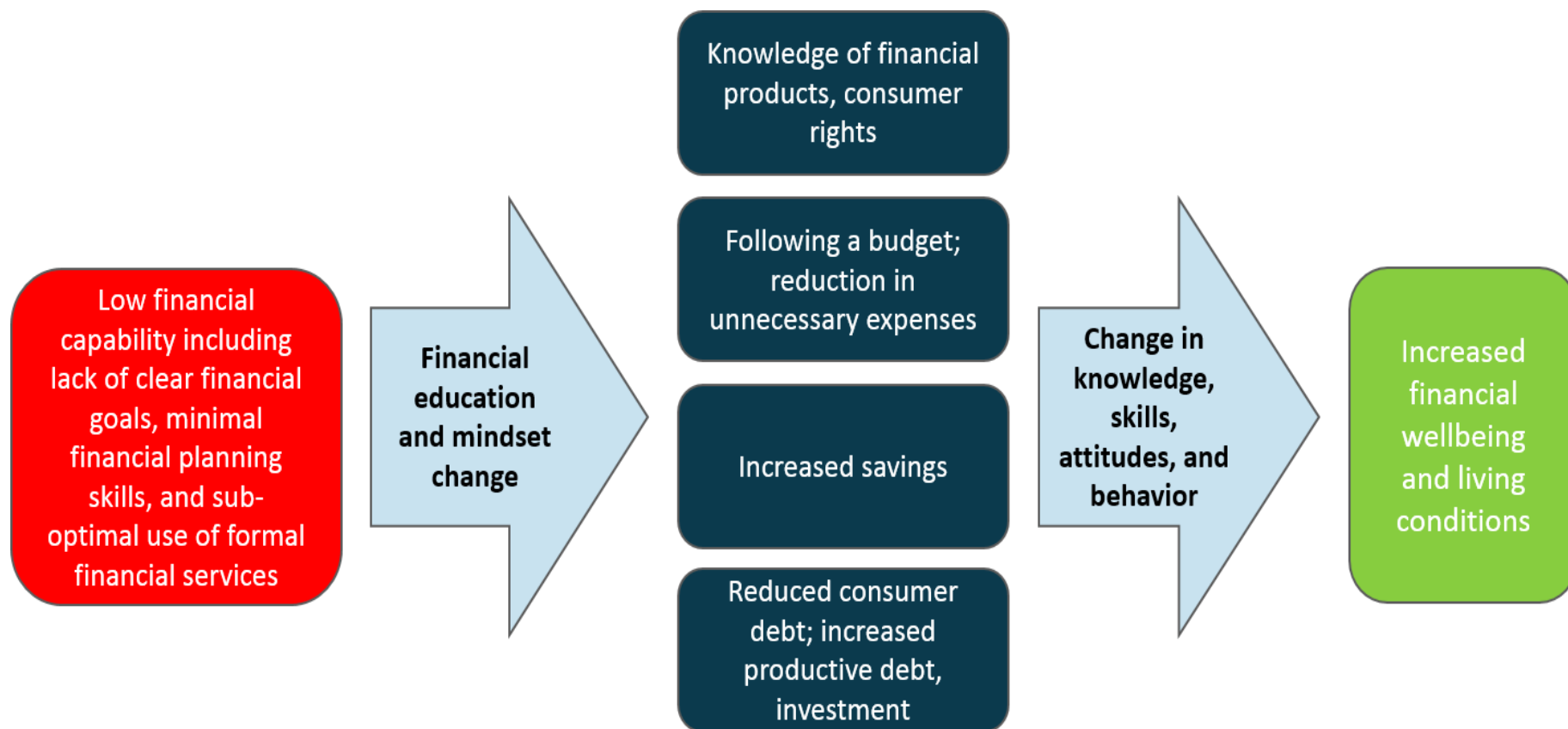
- Impact evaluation answers the question: what changes in outcomes are **directly attributable** to the intervention?
- Key concept is to identify **cause** and **effect**
- To do so, must separate changes in observed outcomes that are caused by the program vs. changes in observed outcomes that are caused by other factors (e.g. other changes/influences over time, factors that motivate an institution or person to sign up for a program)
- Why is understanding causality so important?
 - Case study: staff at the SACCOs observe that clients receiving the training are saving at a higher rate than non-participants.
 - Great news!
 - But wait...is that **correlation or causation**?
 - What else happened over the three-month period? What kind of clients signed up for the program in the first place?

Methodology: Why randomize?



- Randomization is the ‘gold standard’ experimental approach to ensure a valid counterfactual group
- By randomly choosing a “treatment” group (which gets the intervention) and a “control” group (which does not), we can assure that the only differences between the two groups are a result of the intervention since they are otherwise statistically identical
- This can be tailored to programs that have a phased-in implementation, like the *Financial Education through SACCOs* program
- We simply randomly select which SACCOs get the intervention in Phase One (the treatment group) and which SACCOs will get the intervention later (the control group).
- Because the two groups of SACCOs are randomly selected, they are statistically identical and we can attribute any changes between the two groups to the intervention (financial education training program)

Theory of Change



Sample size calculations

(1) Total sample size (J)	Number of SACCOs*Sample size per SACCO (n)
(2) Standard deviation of outcome (SD)	SQRT (outcome mean*(1-outcome mean))
(3) Minimum detectable effect size (MDES)	$MDES = MJ - 2 \sqrt{\rho + \frac{(1 - \rho)SD}{n}} \sqrt{\frac{1}{P(1 - P)J}}$ <p>Where</p> <ul style="list-style-type: none"> • J: Number of randomized groups • n: Number of individuals per randomized group • P: Proportion of groups randomized to program status • ρ : Intra-cluster correlation • $MJ - 2$: Effect multiplier $MJ - 2 = t_{(1-\beta)} + t_{\alpha/2}$ <p>For example, for a power of 80%, $t_{1-\beta} = 0.84$. Critical values at the t table show that $t_{\alpha/2}$ equals 1.960. So, $MJ - 2 = 0.84 + 1.960 = 2.8$.⁵</p>
(4) Effect size in standard deviations (SDs)	<p>Minimum detectable effect/standardized effect size/standard deviation of outcome.</p> <p>It should be in the 0.2-0.80 range, where 0.2 sd is MODEST effect size and 0.8 LARGE effect size.</p>

Sample size calculations

Item	Description
Power of Test	It is based on statistical significance required and is conventionally set to 0.8 or 0.9
Significance Level	It is the desired statistical precision
Proportion Treated	It is the proportion of sample in "treatment" group
Mean and Standard Deviation of Outcome	It is based on the presumption that absent our treatment, very few people will approach banks/SACCOS to obtain loans/open accounts/etc. The starting value of SD is based on the assumption that 5% of individuals in our control group will take out loans/open accounts/etc. during the experiment period.
Intra-cluster Correlation	It is the ratio of between-cluster variability and the sum of between-cluster variability and within-cluster variability. Values range between 0 and 1.

Sample size calculations

# SACCO	Sample size per SACCO	Total Sample size	Power of Test	Significance Level	Proportion Treated	Mean of Outcome	Standard Deviation of Outcome	Intra-cluster Correlation	Min. Detectable Effect	Effect in SDs
1	500	500	0.8	0.05	0.5	0.05	0.22	0	0.05	0.25
10	50	500	0.8	0.05	0.5	0.05	0.22	0.2	0.79	3.64
20	50	1000	0.8	0.05	0.5	0.05	0.22	0.2	0.56	2.57
200	50	10000	0.8	0.05	0.5	0.05	0.22	0.2	0.18	0.81
200	50	10000	0.8	0.05	0.5	0.05	0.22	0.3	0.22	1.00
200	50	10000	0.8	0.05	0.5	0.05	0.22	0.25	0.20	0.91
200	50	10000	0.8	0.05	0.5	0.05	0.22	0.1	0.13	0.58
200	500	100000	0.8	0.05	0.5	0.05	0.22	0.1	0.13	0.57
200	20	4000	0.8	0.05	0.67	0.05	0.22	0.13	0.15	0.70

Randomization (1)

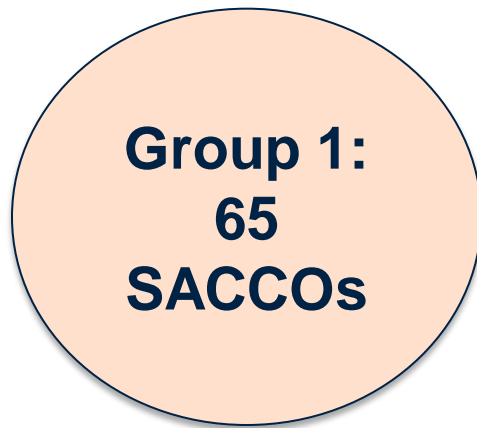
- To evaluate the impact of the *Financial Education through SACCOs* program, we began with 200 SACCOs in Phase One
- We want to test overall impact of *Financial Education through SACCOs* program, as well as the impact of key program design element: who from each SACCO attends the ToT and leads the training back at their SACCO
- How to do this? ... Randomize!



200 SACCOs

Randomization (2)

- We randomly selected the 200 SACCOs into three different groups
- At baseline, Groups 1, 2, and 3 are **statistically identical** along key variables (e.g. SACCO size, geographic distribution)



Randomization (3)

- Groups 1 & 2 received an intervention: *Financial Education through SACCOs* program
- But two types of the intervention: Group 1 SACCOs selected trainer group while Group 2 were asked to send one board member, one manager, one loan officer.

**Financial Education
through SACCOs program
intervention**

SACCO selects
trainer group

Pre-determined
trainer group

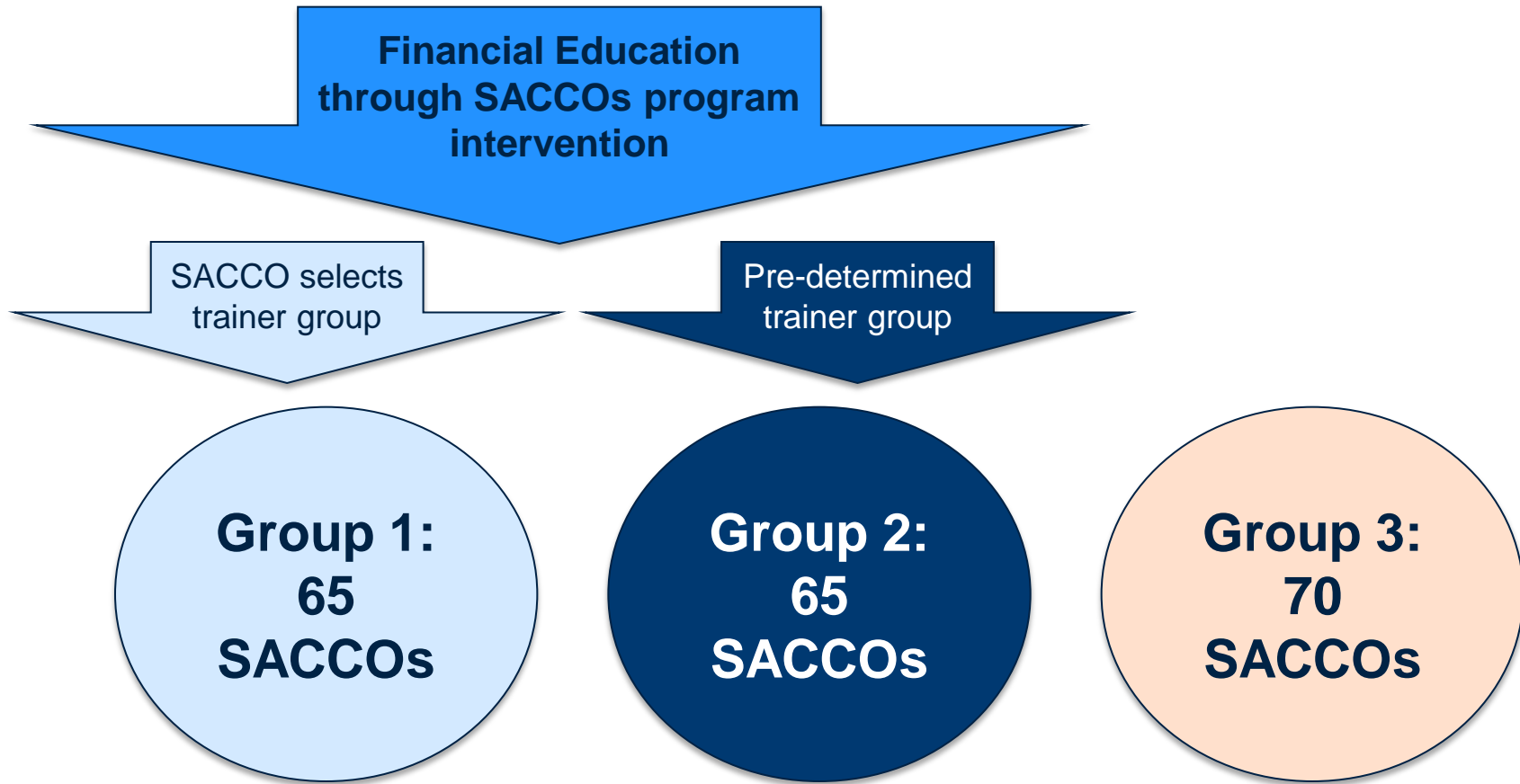
**Group 1:
65
SACCOs**

**Group 2:
65
SACCOs**

**Group 3:
70
SACCOs**

Randomization (3)

- If average characteristics of Groups vary post-intervention, we know the differences must be **caused** by the interventions, because the Groups are otherwise statistically identical



Key Outcomes



- Knowledge of key rules of thumb, key components of a budget
- Attitudes towards budgeting, saving, responsible borrowing, spending for needs vs. wants, etc.
- Setting financial goals via financial plan – and adhering to financial plan
- Developing a budget – and adhering to budget
- Saving towards financial goals
- General savings behavior
- Active use of accounts
- Responsible borrowing behavior (e.g. NPLs)
- Sense of financial security (e.g. have enough money to cover daily expenses, large future expenses)



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IE Preliminary Findings (1)



- Compared to the comparison group, members of Group 1 SACCOs - those that participated in *Financial Education through SACCOs* program *AND* were able to choose their own representatives to attend the training-of-trainers - were:
 - More likely to report having a **written budget** and strictly adhering to their budget;
 - More likely to report having a written **financial plan** and strictly adhering to their financial plan;
 - More likely to report **saving regularly** towards financial goals;
 - More likely to report **financial attitudes** that emphasize saving and responsible borrowing; and
 - More knowledgeable of **key rules of thumb** including the advantages of borrowing for business/investment over consumptions



IE Preliminary Findings (2)



- Effects for Group 2 SACCOs - those that participated in *Financial Education through SACCOs* program but were told to send one board member, one manager, and one loan officer - were significantly weaker or non-existent
- Group 1 SACCOs sent a more diverse set of representatives to the training-of-trainers, and **were more likely to send**
 - Loan/supervisory committee president
 - SACCO member
- ... and **less likely to send**
 - Manager
 - Loan Officer
- Results indicate that **greater operational autonomy** at the SACCO level can result in more effective provision of financial education

IE Preliminary Findings (3)



- No impacts found on account usage, responsible borrowing behavior, or financial security
- Absence of results along above outcomes due in part to relatively low take up (i.e. 500 members still a small percentage of most overall SACCO membership)
- Analysis does suggest that higher levels of participation in the trainings in the future may reveal positive impacts along a broader range of outcomes (including related to account usage and financial security)
- Nonetheless, may be worthwhile to **revise** and **strengthen** some aspects of curriculum
- Also underlines challenge of translating shifts in knowledge and attitudes into behavioral change

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Recommendations: key take-aways



- Positive and meaningful impacts of *Financial Education for SACCOs* program for members of SACCOs who could choose representatives for training-of-trainers
- Most impacts related to knowledge, attitudes, skills
- Behavioral impacts for saving towards financial goals
- No behavioral impacts for account usage, responsible borrowing, financial security – partly due to relatively low take-up
- Going forward:
 - SACCOs should be able to chose their own representatives for ToT
 - Consider revising and strengthening some aspects of curriculum, and further emphasizing behavioral changes for account usage, savings, responsible borrowing, etc.
 - Consider “success factors” and “lessons learned” from operational experience

