

“The [SG] allows me to leverage my money, which is impossible to do at home.”
SG member, Kenya

“Many of us are members of other groups, because each [SG] has a share limitation. It is common to combine share-outs for important purchases.”
SG member, Rwanda

“Although we have a lock box, we don’t use it because it is unsafe. Instead, we save our funds in a bank and our welfare fund in a secret location.”
SG group discussion, Uganda

Focus Note 1: Outcompeting the Lockbox – Linking Savings Groups to the Formal Financial Sector

In 2013, the Bill & Melinda Gates Foundation (BMGF) issued a statement of work calling for an evaluation of the feasibility of digitally linking savings and loan groups (SGs) to the formal financial system in alignment with BMGF’s revised strategy to broaden the reach of digital financial systems. Thus, Bankable Frontier Associates (BFA) spent several intense months evaluating the case for promoted SGs¹ and their members to be linked profitably to the formal financial system via mobile money, and in doing so, expand the financial options available to their members. Specifically, BFA examined the case in Kenya, Uganda, Tanzania, and Rwanda—all countries with varying levels of formal financial access and mobile money development. From Kenya—where Equity Bank has famously focused fully on the low income segment and where M-Pesa has broken ground on a new era of mobile money services—to Uganda, where mobile money regulations are just now taking shape, BFA surveyed various participants of a possible linkage value chain to determine the costs and benefits of linking millions of poor SG members into the formal financial system.²

For those players with the foresight to take advantage of deposit linkage opportunities, a desirable business case awaits (see second Focus Note in this series). But these opportunities cannot be pursued half-heartedly or as an afterthought—members won’t rush to open formal savings accounts until banks and mobile money operators prove that their value and added cost outweighs the many conveniences of existing SG arrangements. This Focus Note details what those conveniences are and argues that banks and mobile network operators can provide real

¹ Throughout this Focus Note, we refer specifically to SGs promoted by international and national non-governmental organizations. These groups follow standardized savings models, allowing interested parties to predict, with a fair amount of certainty, savings patterns and behaviors. We elaborate on SG models and operations below and in the Annex.

² Promoted SG members number between 3.65-3.97 million in Kenya, Tanzania, Rwanda, and Uganda, according to data gathered by Hugh Allen of the SAVIX.com from a selection of the largest promoting institutions and by BFA from conversations with promoting institutions in each country.

value to the financial lives of SG members (longer-term, diverse savings options) by overcoming some SG shortcomings.

The BMGF-BFA SG Linkage Investigation

Headlines regularly proclaim the success of M-Pesa, Kenya’s runaway mobile money service—reportedly a conduit for at least 25%³, if not more,⁴ of Kenya’s annual GDP. Whatever the real figure, M-Pesa’s success is undisputed in transforming the way the entire economy transacts. Today, 11.5 million Kenyan adults⁵, nearly 62% of adults, use mobile financial services, which can be used to pay schools fees or electricity bills through a simple mobile handset, eliminating the time and paperwork previously required to complete such basic transactions manually. Mobile money, then, is heralded for its promise of hastening financial inclusion.

Despite its success, 53% of Kenyan adults that use mobile financial services do not have an account with a bank.⁶ At the same time, 5.16 million Kenyan adults (nearly 28%) belong to informal savings groups—groups which provide the opportunity to save, and often borrow, without the constraints of needing to be close to a mobile money agent or a physical bank branch.⁷ Among the poorest fifth of Kenyan adults, 15.5% use these informal savings groups and 28% use mobile financial services.⁸ Summed across all countries under investigation—namely Kenya, Uganda, Tanzania, and Rwanda—10.8 million individuals rely on informal savings groups as one instrument to manage their financial needs.⁹

Many of these savings groups are trained and supported by NGO promoters, both domestic and international, and also allow for internal lending with the deposited funds. These promoted savings and lending groups (which we will refer to hereafter as SGs¹⁰) offer a unique opportunity to test whether mobile money can, indeed, play a transformative role for financial inclusion—by bringing the benefits of formal financial services to those who would otherwise remain outside of the formal financial ecosystem. A primer for the mechanics of both informal savings groups and promoted SGs is available in the Annex of this Note.

Building off work which the Bill & Melinda Gates Foundation (BMGF) has already done in partnership with many international NGO promoters to pilot linkage partnerships, BMGF wished to understand the incentives for stakeholders (Figure 1) to engage in digital linkage partnerships across East Africa. Simply put, the motivating question was, “what incentives will drive each stakeholder towards investment and sustained involvement?”

³ E.C. “All together now.” *The Economist*, January 17, 2013.

⁴ Manson, Katrina. “From oil painter to the C-Suite.” *Financial Times*, February 24, 2013.

⁵ FSD Kenya, Central Bank of Kenya. “FinAccess National Survey 2013.” October 2013. FinAccess results are nationally representative, and Kenyan adults are defined as Kenyans 18 years and above.

⁶ *Ibid.*

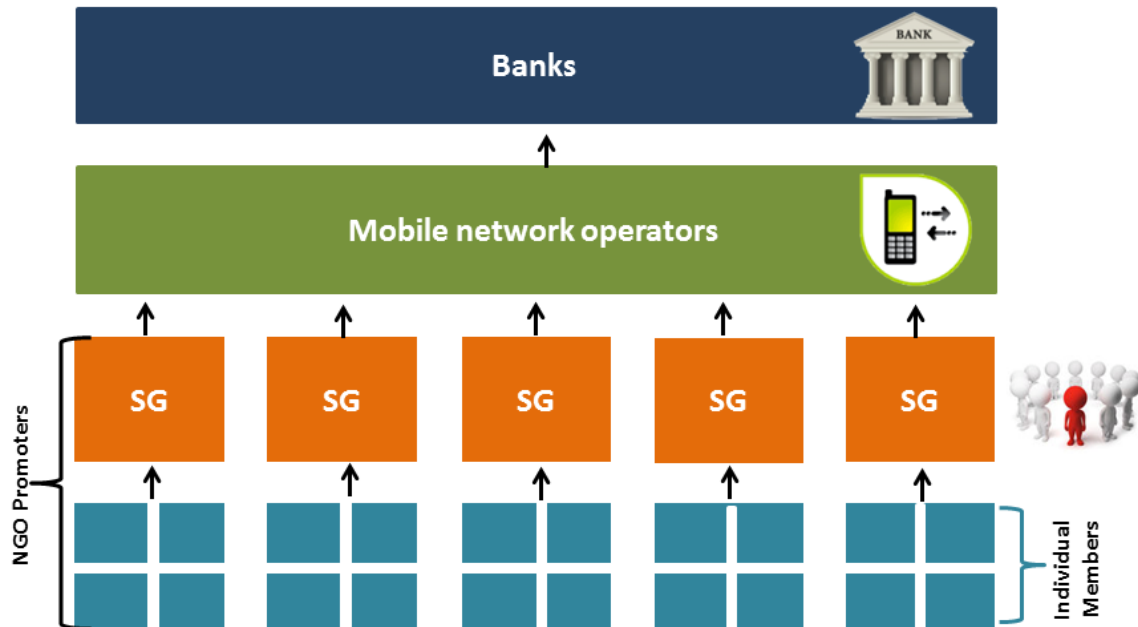
⁷ *Ibid.*

⁸ *Ibid.*

⁹ World Bank. Global Financial Inclusion Index – Kenya, Tanzania, Rwanda, Uganda, 2011.

¹⁰ For a detailed description of the SG model, please refer to the Annex.

Figure 1: The Digital Linkage Value Chain



Thus, BFA spent five weeks in East Africa (and many weeks of deskwork beforehand) unearthing the motivations and goals for each of the necessary players (see Figure 1 for a list of these stakeholders). A demand-side team met with NGO promoters, SGs, and individual members to gather information about needs, desires, savings transaction patterns, and potential concerns regarding linkages. In parallel, a supply-side team met with banks and mobile network operators (MNOs) to determine the same and to assess whether a business case does exist to drive such partnerships sustainably.

We believe that there are wins to digital linkages for supply-side players. For banks and MNOs, these include: 1) the accumulation of considerable funds, 2) convenient points for and lowered cost of customer acquisition, 3) the generation of mobile money transaction fees, 4) access to customer financial behavior, and 5) liquidity for agent network management. As we will outline in Focus Note 2, formal financial institutions have a compelling role to play, if the linkage to an SG is structured thoughtfully. In this Focus Note, we describe, in detail, the benefits of the SG model and identify how digital financial services can enhance these benefits for SG groups and members.




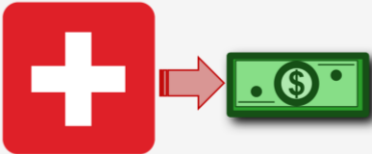
The SG model is proven and well established...could there be improvement on such a good thing?

In the target countries of Kenya, Rwanda, Tanzania, and Uganda, there are an estimated 3.65 million members across NGO-promoted SGs as of November 2013 (note that the 10.8 million cited above includes *all* informal savings group members, including those in groups formed independently of promoters).¹¹ This number represents a fraction of total SG coverage, and is

¹¹ Allen, H. "SG Global Outreach." SEEP Network, November 2013. < <http://www.seepnetwork.org/savings-groups-global-outreach-pages-20015.php>>

likely a gross under estimate as it does not cover promotion of SGs by local NGOs or those which have formed independently of implementing organizations. SGs offer numerous benefits to members in regions where the vast majority of adults do not participate in the formal financial sector.¹² In its current form, the following benefits are particularly salient:

Figure 2: Strengths of SGs

	<p>Provide near doorstep banking</p>
	<p>Enforce savings discipline</p>
	<p>Provide lump-sum savings opportunities</p>
	<p>Offer short-term loan window and emergency finance</p>

SGs provide proximate financial services

The popularity of SGs comes as no surprise. Like many other informal options, SGs operate at the village level, making them a convenient, proximate source of finance when formal options are unavailable. As a replicable, adaptable, and familiar source of savings, credit, and social capital, promoted SGs are now ubiquitous in the East African informal financial landscape.

Because of their proximity, SGs tend to be comprised of neighbors and community members. An element of trust exists among members to start with. Members can contribute small amounts to begin, until they feel comfortable contributing more. The social cohesion of groups also encourages a savings discipline within SGs that would be difficult for individuals to achieve on their own. And because of SG proximity, emergency financing can generally be obtained when needed. Financial service providers will have to compete with this ease and convenience to benefit from opportunities afforded by linkages.

There are drawbacks, however, to a financial mechanism that is dependent on members who may suffer the same shocks and economic constraints. This will be discussed in the next section.

¹² Sub Saharan Africa has the highest rates of formal financial exclusion, defined as the percentage of adults without bank accounts, at 76%. This rate increases to 87% for those in the lowest 2 income brackets regionally and to 94% in Tanzania, the study’s country with the lowest rates of financial inclusion. See World Bank Global Findex <<http://datatopics.worldbank.org/financialinclusion>>

Enforcing savings discipline to build up lump sums

SGs instill savings discipline. During focus group and one-on-one discussions, SG members repeatedly stressed that members **must** meet the minimum savings amount at each meeting, with few exceptions. This requirement ensures that members accrue a minimum pool of savings by the end of the savings cycle (known as the share-out, see Annex for further detail on the SG model). For the majority of SG members with no access to formal savings option, SGs and other informal groups provide a welcome alternative to saving at home which is prone to immediate spending on consumption needs.

Members often intend to use the end-of-cycle share-out amounts for lump sum purchases, such as business assets (including livestock), home improvements or construction, or educational fees. And while the share-out does generate a lump sum which would be difficult for many members to accumulate at home, as we will see, share-outs do not always cover the amount needed for such investments.

SGs provide members with a reliable, short-term loan window

SGs provide members with access to a valued “loan window,” which can be accessed for income generating activities, consumption purposes or when unanticipated income shocks arise (see Annex for details). Generally, members can borrow up to 3-4 times their accumulated savings amount for typical loan durations of 1-3 months, at interest rates of 6-10% per month on the principal balance. SGs thus offer small, frequent loans which members otherwise would not find offered by the formal financial sector or by other informal options.

In addition to the loan window, the majority of SGs also allow members to avail emergency loans for critical needs, such as illnesses or funerals. These loans are generally provided with zero interest and often even as grants.

Weaknesses of the current SG model

While SGs do provide proximate, flexible short-term savings and credit opportunities, they have important limitations which impact the transformative role they can play in the financial lives of members. This is where we envision digital financial services providing solutions.

Figure 3: Weaknesses of SGs

	<p>Risk of theft</p>		<p>Limited financial options (restricted savings opportunities and a shortened loan window)</p>
	<p>Limited (and sometimes negative) interest earnings</p>		<p>Common external shocks</p>

Lock boxes and substantial risk of theft

For the most part, SGs use metal lock boxes to store excess savings (also known as residual funds or cash-in-box) which are not distributed to members for credit. Regardless, the risk of theft is high, particularly given the conspicuousness of such boxes and fairly discernible periods of SG liquidity accumulation.

SGs tend to save for cycles of one year, and many cycles start in January as a course of familiarity. This predictability can be exploited by those in the community that understand



One group conceals its lock box in a rice sack to avoid theft during transport.

when groups are likely to be flush with cash (the latter months when members stop lending in order to recollect total savings).

Residual funds, or cash-in-box, can amount to sizable sums, particularly during the last few months of a SGs' first cycle, when groups stop extending credit and recollect loans outstanding in preparation for share-out distribution (see Annex).¹³ From

BFA's research it appears that these sums accumulate even sooner, and in larger amounts, during subsequent savings cycles.¹⁴ In Chart 1 below, we see the monthly cash-in-box accumulation of one Tanzanian SG that BFA visited from its 2nd to 4th cycle (in this case, year) of saving. As we see, the SG had stored several thousand dollars in its lockbox during the last 6 months of its 2nd and 3rd cycles (with each cycle starting in February), and had already accumulated USD \$2,000 three months into its 4th cycle. When totaled across SGs in a country, this number becomes substantial. In Kenya for example, the average cumulative cash-in-box for its nearly 62,000 SGs is more than USD 12 million.¹⁵

While SGs devise elaborate procedures to ensure the safety of funds,¹⁶ one individual (usually the group Treasurer) must always take responsibility for the box between meetings and, hence, the entire SG's accumulated savings. Many groups find it difficult to designate a treasurer due to the enormous responsibility placed on these individuals. In some cases, attempted thefts of the box have led to serious injury or even death.

For this reason, most SGs are encouraged to push excess funds into frequent lending. Are members forced to take more loans than they would want? This remains an unanswered question.

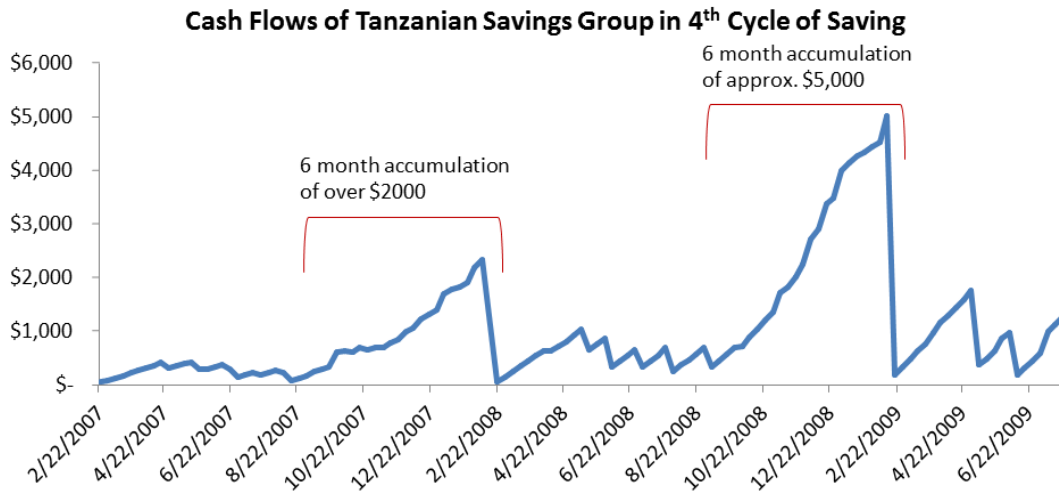
¹³ SGs typically save and extend credit for the first 6-9 months, after which members repay loans in preparation for end-of-cycle share-out. During these last few months, cash-in-box increases more than 10-fold. This accumulation begins much earlier, and in larger amounts, in groups in their 2nd, 3rd, or 4th cycles.

¹⁴ While we have anecdotal reason to believe that SG balances increase quickly after a group's first cycle (i.e. after it has graduated), current MIS data on graduated groups is insufficient to make statistically significant conclusions.

¹⁵ Cash-in-box estimates derived from MIS data and conversations with promoting regarding SG cash flows during their 1st and 2nd savings cycles.

¹⁶ Lock boxes often have 3 locks and 3 keys, and multiple members will be assigned to different roles to ensure the safety of the box, e.g. 4 different members will be responsible for each key and for the lockbox. One SG went so far as to ensure that the key and lockbox holders lived in different villages to prevent collusion.

Chart 1: Residual Cash Flows of a Graduated SG



Source: Cash-in-box data obtained by BFA from ledger book of a 30-member SG formed in 2010 and currently in its 4th cycle (year) of saving.

Time-bound financial options restricted to less than a year

As Stuart Rutherford describes in *The Poor and Their Money*, informal savings group cycles (including those of SGs) terminate after 9 months to 1 year.¹⁷ Rutherford refers to this safety mechanism as an “action audit,” designed to protect member funds.¹⁸ The importance of the action audit increases with the additional complexity introduced by lending:

“This added management burden makes [ASCAs] less transparent and so more vulnerable to fraud than ROSCAs.¹⁹ But being time-bound is a very healthy feature that good [ASCAs] share with ROSCAs. During a ROSCA or at the end of a time-bound [ASCA] either you get your money back or you don't. If their ROSCAs or [ASCAs] don't produce the goods, the members walk away and the device dies... I call this an ‘action audit’ and it substitutes very well for the sort of formal but less easily understandable audit that professional savings banks get accountants to do.”²⁰

Regular share-outs provide transparency and offer an opportunity to make adjustments—at the end of a set period, members can ensure that their money is still safe and make adjustments to rules or group composition if necessary.

Yet, as critical as this feature is for informal groups operating with limited support, restricted savings cycles mean that members often cannot save enough for the important lump sum purchases mentioned above (housing, land, business assets, and educational fees) in one cycle.

¹⁷ Rutherford, S. “The Poor and Their Money: An Essay about Financial Services for Poor People.” Institute for Development Policy and Management, January 1999.

¹⁸ *Ibid.*

¹⁹ ASCAs and ROSCAs are the two most recognized informal savings group models. SGs are based on the ASCA model, which provides both credit and savings opportunities, thus the takeaways regarding action audits apply equally to the SG model. On the other hand, ROSCAs only offer an option to save lump sums. See the Annex for a detailed explanation of both models.

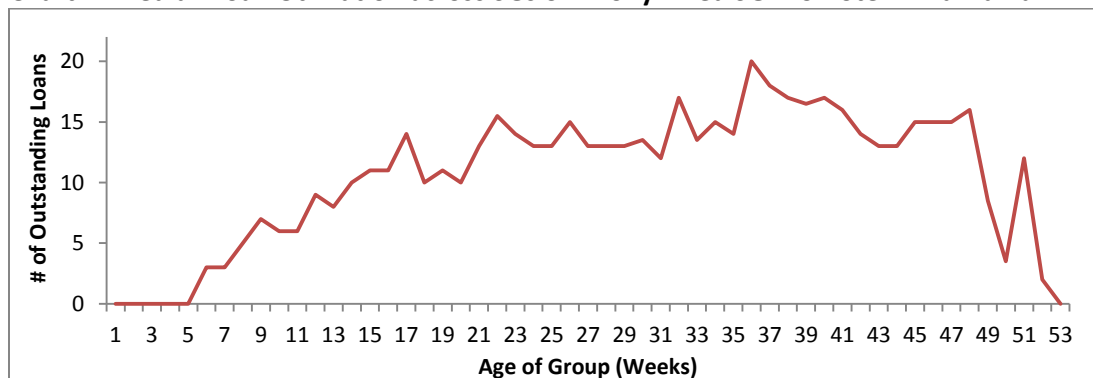
²⁰ Rutherford, S. “The Poor and Their Money: An Essay about Financial Services for Poor People.” Institute for Development Policy and Management, January 1999.

Rather, members often pay for these investments in a piecemeal fashion. For example, Patience, an SG member in Uganda used her successive share-outs to build up a small chicken business. She purchased materials to build a chicken coop with the first share-out, but then had to wait for the next year’s share-out to purchase hens and feed. Further, without a secure place to store share-out amounts, they can easily be depleted for immediate consumption needs.

The need to limit savings cycles to protect funds limits the *credit window* as well. Because of their cyclical nature, SGs have relatively little cash at the beginning of an SG cycle, when accumulation in the savings pot begins anew. Additionally, as pointed out in the Annex, SGs often halt lending several weeks prior to the end of each cycle to collect all outstanding credit in preparation for share-out. Not only does this put SG funds at risk of theft at the end of each cycle, but it also shrinks the window for member borrowing. As shown in Chart 2, the number of loans outstanding is minimal towards the beginning and end of each cycle.

Loan availability depends on the operating rules of the SG as well. While some SGs allow weekly borrowing starting from the first meeting of each cycle, others allow savings only at the beginning of each cycle to accumulate cash-in-box. During our research, we met with several groups which prohibited borrowing during the first and last 3 months of every cycle—effectively leaving only half of the cycle in which members could obtain credit, if needed.

Chart 2: Median Loan Utilization across SGs of Anonymized SG Promoter in Tanzania²¹



Source: MIS data provided by promoter. BFA estimated loan utilization by calculating the number of loans outstanding as a percentage of number of savers.

In order to fully overcome these drawbacks, it is crucial that linkages are designed to link not only the SG group, but the SG individual members themselves. Providing a link between the formal provider and the individual member then opens the door to a number of further financial options – both borrowing and savings –to suit the needs and financial patterns of the individual members. In BFA’s analysis of the Promoters’ data of their groups, it was clear that group members were not homogenous – some borrowed quite a bit, while others borrowed very little. Linkages to formal institutions create a digital pathway through which SG members conduct not only group-level transactions but also *individual* / transactions. Group linkages could facilitate service delivery to individual members by allowing financial service providers to tap into a

²¹ The dataset contains SGs at various stages in their life cycle and does not represent the trajectory of the same SGs over time. Rather, it represents an overall analysis based on data from different SGs at different points of time.

valuable resource – internal payment “histories” of individual members, which they could use to tailor products and outreach to particular SG members.

The additional effort to link not only SGs but also individuals to formal providers tends to pay off. BFA’s analysis suggests that providers will earn more from linkages to both groups and individuals than to groups alone, as Focus Note 2 points out.

The fallacy of high returns on savings for all members

We found that members are often encouraged to borrow frequently as a means of increasing SG “profits” from monthly interest payments (often 10% flat) and to keep the funds in the box to a minimum. This behavior is based on the notion that interest paid on those loans generates returns of 30% or more for members.²² In reality, since all funds are member generated and external lending is discouraged, we can consider them as additional savings for the member, resulting in a “zero-sum” situation in which members receive, as share-out, what they have contributed cumulatively, and no more. Unless “interest income” returns are pro-rated based on loans taken, which they rarely are, some members will receive more at share-out, and others less. This is modeled in Table 3:

Table 3: “Interest Generation” of Example SG and Members

	Savings	Total Loans	Interest paid	Share Out value	Return on savings	Return on total paid in
Member 1	\$120	\$240	\$72	\$156	30%	-18.17%
Member 2	\$120	\$180	\$54	\$156	30%	-10.34%
Member 3	\$120	\$150	\$45	\$156	30%	-5.45%
Member 4	\$120	\$60	\$18	\$156	30%	13.04%
Member 5	\$120	\$50	\$15	\$156	30%	15.56%
Member 6	\$120	\$40	\$12	\$156	30%	18.18%
Group	\$720	\$720	\$216	\$936	30%	0%

Source: Model produced by BFA, based on behaviors observed during field research. Assumptions detailed below.

Table 3 illustrates a scenario in which 6 members contribute an equal amount (\$120) over the course of a savings cycle. Each member borrows different amounts, as shown, and pays 10% monthly interest on the principal amount borrowed for loans of 3-month durations (for a total of 30% interest). We assume that all funds are borrowed (i.e. there are no idle funds in the box between meetings) and that no members delay repayment. As illustrated in the “Share Out value” column, each member receives \$156 in accordance with the equal number of shares

²² Hendricks, L., et. al. “Village Savings and Loans: A Pathway to Financial Inclusion for Africa’s Poorest Households.” Global Microcredit Summit Commissioned Workshop Paper, November 2011.

contributed by all, which is \$36 more than each one actually saved. However, as we see in the “Return on total paid in” column, half of the members actually *lose* money when considering the total amount (savings + interest) members actually contributed to the group. At the group level, profit generated is null.

We see that net borrowers, such as Members 1, 4, and 5, essentially pay to borrow. While negative returns may be acceptable to some members with greater credit needs, our research did not find this to be an obvious outcome to members. Forced borrowing to maintain low levels of residual funds may actually be harmful to members who otherwise do not need credit.

SGs are affected by common, external shocks which will impact all members

Poor households must deal with numerous, unexpected shocks in their lives. As a result, these households employ a number of strategies to protect themselves against risks. While some shocks are specific to individual households (i.e. idiosyncratic risks, such as illness or loss due to theft) and can be mitigated with financial and social informal insurance mechanisms, such as SGs, other shocks are *covariate*.²³ Covariate shocks, such as droughts, pests and even war, affect all households within a certain radius. When such shocks occur, community-based risk protection mechanisms, such as SGs, are insufficient to protect households.

For example, in Northern Uganda, we spoke with two SGs that had experienced drought during the previous planting season. As a result, harvest income was negligible, and members had limited extra funds to save in the SG. Even without the additional burden of drought, after two decades of war in Northern Uganda, members of these SGs were struggling to regain normal livelihoods in an economy which was decimated. In such cases of covariate shock, external risk mitigation strategies (such as formal insurance) may be required and SGs are less effective at improving members’ access to funds.

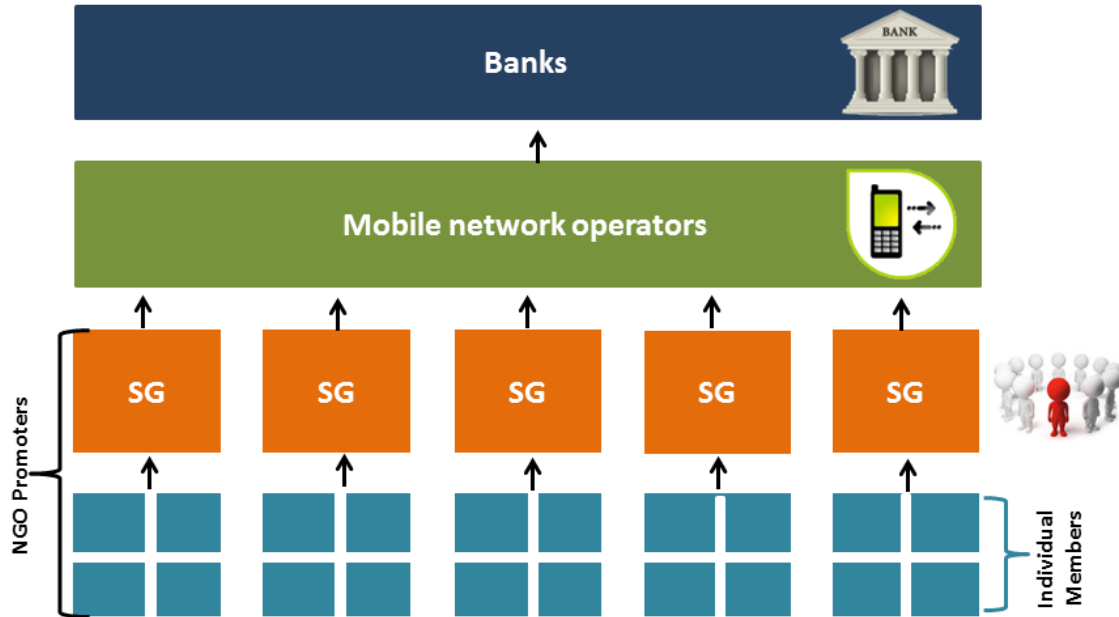
Turning weaknesses into strengths with digital linkages

The SG linkage value chain and its stakeholders—a who’s who

What do we mean by a linkage value chain? In order for SGs and their members to benefit from formal financial product offerings, a number of stakeholders have to step in to successfully make it happen. Figure 1 above and repeated below maps each of the possible stakeholders, from SGS and members to service providers, in what we term the SG-linkage value chain.



²³ Bhattamishra, R. and Barrett, C. “Community-based Risk Management Arrangements: An Overview and Implications for Social Fund Programs.” Social Protection Discussion Paper #0830, World Bank, October 2008.


Figure 4: Illustration of the SG-Linkage Value Chain



SGs are the primary stakeholder—very little can compete with the convenience of what is all but doorstep banking. Unless and until banks and MNOs partner can bring the benefits of formal financial services to rural SGs, members will stick to the tried and tested SG model. However, as we see in Table 4 below, there are clear areas for wins—for all stakeholders involved—if the roles for each player leverage and complement the motivations and strengths of one another:





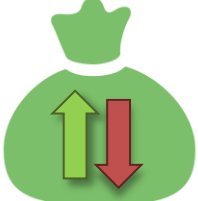

Table 4: Stakeholders in the Linkage Value Chain

The players:	Limitations of current conditions:	Incentive for linkages:	What each brings to the value chain:
Demand-side			
SGs & members 	<ul style="list-style-type: none"> Substantial risk of theft Limited, short-term savings and credit options In some cases, forced borrowing 	<ul style="list-style-type: none"> Longer-term savings opportunities A safe alternative to SG lock boxes Access to formal financial products—through mobile money channels 	<ul style="list-style-type: none"> Frequent transactions for banks and mobile network operators One-stop-shops for customer acquisition & marketing
Supply-side			
Commercial banks* 	<ul style="list-style-type: none"> Limited availability of convenient branches and service points Unstable and low-levels of float; high cost of capital Shallow penetration down market 	<ul style="list-style-type: none"> Stable, sizable float income from residual group deposits Points of aggregation for client onboarding and marketing Customer transaction information 	<ul style="list-style-type: none"> Interest on savings Safe, long-term savings options Access to suite of mainstream financial services Lump sum savings opportunities

<p>Mobile network operators</p> 	<ul style="list-style-type: none"> • Regulated limits placed on amount of funds that can be stored in m-wallets • High transaction fees • Liquidity management challenges (i.e. balancing cash and e-float among agents)* 	<ul style="list-style-type: none"> • Reduced churn of customers • Liquidity management • Service cross-selling 	<ul style="list-style-type: none"> • Easy access to account information • Proximity of mobile network agents • Mobile wallets • Low cost platform to host stored value accounts • Lower, cost effective KYC and onboarding of new customers
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*Note that the availability of service points and availability of float will of course differ by country.

Table 5: Leveraging Linkages to Overcome SG Limitations

SG Limitation:	Linkage Benefit:
 <p>Substantial risk of theft</p>	 <p>Formal deposit accounts which provide safety and security for residual funds. Members may no longer feel compelled to take loans which aren't needed.</p>
 <p>Limited financial options and common external shocks</p>	 <p>Linkages would enable longer-term, lump-sum savings opportunities. And over time, data captured digitally could expand formal borrowing options for individuals. Formal financial options would be independent of local economic conditions which might restrict capital.</p>
 <p>Minimal, or negative, interest earnings</p>	 <p>Funds stored in the account throughout the duration of the cycle would generate interest and lower opportunity costs related to cash (although high transaction fees will have to be considered).</p>

Eliminating the need for forced borrowing through a secure deposit account

Linking SGs digitally to bank deposit accounts would provide a safe storage option for excess funds accumulated between meetings and in the latter months of each savings cycle. More importantly, this could alleviate the pressure to borrow in order to maintain minimal lock box balances. Ironically, more “cash-in-the-box” raises the appeal of linking these SGs to the formal financial sector. From a bank’s point of view, the less that SGs lend among themselves, the more money is accumulated in the savings “pot”—and the higher the potential for bank deposits. The result is a substantial opportunity for deposit mobilization (see Focus Note 2 for analysis of business case outputs) and leads to longer term individualized saving and borrowing opportunities for members. For SG members, these long-term savings options would help to

fulfil member demand for accumulating savings over a longer period of time for larger purchases.

Expanding formal financial access through digitization and the power of data...

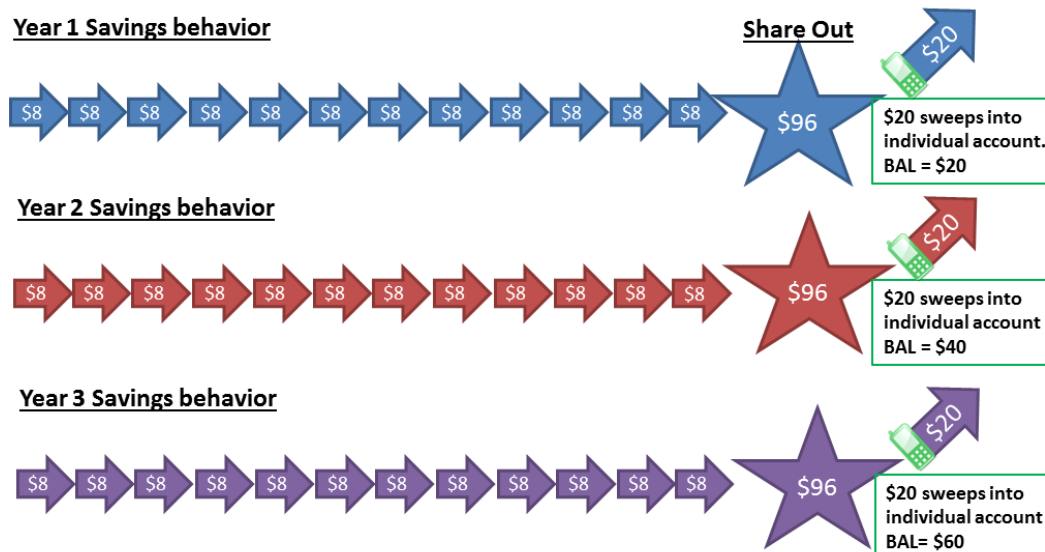
While we have established that SGs do provide financial options which are valuable to all members, individuals naturally have different financial needs (and capacities), all of which cannot be met by the group alone.

On their own, it is difficult for low-income, rural SG members to build up financial histories with formal financial institutions in order to access a broad array of products, including credit. The costs of gathering, transmitting, and verifying information about the financial behaviors of individuals within SGs is simply too costly to obtain by traditional means. NGO promoters currently manage to collect information about their numerous SGs only at the group level, but collecting and uploading individual data by hand would be overly burdensome for both the group and promoters.

To address this challenge of digitizing the transactions among SG group members, one option explored by different promoters has been to introduce either separate devices or applications that would help group members easily record these transactions digitally. But recording intra-group transactions is addressing only half the problem – it fails to actually transmit this data to financial service providers in a format that is useful for making business decisions that would facilitate entering new markets with new products.

If Individual linkages come to fruition, however, they could lead to new patterns of savings around group share-out. Imagine an SG member who could save up in a variety of SGs and automatically “sweep” funds into an individual deposit account upon share-out. Figure 4 below shows this possibility:

Figure 4: Linkage Scenario for an Individual Member



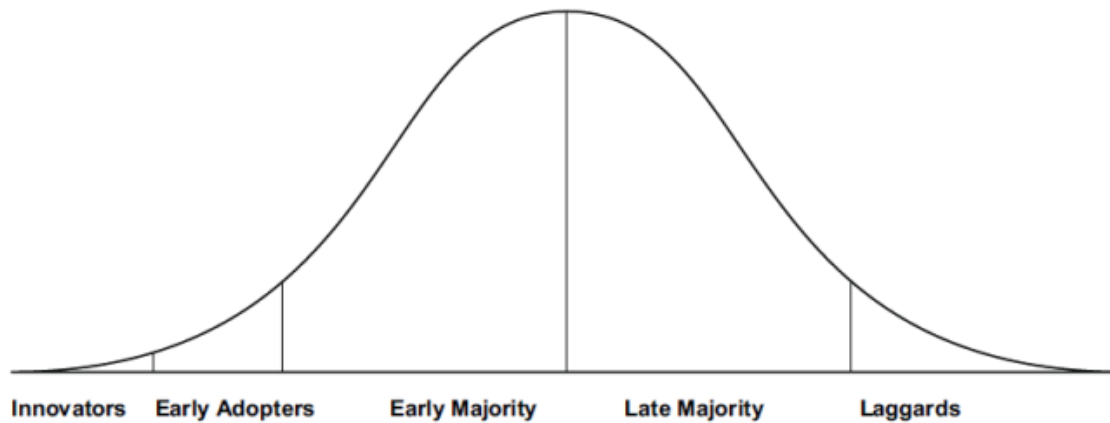
Digitized information would offer an additional benefit—immediate information. Storing and retrieving SG data digitally would increase transparency and accuracy of SG records, obviating the need for action audits and tedious bookkeeping. Members would be able to track their individual share values at any point during the cycle, and not just at the end. One way of digitizing this information is to make the transactions themselves digital through a mobile wallet. To be an effective form of information for a broad number of financial providers the private sector would have to make investments in infrastructure to capture member data using a standard that would allow them to be used to make business decisions.

Reshaping the technology adoption curve “in the company of friends”

Friends and family are often a first source to learn about financial products and options among low income individuals. 55% of adult Kenyan women, for example, named friends and family as their primary source of financial advice.²⁴ Many SG members, particularly women, have not been exposed to formal financial services and many non-users may, in fact, fear untested services.²⁵ But SGs may provide a safe space in which to learn about and test these.

Figure 5 illustrates the technology adoption curve, adopted by Everett Rogers to describe the diffusion of new technologies among populations. Technology laggards, shown on the far right, often lack the economic means to take risks on new ideas and products, and as a result, adopt new technologies last. The late and early majorities, on the other hand, are willing to adopt a new technology once they understand the benefits of that technology or after they have resolved any uncertainties related to it.

Figure 5: The Technology Adoption Curve



In Rogers’ book, *Diffusion of Innovations*, he describes five characteristics which influence the overall rate of adoption of a new technology within a social system.²⁶ These include (1) relative advantage, (2) complexity, (3) compatibility (how well the idea fits in with existing mental models), (4) trialability, and (5) observability. New products which can be observed or tested are likely to be adopted much more quickly than those which are abstract.

²⁴ FSD Kenya, Central Bank of Kenya. “FinAccess National Survey 2013.” October 2013.

²⁵ Bankable Frontier Associates, GSMA mWomen Programme . “Unlocking the Potential: Women and Mobile Financial Services in Emerging Markets.” February 2013.

²⁶ Rogers, Everett. *Diffusion of Innovations*. The Free Press, 1995.

We hypothesize that the introduction of mobile money and new financial products via SGs could hasten the rate of adoption among this population by providing a safe space in which new users and late technology adopters (especially laggards or the late majority who delay adoption due to uncertainty or high risk) can trial and observe new products and technologies in a group setting before adopting individually. Given the complexity of mobile money, SGs may be especially helpful in this regard. According to Rogers, when technologies are more complex, interpersonal contact helps to speed up the rate of adoption compared with traditional mass media channels.²⁷ According to his model, we expect each SG to have at least a few innovators and early adopters who are already comfortable with or at least willing to try mobile money or formal products. These innovators would serve as conduits of information to the rest of the group. In Care’s vast experience of promoting SGs, for example, lessons taught to SGs are quickly disseminated to other members and groups.²⁸ Additionally, research on mobile money promotion and savings groups in Ghana found that very simple *group* promotion techniques increased the usage of mobile money services among individual members.²⁹

Above all, members are the bottom line.

This Focus Note has explored the potential for digital linkages to plug gaps in savings groups while broadening the financial options available to members:

1. Access to deposit accounts would reduce security concerns related to cash stored at the village level, reducing the pressure to borrow internally.
2. Bank linkages would enable SGs to save for longer than one cycle. Over time, we envision that data captured digitally would help to expand the formal financial options available to individual members through the creation of individual financial profiles.

It is important to note that analysis conducted by BFA suggests that despite the potential benefits of linkages to SGs and members, digital linkages also come with high transaction fees. Financial service providers may have to compromise some profit to convince customers to switch—and in doing so, they can capture a number of the benefits enumerated above.

However, BFA’s analysis suggests that the business case for providers is strong enough to allow for a win-win for both providers and SG members. The details of this analysis can be found in Focus Note 2.

²⁷ Rogers, Everett. *Diffusion of Innovations*. The Free Press, 1995.

²⁸ Hendricks, L., et. al. “Village Savings and Loans: A Pathway to Financial Inclusion for Africa’s Poorest Households.” Global Microcredit Summit Commissioned Workshop Paper, November 2011.

²⁹ Aker, J. C. and Wilson, K. “Can Mobile Money be Used to Promote Savings?: Evidence from Northern Ghana.” Extreme Inclusion: Development, Dignity and Financial Services Conference. May 2013. < http://fletcher.tufts.edu/ExtremeInclusion/~media/Fletcher/Microsites/CEME/Extreme%20Inclusion%202013/Mobile%20Money_Jenny%20Aker%20and%20Kim%20Wilson.pdf>

Annex: Informal savings groups and SGs – a primer

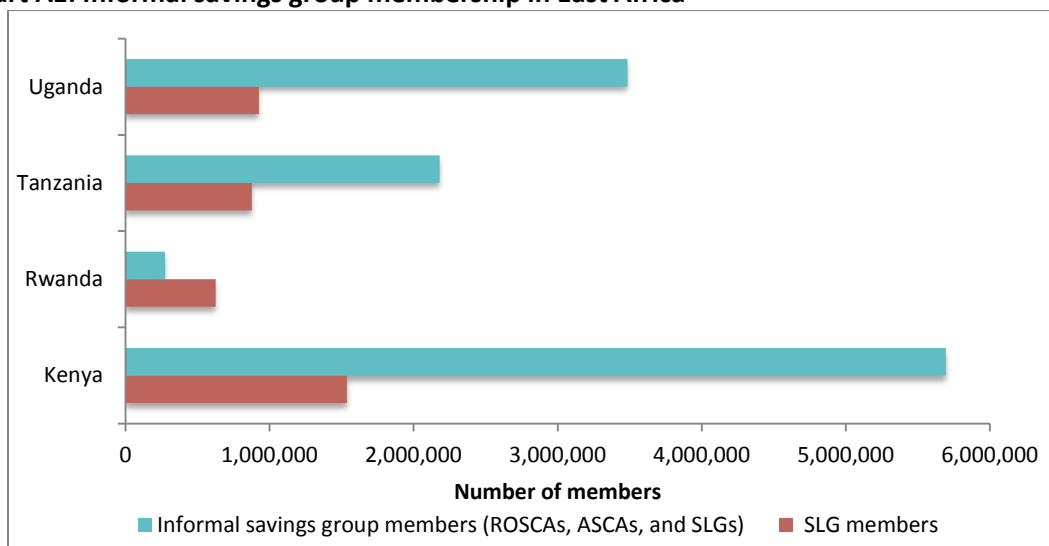
An introduction to informal savings groups

Throughout the world, two models of informal savings groups predominate.³⁰

- 1) The **accumulating savings and lending association, or ASCA, model** provides members an opportunity to save and obtain short-term credit from a common savings pool. The ASCAs operate in cycles, usually of 1 year or less. At the end of a cycle, members receive their individual savings in a lump sum amount. In ASCAs, members generally save a set amount per savings period to facilitate easy bookkeeping. The SG model is based on the ASCA model but operates with greater standardization introduced by NGO promoters.
- 2) **Rotating savings and credit associations (ROSCAs)**, also known as merry-go-rounds, allow members to accumulate pre-specified lump sum savings amounts. Individuals can often choose to join ROSCAs based on the lump sum amount that they would prefer to accumulate. Groups have a set number of members and agree to contribute a specific amount at specified intervals. At each interval, a different member will receive the entire lump sum amount from all individuals as a grant. At the next meeting, a different member will receive this lump sum, and so on until all have received the lump sum once (hence, the name merry-go-round). ROSCAs generally do not provide a credit option.

As Chart A1 shows below, informal ROSCAs and ASCAs are more popular than SGs. Can informal and promoted groups work together in the same portfolio?

Chart A1: Informal savings group membership in East Africa



³⁰ Rutherford, S. "The Poor and Their Money: An Essay About Financial Services for Poor People." Institute for Development Policy and Management, January 1999.

Source: Informal savings group estimates based on 2011 World Bank Global Financial Inclusion Database data on savings behavior over past one year. SG membership data based on information collected from SG promoters by Hugh Allen and as of November 2013.

The SG model, in detail

The SG model is based off of the ASCA model described above. CARE promoted the first standardized SG model, branded the Village Savings and Loan Association (VSLA) model, in 1991. Since then, numerous NGOs have branded their own variations of SGs. Catholic Relief Services' SGs are known as Savings and Internal Lending Clubs, or SILCs, while those promoted by Aga Khan Foundation are referred to as Community-Based Savings Groups (CBSGs). In these two focus notes, we refer to all promoted groups as SGs.

While the parameters of the SG model vary by promoter, region, and group, SGs predominantly share several common criteria:

- 1) SG members contribute regular savings by purchasing “shares.” Each SG sets a minimum numbers of shares each member must purchase per meeting (usually, one), at a fixed price per share. Members have the option of purchasing additional shares, according to his/her ability. SGs typically set a maximum share limit (BFA observed an average maximum of 5 shares per individual, per meeting). The share system not only allows members the flexibility to contribute more or less depending on his/her abilities at the time of meeting, but it also simplifies bookkeeping. Rather than totalling large sums, members can keep track of how many total shares they have saved to date, with each share often being documented by an inanimate object for members that may be less educated. In Figure A1 below, members of the SG save “shares” worth \$5 each. For example, while the red member saved three shares worth \$15 during the first meeting, he/she contributed only one share worth \$5 in the second.
- 2) SGs tend to lend out most of the funds saved as loans during each meeting. This allows the group to intermediate between net-savers and net-lenders who have need for more funds than they naturally have access to. Interest rates are charged on a per-month basis, and are usually 10%, though some charge as low as 5% or as much as 20%. While the additional amount deposited with the principal is termed as interest, it is in essence “additional forced savings” and can add up to significant amounts, as it is also continually lent out. As a prudential measure, the maximum loan amount is capped at some multiple of total savings amount, usually three times this amount.
- 3) With few exceptions, SGs store excess liquidity after loans have been disbursed (also known as “cash-in-box”) in metal lock boxes. A group treasurer will take responsibility for the lock box between meetings. To prevent the risk of the treasurer or members of a group colluding to steal residual funds between meetings, lock boxes typically have three separate locks and keys, each of which is entrusted to a different member.
- 4) SGs adhere to a cycle that usually lasts 9-12 months, at the end of which members receive their total savings contributions, plus any interest generated from internal lending. This is known as the “share-out” and can sum to considerable amounts.
- 5) In preparation for share-out, SGs halt lending several weeks to 2 months prior to the end of cycle. This allows SGs to recover share contributions accumulated over the cycle. This results in large sums of cash accumulating in the lock box over a brief period.

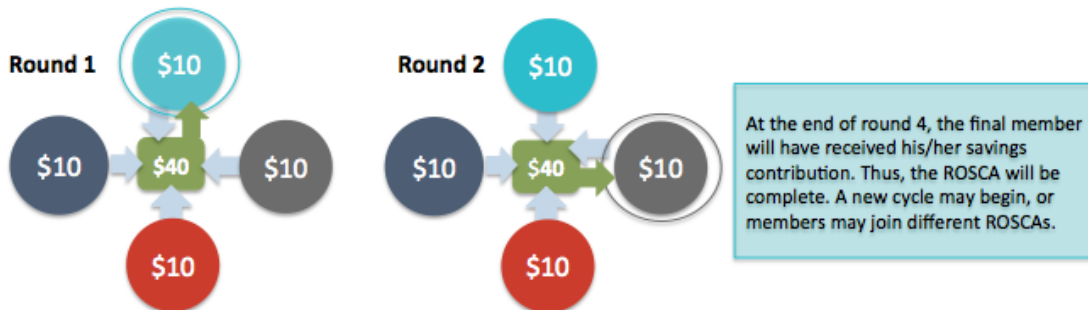
Complementarities of informal savings groups and promoted SGs

We believe that informal and promoted groups are complementary. ASCAs, which provide a credit option, are complemented by ROSCAs which provide the option to accumulate a pre-specified lump sum savings amount. Although ASCAs and SGs allow members to build lump sums, it is often difficult to predict how much will be acquired by the end—this is highly dependent on the loan repayments of both the individual and his/her fellow members. However, ASCAs and SGs do provide a highly valued loan window, including emergency credit, which ROSCAs do not. Figure A1 illustrates the complementarities and distinctions of ROSCAs and SGs.

Figure A1: Complementarities of ROSCAs and ASCA/SGs

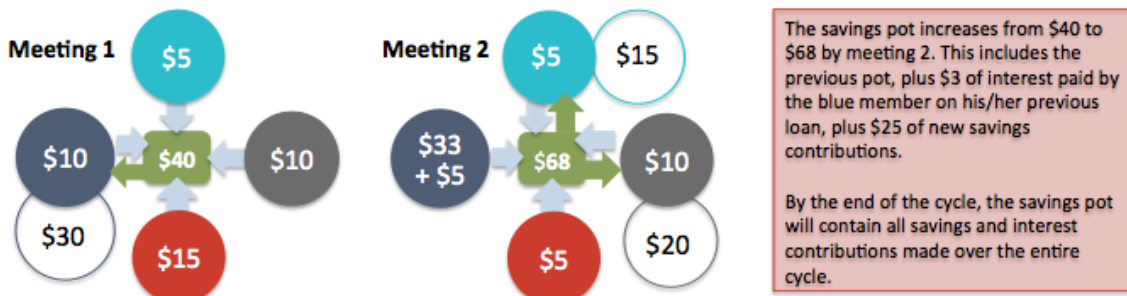
Rotating Credit and Savings Associations (ROSCA):

Members pay in an equal amount, and a different member takes home the “savings pot” each cycle. Here, the turquoise member receives the entire pot in round 1, while the gray member receives it in round 2. ROSCAs do not provide opportunities to borrow credit.



Savings and Lending Groups (SLGs)

Members save a preferred number of shares at each meeting (in this case, each share is equal to \$5). During each meeting members can borrow up to 3 times their savings-to-date. Thus, in meeting 1, the blue member saves \$10 and immediately borrows \$30 (which is repaid in meeting 2 with \$3 of interest, or 10%). In meeting 2, the turquoise and gray members each borrow \$15 and \$20, respectively. At the end of the savings cycle, each member will receive his/her total amount saved, plus a portion of interest generated on credit.



Informal and promoter-led SGs need not (and, in practice, do not) crowd each other out – many women belong to several groups at a time. For example, Caroline³¹, a single mother in Western Kenya belongs to an SG and two ROSCAs. While she uses the SG for short-term credit and to earn “interest”, her ROSCA memberships help to pay for larger lump sum needs, such as her son’s university fees. As Figure A1 shows, membership in savings groups with different patterns of payouts and features helps to diversify the options a poor household has to borrow and save for a multitude of needs.

³¹ Names have been changed to preserve the anonymity of the interviewed SG members.