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Balancing flexibility and discipline in microfinance: Innovative financial products that benefit clients and service providers

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Balancing flexibility and discipline in microfinance: Innovative financial products that benefit clients and service providers

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Abstract

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1. Introduction

Product innovation in microfinance is aimed at responding to the variety of poor clients' needs, i.e. to develop and sustain the offer of a range of client-led products. A more market-oriented approach would help the industry both to increase its social impact and to improve long-term institutional sustainability. Indeed, product design can serve as a powerful targeting mechanism for microfinance institutions, because it determines the type of clients attracted and the extent of the benefits clients receives from financial services (Woller, 2002; Johnson, 2005; Copestake, 2007). Assessing the needs of a target market segment and designing appropriate products, it might help microfinance institution to attain its social mission – for example, avoiding perverse phenomenon known as mission drift (Armendariz and Szafarz, 2010) and guarantee that larger portion of productivity surpluses are attributed to poor clients (Labie, 2009; Hudon and Perilleux, 2010). This paper focuses on innovative market-oriented products that combine two important features: flexibility and enforcement mechanisms.

The poor need flexible products that allow transactions adapted to their cash-flow. Such products help the poor to smooth consumption, when income is irregular and unpredictable, and to cover unexpected expenditures. Financial products designed for poor clients should also include sanctions or other enforcement mechanisms to mitigate behavioural anomalies, such as lack of self-control, intra-household disagreement and attentional failure. Enforcement mechanisms enhance control over client's budget and assure that payments – savings, loan repayments and insurance contributions – are duly made (Collins *et al.*, 2009).

Typically, flexibility – for example, in the form of allowance for *ex post* contract renegotiation – increases the client's temptation to renege on his or her commitment, discouraging financial discipline. Conversely, enforcement mechanisms – for example, social sanctions or the requirement for the client to provide financial collateral – encourage discipline in the client.

This paper aims at providing new insights on the trade-off between product flexibility and discipline in microfinance. We ask how flexible features and enforcement devices may be mixed in microfinance contracts in ways that permit the adaptation of transactions to clients' cash needs while at the same time enhancing the clients' financial discipline. At this purpose, we have assembled a set of examples of flexible financial products offered by microfinance institutions worldwide.

Recent microfinance studies have focused on understanding why rigid enforcement mechanisms in loans contracts are effective.[1] The most discussed mechanism is the regular and frequent repayment schedule ubiquitous in microcredit contracts with repayment starting right after the loan is disbursed (Jain and Mansuri, 2003; Field and Pande, 2008; McIntosh, 2008; Field *et al.,* 2011; Fisher and Ghatak, 2010). On the savings side, Ashraf *et al.* (2003) explore different enforcement mechanisms set in commitment savings contracts in developing countries, and Ashraf *et al.* (2005; 2006) and Karlan *et al.* (2010) examine their impact on clients' behaviour.

Few authors explore ways to make microfinance more flexible (e.g. Sadoulet, 2002; Karlan and Mullainathan, 2006; Tedeschi, 2006). Just a few papers in the literature extensively discuss existing microfinance institutions offering flexible contracts, with the most notable example being SafeSave, (CGAP, 2000; Rutherford, 2011). Most of that literature focuses on single case studies, with a few exceptions, such as Ashraf *et al.* (2003) and CGAP/IFAD (2006b). Searching in the internet extensively – for donors' studies, practitioners' reports and microfinance institutions and networks' websites – we identified a set of innovative practices covering credit, savings and insurance services sectors. Those innovative practices have one common aspect: they mix flexibility and enforcement features in single products.

The rest of the paper is structured as follow. Section 2 discusses the trade-off between flexibility and financial discipline; it is mainly conceptual and theoretical and serves to provide a basic framework for the discussion. Section 3 describes the innovative products, highlighting their flexibility features and enforcement mechanisms. Section 4 draws lessons from these analyses and presents suggested best practices in designing and developing pro-poor microfinance products. Section 5 sums up the findings and presents our conclusions.

2. Theoretical insights from the literature

This section explores the reasons why flexibility and financial discipline are important in microfinance, for the poor clients and for the institutions, and explains the trade-off between flexibility and discipline.[2] Throughout the section, we provide some definitions of terms used to help to delineate the boundaries of the discussion.

[1] See Armendariz and Morduch (2010) for an overview on enforcement mechanisms in loan contracts, used by microfinance institutions in developing countries.
[2] Similar concepts are more extensively discussed in Laureti (2011).

2.1 The importance of financial discipline

For the purposes of this discussion we use Laureti's (2011) use of the term financial discipline: it is a "desirable behaviour of clients, characterized by their obedience to financial commitments, which is encouraged thanks to some enforcement mechanism". In the literature, commitments are arrangements that channel the client's decisions by making certain choices more expensive, sometimes even infinitely expensive, and by providing incentives that promote certain choices (Amador *et al.*, 2006; Bryan *et al.*, 2010). This definition highlights two peculiarities of commitments: i) the restriction of the clients' choices to a sub-set of all possible choices; and ii) the incorporation of mechanisms, typically in the form of sanctions, ensuring that clients obey the rules consistently. For the sake of clarity, in this discussion we call enforcement mechanisms those devices associated with commitments which encourage clients to fulfil their obligations. In the same sense, commitments are credible when the enforcement mechanisms associated to them are strong enough to push clients to make the necessary effort to fulfil their obligations.

Credit, savings or insurance contracts are different types of financial commitments, which could be associated to a range of enforcement mechanisms, of various strength. For example, microcredit contracts are commonly considered credible commitments, driven by various enforcement mechanisms, e.g. social pressure, holding of financial collateral as security for loans and/or dynamic incentives. Also the weekly instalment schedule ubiquitous in microcredit contracts is considered an effective enforcement device, imposing financial discipline through the regularity and frequency of payments and meetings (Armendariz and Morduch, 2010). Commitment savings plans may fix times and amounts for deposits and/or impose restrictions on withdrawals (Ashraf *et al.*, 2003). Enforcement mechanisms associated to commitment savings should encourage clients to make deposits duly on time, for example, by sending staff at the clients' home or workplace for collection of deposits; enforcement mechanisms could also discourage shirking by imposing financial fees for early withdrawal of funds or premature closure of the savings account.

Credible commitments are important for poor households who have difficulty in saving.[3] Such difficulty can be due to poor self-control, inattention to planning or family members asking for money insistently. The proliferation of informal financial devices, such as rotating savings and credit associations (ROSCAs) and deposit collectors, shows that the poor feel the need for commitments (Rutherford, 2000; Johnson, 2004; Guerin, 2011). Also rigid microcredit contracts

[3] "Difficulty in saving" is conceptually different from unwillingness to save or inability to save. The poor want to save and do actually save. The difficulty they have in saving is due to temptation or attention problems or social pressure. Those problems may be attenuated by having the poor engage in credible commitments. Seminal papers on this topic include Strotz (1955), Thaler (1985) and Laibson (1997). Bryan *et al.* (2010) provide a literature review on commitments.

with a weekly repayment schedule are popular among people with self-control problems (Bauer *et al.*, 2008). Evidence shows that commitment savings products incorporating appropriate enforcement mechanisms effectively help the poor to reach their savings targets (Ashraf *et al.*, 2005, 2006; Karlan *et al.*, 2010). Given that the poor have the capacity and the willingness to save, credible savings commitments would help them to save towards a foreseen expenditure or simply to build up reserves for use in case of an emergency. Such savings would reduce the vulnerability of the poor to economic shocks and, hopefully, enhance their standard of living.

For microfinance institutions (MFIs), clients' discipline serves to ensure that lenders are more aware of borrowers' financial situations, reducing the likelihood of clients' delinquency and default. Indeed, not being able to rely on standard collateral, credit scoring systems or legal enforcement, the microfinance industry uses original mechanisms that screen, monitor and provide incentives to borrowers. Those mechanisms are quite rigid and standardized, e.g. joint liability, frequent and regular repayment schedule without grace period, progressive lending, intolerant policy toward default and compulsory savings (Armendariz and Morduch, 2010).

2.2 The importance of flexibility

Product flexibility refers to the ease with which financial transactions are adapted to clients' cash flow (Collins *et al.*, 2009). Contrary to the typical enforcement mechanisms used in microcredit products, flexible products allow for grace periods in loan repayment; provide for adaptable instalment schedules to avoid burdening clients with high repayments in difficult times; and allow for loan prepayment, loan renegotiation in the case of an income shock, and loan refreshing at some point during the loan cycle (Collins *et al.*, 2009). In the case of savings services, flexibility corresponds to the absence of a minimum balance requirement, the voluntary nature of savings and, generally, to the possibility of making deposits and withdrawals of variable amounts at any time.

Flexibility is important for the poor because it helps them to manage money, e.g. smoothing consumption, coping with emergencies and taking advantage of business opportunities. For example, *ad hoc* payment schedules permit households to save[4] cash as soon as it is available, avoiding the temptation to spend it on miscellaneous expenses (Ravi, 2006). Allowing for a grace period in loan repayment would expand the range of investment opportunities that loans could be used to finance, including projects that require a lengthy gestation period before realizing consistent profits (Field *et al.*, 2011). Allowing *ex post* contract renegotiation, earlier withdrawals in a fixed

[4] Whether saving up (setting money aside until it grows into a usefully large sum) or saving down (setting money aside to repay a loan) (Rutherford, 2000).

savings plan or providing for emergency loans, for example, would help poor clients to deal with income shocks or unexpected expenditure needs. Permitting prepayment of loans or offering passbook savings accounts with no restriction on deposits would give the poor a means of investing unexpected small financial surpluses (Meyer, 2002; Karlan and Mullainathan, 2006; Collins *et al.*, 2009; Hudon *et al.*, 2009; Shoji, 2010).

For MFIs, flexibility is good because it would increase clients' satisfaction, reduce client dropout and encourage new clients to take up the products. Moreover, helping the poor manage their money should also reduce problems of delinquency and over-indebtedness (Wright, 2001; Chaudhury and Matin, 2002; Meyer, 2002; Karlan and Mullainathan, 2006; Schicks, 2011).

2.3 Balancing flexibility and discipline in microfinance

Product flexibility and clients' discipline are both important in microfinance. However, it seems they are hardly reconciled in single financial products. On the demand side, product flexibility weakens the effectiveness of the commitment and might deteriorate clients' discipline. On the supply side, product flexibility raises MFIs operational expenses and worsen loan repayment rate (Laureti, 2011). Indeed, MFIs offer standardized products to simplify operations, limit the risk of staff fraud and facilitate liquidity management (Sadoulet, 2002; Karlan and Mullainathan, 2006; Jeon and Menicucci, 2010).[5] More importantly, standard enforcement mechanisms used in microfinance serve MFIs to deal cost-effectively with information asymmetries, assuring that loans are repaid on time without incurring in excessively high transaction costs. However, standard enforcing mechanisms do not allow financial transactions to be adapted to the clients' cash needs. Adding flexibility to microfinance would require abandoning those typically rigid enforcement mechanisms. The fear is that this might aggravate clients' behavioural gaps and worsen problems of asymmetric information between the poor clients and MFIs.

There are three main directions taken by the academic literature exploring the trade-off between flexibility and discipline in microfinance. Firstly, some authors study the effect of flexible *vs.* rigid repayment schedules in loan contracts, in term of clients' delinquency, investment choices and degree of satisfaction. Randomized field experiments provide rigorous empirical evidence, but with contrasting results. Notably, McIntosh (2008) found that a monthly repayment schedule enhanced both clients' repayment of loans and their satisfaction with the product, measured by a decrease in the dropout rate, compared with a weekly repayment schedule. However, in contrast, Field *et al.*

[5] Jeon and Menicucci (2010) use a theoretical model to formalize the increased risk of staff fraud with contingent loan repayment.

(2011) found that the introduction of a two-month grace period into loan contracts increased delinquency and default.

Secondly, other authors use theoretical models to explain the trade-off and individuate ways to overcome asymmetric information with flexible loan contracts. Generally, those models show that introducing flexibility into loan contracts raises the temptation to default; consequently, in order to encourage financial discipline, the enforcement mechanism, e.g. sanctions for default, should also be strengthened. Fisher and Ghatak (2010) explain that high frequency repayment schedule increases the size of loan clients will take on for a given set of enforcement mechanisms. Sadoulet (2002) shows that repayment insurance should be provided only after the first loan cycle, and only to those clients who achieve a good reputation for loan repayment; however, as the number of loan cycles increase, the effect of the borrower's action on her or his reputation becomes negligible, and the lender must impose additional sanctions to deter defaults and insurance claims. Tedeschi's (2006) model proves that the punishment for defaulting clients need not be a lifetime without credit if the client has much to gain from borrowing.

Thirdly, some authors use randomized control trials (RCTs) to test the efficacy of alternative enforcement mechanisms associated to loans and also commitment savings products, such as visits from deposit collectors or short message service (SMS) reminders. Ashraf *et al.* (2005) observed a substantial increase in savings and a slight decrease in borrowing among clients chosen at random to receive the deposit collection service. Karlan *et al.* (2010) tested the effects of soft enforcements obtained through sending SMSs reminding clients to keep on track on their savings; results show that sending SMSs reminders to make deposits increased savings rate by 6 percent and the likelihood of clients meeting their savings goals by 3 percent.[6] Cadena and Schoar (2011) test SMS reminders on loan contracts and find an improvement in repayment similar to that obtained through financial incentives, i.e. the promise of a 25 percent reduction in the interest rate for good borrowers. Sending SMSs overcomes inattention problems, for example when clients forget when payments are due, and increase salience of future expenditure needs (Karlan *et al.*, 2010; Cadena and Schoar, 2011). For the same reasons, specially labelled accounts[7] encourage saving because of mental accounting effects (Thaler, 1985). "Fungibility of money suggests that such accounts should have no effect on savings decisions. However, mental accounting principles suggest that indeed money saved for a particular purpose is likely to be spent on that purpose and hence will affect savings and consumption decisions" (Ashraf *et al.*, 2003: p. 6).

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[6] Bryan *et al.* (2010) distinguish between "soft" and "hard" commitments: soft commitments impose a psychological cost, whereas hard commitments impose an economic cost.

[7] Special labelled accounts make clear the purpose for savings, such as payment for school fees, home renewal or medical care expenses. An example is Mamakiba, a savings plan for pregnant women in Kenya, described in section 3.5.

In line with this literature, we aim at providing new insights on the trade-off between product flexibility and clients' financial discipline in microfinance. Specifically, this paper explores ways in which the microfinance industry might introduce flexibility into financial contracts in combination with appropriate enforcement mechanisms. The approach we take is practical and constructive: by looking at existing innovative products that combine flexible features with enforcement mechanisms, we should get some new ideas on how it is possible, in practice, to combine product flexibility with clients' discipline.

To our knowledge, only a few papers in the academic literature extensively discuss existing solutions for implementing flexible contracts in microfinance (for example, Rutherford, 2000; 2011) and most of the practitioners' literature analyzes single case studies (exceptions include, for example, Ashraf *et al.*, 2003; CGAP/IFAD, 2006b). This paper's main contribution is, indeed, to assemble a set of examples of flexible financial products offered by microfinance institutions worldwide, including savings, credit and insurance products.

3. Innovative products balancing flexibility and financial discipline

This section lists nine innovative products/practices of MFIs worldwide, covering microcredit, microsavings and microinsurance services. These products are innovative primarily because they combine product flexibility with mechanisms to ensure clients' financial discipline; factors such as technology used and originality of products' features played a role in the selection process, but to a lesser extent.

Key information is provided on each product: name/type of product; short description; relevance for the poor, which we call motivation; flexibility features; and enforcement mechanisms (i.e. financial discipline features). Flexibility and enforcement features are discussed in detail, and information about the provider is given, including its location, background, outreach, etc.

3.1 SafeSave and Shohoz Shonchoy's savings and loan accounts (Bangladesh)

SafeSave[8] was founded by Stuart Rutherford in 1996 in Dhaka, Bangladesh, offering one basic product: a passbook savings account, which allows maximum flexibility on deposits and withdrawals (any amount at any time). If clients wish, they may take out a loan the amount of which is linked to the client's savings balance and increases with good repayment history. Loans are repaid flexibly with no fixed duration (the minimum monthly payment is the interest). Loan repayment enforcement features include: client must provide financial collateral (savings balance

[8] www.safesave.org.

should be at least one third of loan outstanding); and progressive lending (steady repayment progress is required to earn increases to the credit limit). MFI's staff encourages deposits and loan repayments by visiting clients once or twice a day at their home or workplace (see table 1).

As of the end January 2011, SafeSave had nine branches serving 15 750 clients living in the slums of Dhaka.[9] SafeSave had 66 repayment/deposit collectors, all of them women from low-income neighbourhoods. The collectors process more than 120 000 small transactions each month on handheld devices. Clients held USD 709 000 in their savings accounts, with an average savings balance per client of USD 45.[10] More than half of SafeSave clients (8 600) hold loans, worth a total of USD 614 000, with an average outstanding balance of USD 71 per borrower. SafeSave reports a recovery rate exceeding 97 percent; it is financially sustainable since 2005, with an annual return on assets of approximately 4.5 percent, and return on equity of approximately 16 percent.

Table 1 – Description of SafeSave and Shohoz Shonchoy's products

Product name/type	**Savings and loan accounts**
Description	Passbook savings and loans typically linked to savings balances
Motivation	Help households in their daily cash management and support them in forming larger lump sums through both savings and loans
Flexibility features	• Passbook savings with no or few limitations on withdrawals and deposits • Flexible loan duration (e.g. either not predetermined or fixed by the clients themselves) • No predetermined repayment schedule for loan products
Financial discipline features	• Borrowers must provide financial collateral • Progressive lending • Daily visit of staff to clients' home or workplace • Staff hired in the slums where the clients live • A few restrictions on withdrawals for clients with loan outstanding • In some cases, compulsory deposits linked to loan disbursement • In some cases, higher interest rate for higher savings balance

Main sources: Rutherford (2011); www.safesave.org and www.thepoorandtheirmoney.com (accessed 20 June 2011).

Following SafeSave's experience, in 2002 a rural version called Shohoz Shonchoy[11] was founded in the village of Hrishipara in central Bangladesh. Shohoz Shonchoy develops and tests innovative approaches to help poor people to save while providing them with access to liquidity through loans. Whereas SafeSave aims to grow, the Hrishipara experiment is kept deliberately small, so as to test a number of different products. Today it has around 1 300 clients and 9 collectors, and has been making a surplus since late 2003.[12] So far, Shohoz Shonchoy has developed three different kinds of product – P5 in 2002, P7 in 2004 and P9 in 2007.

P9 is the most popular of the products tested in Hrishipara. It is designed to help clients build up savings while providing liquidity through loans. Loans are interest-free and do not have any fixed

[9] www.safesave.org, accessed 20 June 2011.
[10] Exchange rate USD 1 = 70 Taka.
[11] www.thepoorandtheirmoney.com
[12] www.thepoorandtheirmoney.com, accessed 20 June 2011.

repayment schedule or maturity. Instead, clients pay fees for opening an account and for loan disbursement. Clients may top-up their loans, i.e. they may borrow as much as they have repaid. Only at completion of repayment may clients take out a fresh loan; the amount they may borrow increases progressively with their credit history. One third of any fresh loan and loan top-up is deposited in a long-term savings account. Withdrawal is restricted until savings balance reaches a fixed target amount. Staff visit clients daily to collect loan repayments.

Since early 2010, a version of P9 called Easysave has been piloted in Kenya, running on the M-PESA mobile money platform. In October 2010 a third version of P9 was introduced in Kalyanpur slum of Dhaka.[13]

Table 2 – Comparison of SafeSave basic loan-and-saving accounts, P9-Hrishipara and P9-Kalyanpur

Terms and conditions	SafeSave	P9-Hrishipara	P9-Kalyanpur
Savings Interest rate (+)	6% per year, for balances above 1000 taka	No interest on savings	No interest on savings
Obligatory deposits	None	1/3 fresh loan and top-up	1/2 fresh loan; 1/10 loan top-up
Restrictions on withdrawals	Some restrictions to maintain partial savings collateral when loans are present	Fee for early withdrawals (savings balance less than 20 000 taka)	Loan ceiling reduced for early withdrawals (before completion of loan repayment)
Loan interest rate (-) and other fees	3% of the month-end, declining balance. Fees: 20 taka for account opening; 5 taka per month for daily visit service; 50 taka loan processing fee for each loan taken	Interest-free loan. Fees: 100 taka for account opening; 1% of borrowed value for loan disbursement and top-up; 5% of savings value for early withdrawal	Interest-free loan. Fees: 200 taka for account opening; 3% for loan disbursement
Loan duration	No fixed duration	No fixed duration	No fixed duration
Loan payments	Repayment of loan principle is up to the client; compulsory repayment of monthly interest	No fixed schedule	No fixed schedule
Loan disbursement	The client's credit limit rises with each loan, provided all interest has been paid on time, with the biggest increases going to clients who demonstrate an ability to make regular loan repayments each month	Initial loan amount 2 000 taka; standardized increase when loan is fully repaid; possibility to top-up the loan before completion of repayment	Initial loan amount 5 000 taka; standardized increase when loan is fully repaid; possibility to top-up the loan before completion of repayment

Source: www.safesave.org and www.thepoorandtheirmoney.com (accessed 20 June 2011).

As of May 2011, 724 active clients have P9 accounts in Hrishiparahas, holding 3.18 million taka in loans (4 393 taka per client, equivalent to roughly USD 63) and 4.24 million taka in savings (5 863 taka per client, equivalent to roughly USD 84). There are 259 P9 holders in Kalyanpur; in contrast with Hrishipara, clients in Kalyanpur have more loans outstanding than savings: 1.15 million taka

[13] http://sites.google.com/site/trackingp9/, accessed 20 June 2011.

in loans outstanding (4 440 taka per client, equivalent to USD 64) vs. 825 000 taka in savings (3 185 taka per client, equivalent to USD 46).[14] Approximately 150 clients started using the P9 account in Kenya in February 2010, but no further information is available (CGAP, 2011).

Table 2 provides a detailed comparison of SafeSave and Shohoz Shonchoy P9 products.

3.2 Bank Rakyat Indonesia's lottery-linked savings account (Indonesia)

PT. Bank Rakyat Indonesia (Persero) (BRI) is a state-owned commercial bank[15] and one of the most successful examples of microsavings mobilization in developing countries (Stark, 2010). BRI's most popular savings account is called Simpedes in rural areas and Simaskot in urban areas (table 3).

Table 3 – Description of BRI's products

Product name/type	**Simpedes and Simaskot**
Description	Savings account for low-income urban and rural savers
Motivation	Provide to low-income people a highly liquid savings account
Flexibility features	• Unlimited withdrawal instantly • No compulsory deposits • No minimum balance • No fee for account opening
Financial discipline features	• Bi-annual lottery

Main sources: Ashraf *et al.* (2003).

Its flexibility features are highly attractive to the poor: no fee to open the account, no minimum balance, no compulsory deposits or withdrawal restrictions and interest paid monthly on all but the smallest balances (less than USD 10). As of the end of March 2011, BRI had 28.85 million savers, more than 20 million of them holding Simpedes accounts (Oleh Donald Banjarnahor, 2011).

The most innovative feature of Simpedes accounts is its linkage to a lottery. Twice a year BRI issues free lottery tickets to Simpedes account holders, the number depending on the holder's minimum monthly account balance. As the lotteries are held in the branches, winners are located within a small area and most local people have either won a prize or know someone who has, which makes the lotteries very popular. The lottery is a commitment mechanism as rewards clients with large savings balances.

A less celebrated innovative aspect of the Simpedes account is its compliance with the principles of Islamic finance (Islamic Finance Asia, 2010), currently a hot topic among micro- and standard

[14] http://sites.google.com/site/trackingp9/, accessed 20 June 2011. Exchange rate USD 1 = 70 taka.
[15] www.bri.co.id. BRI became publicly listed on November 2003. By the end of 2009, the Indonesian Government owned 56.77% of its shares, with the remaining shares held by public investors (BRI, 2010: p. 3).

finance practitioners (Permatasari, 2010; Weill, 2010). According to the principles of Islamic finance, a savings product should not impose fees or any other restrictive conditions on deposits and withdrawals and should not pay interest to depositors. In savings products based on a *Mudaraba* contract (under which one party provides money and the other carries out work) – as Simpedes seems to be – rewards for clients are justified as being a sharing of revenue or profit between the bank and the depositors: clients must maintain a minimum balance to qualify for a share of the profits (Obaidullah, 2008).

3.3 Fixed savings plan by Vivekananda Sevakendra Sishu Uddyon (India)

Ashraf *et al.* (2003) mention various financial institutions around the world that offer fixed savings vehicles, including Vivekananda Sevakendra Sishu Uddyon (VSSU) in India. We selected VSSU for the variety of fixed savings plans it offers – daily, weekly, monthly and term deposits – and for their contractual terms and conditions, which together appear to offer a good balance between discipline and flexibility (see table 4).

Table 4 – Description of VSSU's products

Product name/type	**Fixed savings plan**
Description	Daily, weekly and monthly programmed deposit plan (recurrent deposit) and a one-time saving scheme (term deposit)
Motivation	Responds to clients' need for planning and long-term savings
Flexibility features	• Various instalment frequencies • Allows clients to renege on their commitment, e.g. permits premature closure of savings account or early withdrawal of funds
Financial discipline features	• Regular deposits • Deposit collector at the client's doorstep • Fee for early withdrawal or early closure of the account

Main sources: www.vssu.in (accessed May 2011).

VSSU reaches 380 villages in West Bengal. It has 15 branches and has 56 staff members. In fiscal year 2008/09 it had 17 051 active depositors and a cumulative total of 77 737 depositors (VSSU, 2009).

VSSU savings plans are medium- to long-term and require a minimum deposit of USD 0.2 to USD 1 per period (table 5). In addition to enforcement features typical of such products, such as pre-planning of a regular deposits schedule, VSSU visits clients at their doorstep to collect deposits, so to encourage savers' financial discipline.

Account holders are permitted to close their accounts or to withdraw some money prematurely with respect to the predetermined savings plan. This provides the degree of flexibility needed to make the savings plans attractive to low-income clients, providing a safety net for urgent unexpected expenses. The temptation for clients to renege on their commitment is balanced by financial sanctions for premature withdrawal or account closure. Charges are imposed only if such failings occur within the first 12 months of contracts, which is a good mechanism to balance the temptation to pull out of the commitment, which is highest in the first period of the contract (table 6).

Table 5 – Terms and conditions on VSSU savings plans

Product type	Term	Minimum deposit (rupees)	Rate of interest (annual, %)
Daily scheme	12–18 months	10 per day	3–4
Weekly scheme	100 weeks (24 months)	10 per week	6
Monthly scheme	12–60 months	50 per month	11–12
One-time scheme	12–72 months	1 000	11–12

Source: www.vssu.in (accessed May 2011). Exchange rate USD 1 = 45 rupees.

Table 6 – Flexibility features of VSSU savings plans

<table>
<tr><th>Product type</th><th>Premature closure</th><th>Premature withdraw</th></tr>
<tr><td>Daily scheme</td><td rowspan="3">In case of premature closure, 2% of interest or a fee of 60 rupees is deducted from the deposit amount as penalty</td><td rowspan="4">If a withdrawal is made before a given period (usually 50 weeks or 12 months), no interest is paid on the amount deposited plus a collection fee of 60 rupees or 4% of the amount withdrawn (whichever is greater) is charged</td></tr>
<tr><td>Weekly scheme</td></tr>
<tr><td>Monthly scheme</td></tr>
<tr><td>One-time scheme</td><td>N.d.</td></tr>
</table>

Source: www.vssu.in (accessed May 2011).

3.4 Susu collectors and Barclays Bank in Ghana

Informal financial devices can offer flexibility and convenience to local communities. However they are mostly unreliable and perform poorly, offering a limited variety of financial services and little in the way of funds. Linking formal and informal financial services providers could improve the service offered by combining the strengths of the two types of institution (Pagura and Kirsten, 2006). This is the rationale behind the linkage between susu collectors and Barclays Bank in Ghana (see table 7).[16]

Table 7 – Description of Barclays Bank's product

Product name/type	**Susu collectors + Dwediri account**
Description	The bank offers susu collectors both savings accounts and investment capital for on-lending
Motivation	Facilitate susu collectors' financial intermediation activity (savings and loans) with the local communities
Flexibility features	• Permits adjustment of conditions to changed circumstances, as in emergencies • Low transaction costs for clients • Very little or no bureaucracy and paperwork • Quick turn-around time
Financial discipline features	• Information-intensive mechanism for enforcing payments, i.e. good knowledge of the local economy and proximity with the clientele and their businesses • Doorstep service

Main sources: Osei (2007); Microfinance Gateway (2010); Barclays Bank (n.d.a, n.d.b); IFAD (n.d.).

[16] Barclays Bank is a multinational bank group with headquarters in London, UK, and operations in more than 50 countries (http://group.barclays.com/Home).

Susu is a traditional form of finance practiced in Africa for over three centuries. It is particularly diffused in Ghana, where there are more than 4 000 susu collectors, each of whom have between 400 and 2 000 clients. In 2008 the susu industry was valued at approximately GBP 75 million (USD 160 million) (Barclays Bank, n.d.a). Susu collectors act as mobile mini-bankers, collecting a predetermined amount of money from each client on a daily or weekly basis over an agreed period, typically one month. At the end of this period, the accumulated savings are returned to the depositor, less a small commission for services (usually equivalent to one day's deposit). Some susu collectors combine deposit-taking with provision of small loans to their clients.

Since November 2005 Barclays Bank of Ghana has been providing savings services and investment capital to susu collectors to facilitate their financial intermediation activity with the rural communities. The programme also includes two educational components: awareness creation on good financial management for clients of susu collectors; and capacity building on credit, risk and delinquency management for susu collectors.

The number of collectors participating in the Barclays initiative increased from 100 in two regions in the first year to more than 500 across the country by 2007, and around 70 percent of susu collectors have attended the training programme. Considering that susu collectors usually have between 400 and 2 000 clients, the programme has reached an estimated 200 000 to 1 000 000 clients of susu collectors in 2007. Moreover, an independent study of the programme's impact showed that 72 percent of susu collectors increased the number of clients they have since joining the programme, and that 81 percent of susu collectors were satisfied with the programme. On the client side, 61 percent said their lives had improved and 93 percent of those in business recorded an increase in sales and income (Barclays Bank, n.d.b).

The loan and savings services offered by susu collectors to local communities in Ghana are convenient and flexible in that they lack bureaucracy and paper work, provide a door-step service, and allow changes in their informal contract terms to meet clients circumstances. They promote financial discipline through the daily visit of collectors to the clients' homes. Close clients monitoring is possible thanks to the physical and cultural proximity of susu collectors to the local economy and their clientele; it discourage clients from shirking strategically on their commitments, enhancing financial discipline.

3.5 Innovative M-banking products linked to M-Pesa wallets (Kenya)

Branchless banking through mobile phones (m-banking) is probably the most promising innovation in rural finance in the last few years. Using a network of retail agents and the existing mobile phone infrastructure, potentially even distant and sparsely populated areas can be reached with reliable banking services. The first wave of branchless banking efforts focused on providing payment and money-transfer services. The next challenge is to link mobile money with a full range of banking services (CGAP, 2010; Pickens, 2010).

Safaricom,[17] the Kenyan mobile network operator behind M-Pesa, allows its 13 million customers to transfer money via their mobile phones and through the countrywide network of more than 23 000 agents (Safaricom, 2010). Today, Safaricom, in partnership with a variety of operators (e.g. banks, non-profit organizations, insurance companies, health-service providers, etc.) is piloting innovative m-banking products. Among those, we selected two innovative services for their relevance to the paper's focus and a third product for its rural application (table 8):

- M-Kesho (kesho means "future" in Kiswahili), a savings account provided by Equity Bank that also gives flexible access to loan and insurance facilities (Equity Bank, 2011);
- Mamakiba ("mother and savings" in Kiswahili), a savings plan for pregnant women provided by Jacaranda Heath Clinic and Multiple Choices Labs (gmimano, 2010);
- Kilimo Salama ("safe agriculture"), a crop insurance product for smallholder farmers, provided by Syngenta Foundation for Sustainable Agriculture, UAP Insurance and Safaricom (Kilimo Salama, 2011).

Table 8 – Description of M-Kesho and Mamakiba

Product name/type	**M-Kesho**	**Mamakiba**
Description	Savings account, linked to credit and insurance facilities	Savings plan for pregnant women
Motivation	Provide convenient and reliable multipurpose bank accounts to low-income customers	Help low-income women to save and prepay for their maternal health needs
Flexibility features	• Transactions through mobile phone • No account opening fee, no minimum balance and no monthly charges • No limits on maximum savings balance • Access to "emergency" credit on demand • Access to personal accident insurance	• Transaction through mobile phone • No compulsory savings plan and target • Flexible use of surplus funds
Financial discipline features	• System of credit scoring for access to loan • Fee for withdrawals and no fee for deposits • Positive interest rate on savings (0.5-3% depending on balance)	• Calculation of savings plan • SMS savings reminders and deposit alerts • Savings locked in for a specific use

Main sources: Equity Bank http://www.equitybank.co.ke/products.php?subcat=128 (accessed 3 August 2011); Mas (2010); gmimano (2010).

M-Kesho is a bank account linked to a client's M-Pesa account. This permits holders to store money (M-Kesho has no maximum savings balance, unlike an M-Pesa account) and also to tap into loan and insurance facilities. Only electronic transactions are allowed to and from M-Kesho. Flexibility features include: no fee for opening an account, no minimum balance and no monthly fee

[17] http://www.safaricom.co.ke/.

(like an M-Pesa account); and fees for withdrawals but not for deposits. Clients can request an emergency loan of between USD 1.30 and USD 67 by mobile phone. To evaluate a client's creditworthiness, Equity Bank uses a credit scoring system based on the balance and transactional history of the customer on their M-Pesa, M-Kesho and normal Equity accounts (if any) over the previous 6 months. M-Kesho was launched in May 2010 and after only 3 months 455 000 people had opened accounts, though activity on these accounts remains low (Radcliffe, 2010).

Mamakiba is a savings plan designed to help pregnant women to pay for their maternal health needs. A mix of enforcement mechanisms encourages savings. Firstly, a savings calculator helps determine the total savings target and the minimum periodical payments necessary to reach it, taking into account the woman's cash availability and health needs. Secondly, SMS messages remind the women to save, confirm deposits and provide updates of total savings and the remaining amount to be saved. SMS alerts warn the client if she has not met her savings target and ask for new savings target. Thirdly, savings are blocked for a specific use, which should be a further encouragement for savings. Transactions are made electronically. If a woman's savings exceed her savings target the surplus can be transferred back to her M-Pesa account, used for post-natal care or any unforeseen expenditure. The programme was launched in 2008 and is still in its pilot stage. It targets approximately 25–50 women per month, from low to low-medium income levels (Center for Health Market Innovation, 2011).

Kilimo Salama is an insurance designed to allow Kenyan farmers – who plant on as little as 0.4 ha – to protect their farm inputs against drought and excess rain. The project is a partnership between Syngenta Foundation for Sustainable Agriculture, UAP Insurance, and telecoms operator Safaricom. Kilimo Salama allows farmers to pay their insurance premium using the M-Pesa service. When data from a particular weather station indicates that drought or other extreme conditions are destined to cripple crops, all farmers registered with that station automatically receive payouts directly via M-Pesa. The project was pilot-tested in 2009, with 200 farmers insured in Nanyuki region; nowadays Kilimo Salama reaches 22,000 farmers in southwest Kenya (Rosenberg, 2011); and it expects to reach up to 25,000 farmers in 2012 (UAP, 2011).

3.6 Seasonal loans by Confianza (Peru) and Banco Los Andes ProCredit (Bolivia)

Expenses for agricultural activities and income from them are typically seasonal and depend on crop and livestock cycles. As a result, the rigid disbursement and repayment schedules of standard microcredit contracts are not well suited to financing agriculture. A study by CGAP/IFAD (2006a, 2006b) assessed nearly 80 rural finance institutions worldwide to identify successful, sustainable agricultural microfinance products. Confianza[18] in Peru and Banco Los Andes ProCredit[19] in Bolivia are among those identified as delivering such products in Latin America.

Table 9 – Description of Confianza and Banco Los Andes' products

Product name/type	**Agricultural loan (short term)**
Description	Microcredit for financing rural households and their agricultural activities
Motivation	Provide sustainable access to credit in rural areas
Flexibility features	• Individual lending • Loan disbursements made in instalments corresponding with the crop cycle • Loan repayments are set according to revenue flow • Loan term is adapted to the crop cycle
Financial discipline features	• Borrowers must provide some collateral • Penalty interest rate • Rigorous loan monitoring • No tolerance toward default • Selection of household with diversified income sources

Main sources: CGAP/IFAD (2006a, 2006b).

Both institutions adopt a strategy of strict credit discipline combined with adapting their loan products to rural clients' needs (table 9).[20] Confianza poses strict lending requirements, serving only households with a diversified income stream, and monitors loans closely through a network of loan officers in the field. Banco Los Andes has established a strong reputation for not tolerating delinquency; loan officers visit clients immediately after the first missed payment. It charges high interest rates to clients who have defaulted on payments and lower interest rates to clients in good standing. It has also adopted a flexible approach to collateral, focusing on the value of pledged assets to the borrower rather than the recovery value for the lender.

As of the end of December 2010, Confianza had 10 250 rural clients, equivalent to 13 percent of its total active clients (75 813). Rural clients had loans totalling USD 25 million, almost 19 percent of the institution's total gross loan portfolio; average loan per rural borrower was USD 2 455, higher than the institution's average loan (table 10).

Banco Los Andes ProCredit reported that its agricultural credit portfolio amounted to USD 5 834 000 at end December 2010, equal to only 1.5 percent of its total gross loan portfolio (table 10).[21]

Both institutions offer a credit product customized to clients' circumstances, with disbursements and repayments tailored to the income and expenditure cycles of agricultural production. Confianza

[18] www.financieraconfianza.pe.
[19] www.losandesprocredit.com.bo.
[20] Interestingly, both institutions transformed their operations during the 1990s by focusing on clientele needs and applying strict financial discipline. In 1998 Confianza inherited a rural portfolio composed primarily of group loans to women involved in agriculture. After experiencing a major repayment crisis, in 1999 Confianza broadened its targeted clientele, including also less risky and more profitable rural clients, e.g. those involved in non-farming activities. In contrast, in 1995 Banco Los Andes ProCredit inherited a prevalently urban lending portfolio of individual loans and, pushed by competition, decided to expand into rural areas.
[21] http://www.losandesprocredit.com.bo/resultadocifras.aspx, accessed 3 August 2011.

offers emergency lines of credit to clients with good repayment histories, whereas Banco Los Andes emphasizes its rapid allocation and disbursement process. However, even thought their products are adapted to crop cycles, loans by Confianza and Banco Los Andes have two limitations: firstly, they are short term, responding only to seasonal working capital needs; and secondly, they do not protect rural household from major systemic shocks due to natural disasters or volatility of market prices.

Table 10 – Characteristics of loan portfolios of Confianza (Peru) and Banco Los Andes (Bolivia), end of December 2010.

		Confianza	Banco Los Andes
Total active borrowers	no.	75 813	67 203
Rural borrowers	no.	10 250	n.d.
Percentage rural	%	13.52	n.d.
Gross loans portfolio	USD	134 397 509	391 153 418
Rural loans portfolio	USD	25 159 786	5 834 000†
Percentage rural	%	18.72	n.d.
Average loan	*USD*	*1 773#*	*5 837#*
Rural average loan	*USD*	*2 455#*	*n.d.*

Source: www.mixmarket.org, except for † www.losandesprocredit.com.bo/resultadocifras.aspx (accessed 3 August 2011).
Authors' rough calculation, as the ratio between the value of the loan portfolio and the number of active borrowers.

3.7 Rural credit from Bank for Agriculture and Agricultural Cooperatives (Thailand)

In addition to predictable seasonality of income and expenditure, agriculture is subject to high systemic risk which is usually co-variant, e.g. natural disasters such as flood and draught lead to market price volatility. These risks lead to a high degree of uncertainty in smallholder farmers' income, which is usually coupled with a lack of appropriate financial strategies for consumption smoothing. Moreover, raising agricultural productivity requires long-term investments. According to a FAO study (FAO, 2003), state development banks and member-owned institutions, such as Thailand's Bank for Agriculture and Agricultural Cooperatives (BAAC),[22] are the most successful in providing such long-term financing for agriculture.

Table 11 – Description of BAAC's products

Product name/type	**Rural credit**
Description	Short-, medium- and long-term financing for rural households
Motivation	Provide demand-based financing and risk-coping devices for rural households
Flexibility features	• Short-, medium- and long-term financing • *Ex post* loan renegotiation • Income pledge for farmers
Financial discipline features	• Monitoring • Joint liability • Standard collateral • Credit history

Main sources: Townsend and Yaron (2001); FAO (2003); CGAP/IFAD (2006a); Wajananawat (2010).

[22] www.baac.or.th.

BAAC provides smallholder farmers with short-term loans (6–18 months) for seasonal needs and medium- and long-term loans for financing investment (up to 20 years in the case of purchase of land and machinery) (Saila, 2010). BAAC allows clients to reschedule their loans if they face major repayment difficulties due to flood, drought, etc. (Townsend and Yaron (2001). To limit moral hazard, credit officers in the field monitor clients' circumstances and punitive interest rates are applied to cheaters (table 11).

At end March 2010 a total of 6.10 million farm households had access to BAAC's credit services. Credit is extended mostly to individual households (4.5 million households); fewer households received credit as members of agricultural cooperatives or farmers' associations (1.6 million households). The gross loan portfolio to farm households was 475.4 billion baht (approximately USD 16 billion at July 2011 exchange rate), of which 449.7 billion baht was loaned to individual farmers. Roughly 8 percent of the farm gross loan portfolio (38 billion baht) is in arrears for longer than 90 days (BAAC, 2010).

BAAC protects farmers' income against price volatility through farm income guarantee schemes covering the three main cash crops – rice, cassava and maize. This scheme was introduced in 2009 to replace the crop pledging scheme the bank operated previously. Under the schemes farmers are compensated for the differences between the reference crop prices and guaranteed prices set by the government. To limit fraud, inspection committees hold meetings at the village or community level to publicly verify and confirm the farmers' farm size and crop production volume. At the end of March 2010 a total of 3 787 556 farm households were entitled to receive compensation worth 35.4 billion baht (BAAC, 2010: p. 165).

3.8 Housing microfinance and other long term loans by the Indian Association of Savings and Credit (India)

The Indian Association of Savings and Credit (IASC)[23] was created in 1998 as a venture between the Housing Development Finance Corporation (HDFC) and Palmyrah Workers Development Society (PWDS). HDFC is a leading private-sector housing lender; PWDS is a grass-roots non-governmental organization operating in Tamil Nadu, India. IASC offers long-term credit to cover big-ticket expenses for various purposes – business, housing, education, etc. – to low-income clients (table 12).

Clients are organized in self-help groups. The groups must show a good credit record, regular meeting participation and internal management capacity for at least one year before becoming

[23] www.iasc.in.

eligible for loans. The groups must also have a minimum amount of regular savings from each member and a minimum group savings balance before they can link with IASC.

Table 12 – Description of IASC's products

Product name/type	**Economic loans, housing loan, other loans**
Description	Long-term loans to cover big-ticket expenses
Motivation	For various purposes: economic activity, housing and other (education, medical emergencies, debt redemption, revolving fund, disaster mitigation, etc.)
Flexibility features	• Long-term loan (12–180 months) • Loans can be paid off early, albeit at a price
Financial discipline features	• Self-help group–IASC linkage • Regular monthly instalment • Security deposit: 5% of the loan amount • Prepayment charges: 0.25%

Main sources: CRISIL (2008) and www.iasc.in (accessed 1 May 2011).

IASC offers many types of products (table 13). Loans for economic activity are differentiated between farm and non-farm businesses and are issued for 3 years. Housing loans are available both for repair and maintenance and for the construction of a new house, with the maturity varying between 2 and 15 years. Loans are also available for education expenses, to cover medical emergencies, for marriage expenses, for disaster mitigation, for redemption, etc. Loans are repaid in regular monthly instalments. A security deposit of 5 percent is compulsory. Loans may be paid off early, but the institution charges a fee for it.

Table 13 – Terms and conditions of some IASC loans

Product type	Loan amount (rupees)	Loan term (years)	Interest rate (%)	Approx monthly instalment (rupees)*	Approx monthly instalment (USD)*
Housing loan					
New construction	75 000	10	18	1 351	30.38
Extension	45 000	5	17	1 118	25.14
Repairs	30 000	3	18	1 085	24.38
Plot purchase	30 000	3	18	1 085	24.38
Economic loan					
Farm	15 000	3	18	542	12.19
Non-farm	25 000	3	19	916	20.60
Other loans					
Education	25 000	4	15	696	15.64
Wedding	25 000	3	20	929	20.89
Medical emergency	10 000	3	15	347	7.79

Source: www.iasc.in (accessed 1 May 2011). Exchange rate USD 1 USD = 44.48 rupees.
*Authors' calculation. Monthly payments based on the loan amount, loan term and compounded interest rate. It should give an idea of the income level of the target clientele.

Approximately 90 percent of members of self-help groups have an average individual income between 1 000 and 3 000 rupees per month (USD 22–67) (Centre for Micro Finance, n.d.). IASC website reports over 34 000 active borrowers in 6 513 groups at the end of March 2010 (Table 14). IASC issued 30 000 loans in 2009–10 with a total value of 307.9 million rupees (USD 7 million) and an average loan size of 10 264 rupees (USD 230). By March 2010, IASC had 24 branches covering 875 villages (table 14).

Table 14 – Numbers of borrowers and groups obtaining loans from IASC, and value of loans, March 2008 to March 2010.

	31 March 2008	31 March 2009	31 March 2010
No. of active borrowers	17 070	19 603	34 321
No. of groups	4 038	4 841	6 513
No. of loans issued	13 300	20 135	30 000
Value of loan disbursed ('000 rupees)	112 200	146 200	307 900
Average value of loan disbursed (rupees)	*8 436**	*7 260**	*10 264**

Source: http://www.iasc.in/products_services.html (accessed 1 May 2011).
* Authors' calculation.

3.9 Vimo SEWA's gender-sensitive composite microinsurance product (India)

Vimo SEWA[24] is an integrated insurance programme started by SEWA (Self-Employed Women's Association) Insurance for its members to provide life, hospitalization, accident and asset insurance. Membership of the scheme is voluntary. Women are the principal members and can buy insurance for their husbands and children. SEWA developed composite insurance products because the poor are vulnerable to numerous risks and often do not make a distinction between coverage for their person or their income-generating activities. Vimo SEWA is specially designed to cover risks commonly encountered by women.

Table 15 – Vimo SEWA's product main features.

Product name/type	**Insurance (life, health, property, accidental)**
Description	Integrated insurance that covers death, illness, accidental injuries and property loss
Motivation	Cover a range of risks affecting women
Flexibility features	• Voluntary membership • Need-based, affordable product • Integrated insurance scheme for the family • Cashless system for illness coverage (through tie-ups with hospitals) • Innovative premium payment plans such as fixed deposits and monthly instalments • Insurance linked to savings plan and loans
Financial discipline features	• For SEWA members and their families • Limit on the type of risk insured, amount insured, etc. • Co-payments of claim • Premiums collected door-to-door or though self-help groups

Main sources: http://www.sewainsurance.org (accessed May 2011); Churchill (2011).

The SEWA composite insurance product has a number of innovative flexibility features (table 15):

- Clients can choose between various insurance schemes that differ in the amount of the annual premium and benefits.
- SEWA gives clients the possibility to pay their premium in cash or from the interest on fixed deposits. Payments can be annual, quarterly or monthly.

[24] www.sewainsurance.org.

- SEWA, along with Life Insurance Corporation (LIC) of India, has also introduced a special plan, "Jeevan Madhur", which is a simple savings-linked life insurance plan where the individual member pays premiums annually.

Vimo SEWA began with 7 000 members in 1992, and currently has 120 000 members, a small number of clients considering the Indian context. Until recently, half of the members dropped out each year. The renewal rate has now increased to 60 percent, and SEWA is aiming to bring it to 80 percent. Recently, SEWA has started to send members SMSs to remind them when it is time to pay their premiums and to give members no-claims discounts; a 2010 analysis of Vimo SEWA's claims showed that over 40 percent claims were for readily preventable conditions or conditions that could have been treated without hospitalization (Yadav, 2010).

4. Lessons learned

The practices we have reviewed show that flexibility – adaptability of transactions to clients' cash flow – can have various forms. Loans of Confianza and Banco Los Andes Procredit allow financial transactions to be tailored to clients' future cash needs. Disbursement and repayment, however, are predetermined; clients commit to those and are not allowed to alter those commitments. In contrast, BAAC offers the possibility to adjusting the loan payment schedule in the event of emergencies and negative shocks; VSSU allows early withdrawals or premature account closure on its fixed savings plans at the costs of some fees; and IASC allows clients to pay off loans early, but charges a fee.

In both types of flexibility, i.e. seasonal loans and *ex-post* contract renegotiation, screening, monitoring and/or incentive mechanisms adopted by the MFIs are quite stringent, which should assure financial discipline. Confianza and Banco Los Andes Procredit lend only to households with diversified income sources, monitor client accounts rigorously and have a rigid policy toward default. BAAC has adopted a different approach, requiring physical or social collateral from borrowers as a covenant, and uses its staff in the field to verify clients' circumstances in case of a request to reschedule a loan; cheaters are faced with punitive interest rates.

In both cases, MFIs incur additional costs for acquiring information on borrowers, which could be avoided in rigid products. For instance, lending only to households with diversified income sources reduces the risk of default, because the client can draw on various sources to meet repayments, but verifying sources of income can be a costly exercise. Similarly, BAAC's incurs costs in verifying the causes of default if the client requests rescheduling of a loan; such costs would be avoided if rescheduling was not an option. However, applying a weekly repayment schedule, for example, provides the MFI with up-to-date information on households' cash flow without the need for costly information-gathering operations (Jain and Mansuri, 2003; Armendariz and Morduch, 2010).

A different type of flexibility is offered by SafeSave in Bangladesh, linking loans to voluntary savings. SafeSave's loans do not set any repayment schedule and do not have any maturity; the only compulsory payment is interest, leaving the client to decide when and how much capital to repay. There is no commitment to a given plan – with the exception of the interest payments – or, looked at from a different perspective, shirking is permissible. To impose discipline, SafeSave employs a requirement to provide financial collateral, progressive lending and collectors.

Collins *et al.* (2009) explain the value of financial collateral, i.e. linking (voluntary) savings to loans: "Although uncollateralized lending has been one of the proudest boasts of the microfinance movement, the judicious use of financial collateral can make loans more usable for the poor: the diaries show that many poor people do not object to 'borrowing back their own savings' partly because they value the savings so highly that they would rather borrow against them than draw them down, and partly because having the savings reassures them that should difficulties arise they can set their loan off against their savings" (Collins *et al.*, 2009: p. 182).

Three out the nine products/practices described in this paper employ deposit collectors to enforce payments, either for loan repayment or savings deposits (i.e. SafeSave, Barclays Bank and VSSU). Although collectors provide a highly convenient service for clients they are a cost to the MFI, requiring a large number of staff covering considerable distances in order to reach each client daily. To reduce the cost, both SafeSave and Barlays Bank employ (low-paid) local people, through whom they gain access to locally embedded relations and valuable information. SafeSave hires staff from the same slums where clients live; and Barclays Bank hires (i.e. links to) existing susu collectors.

Finally, transaction costs and innovation inevitably lead to discussion of branchless banking and, particularly, m-banking. The m-banking savings plan for pregnant women, Mamakiba, is not a compulsory savings plan, offering the same degree of flexibility as passbook savings accounts (such as those offered by SafeSave). However, it employs at least three soft commitment devices to encourage financial discipline: first, the savings calculator helps clients to plan their savings; second, SMSs sent through mobile phones remind people to pay, provides updates on savings balances, etc.; and third, tying savings to a specific use may encourage deposits.

5. Concluding remarks

This review shows that there are ways the microfinance industry can offer flexible financial products that also encourage financial discipline. Flexibility serves to facilitate money management for low-income clients, whereas commitments accompanied with appropriate enforcement mechanisms serve to encourage financial discipline. The exact mix of flexibility features and enforcement mechanisms that works best will be determined by the characteristics of the target clientele.

Various types of flexibility in financial products could be valuable for the poor. *Ex ante* flexibility (called 'rigid flexibility' by Karlan and Mullainathan, 2006) fixes a payment schedule that matches with clients' future cash needs; *ex post* flexibility allows deviation from fixed plans under specific conditions; and pure flexibility leaves full discretion on timing and amount of payments. These different types of flexibility have implications for the credibility and effectiveness of the commitments. *Ex ante* flexibility by itself is a pure commitment and should encourage discipline and lessen concerns of weakness in management information, fraud by staff and liquidity management. However, it may be less effective than a standardized rule that imposes frequency and regularity of transactions and meetings. *Ex post* flexibility weakens the credibility of commitments and aggravates temptation issues. Pure flexibility, by itself, does not impose any commitment.

Generally, the introduction of flexibility requires MFIs to adopt alternative enforcement mechanisms for establishing clients' discipline. Regarding loan contracts, introducing flexibility requires MFIs to balance the increased credit risk by adopting rigorous lending policies. For example, MFIs should concede flexible repayment schedule only to the best clients; ask for more collateral; deploy more staff in the field to monitor clients rigorously; and generally raise the sanctions for default so as to balance the increased temptation.

Regarding savings, our review points to the important role of soft commitments in enhancing discipline, i.e. commitments associated with enforcement mechanisms inflicting psychological sanctions to the individual. Such soft enforcement mechanisms include tools to help clients to plan their savings, visits from deposit collectors or SMSs to remind clients to make deposits or repayments, and application of mental accounting principles through specially labelled accounts, for example. These mechanisms should encourage clients to save and, at the same time, leave them some flexibility to facilitate their money management. Indeed, we see soft commitments as one of the most promising ways the microfinance industry could mix flexibility and enforcement in microsavings products.

This review suggests two potential trade-offs when balancing flexibility and discipline, mainly for the credit market. First, flexibility may result in higher costs for enforcing loan contracts, especially for acquiring information on clients to evaluate their preferences, repayment capacity, etc. Considering that, in developing country contexts, the unit of analysis is commonly the entire household, rather than an individual, gathering such information may be a major problem for MFIs. Second, MFIs tend to offer flexibility to privileged clients, e.g. households with diversified cash flow (Confianza and Banco Los Andes), households with large savings and good credit history (SafeSave and IASC), household with collateral (BAAC) and households that already have access to informal finance channels (Barclays Bank). This will tend to exclude poorer, more vulnerable households that may benefit most from access to credit.

The microfinance literature indicates that market-oriented approaches offer important gains in both long-term institutional sustainability and social impact. This review shows that flexibility increases MFIs' costs but does not seem to bring with it a broadening of their client base. Research is needed to verify these perceptions, perhaps through collection of rigorous empirical evidence. In-depth case-studies of one or more of the institutions covered by this review could help understand the costs of flexibility for the MFIs, whether these costs are passed on to the clients through, for example, higher interest rates on loans, and the typology of clientele to which flexibility is addressed. Randomized field experiments would be the best methodology to evaluate the impact of product flexibility on variables such as clients' default and satisfaction rates.

The microfinance practices we have reviewed combine flexibility and discipline within one product. Alternatively, flexibility and discipline could be offered in separate products accessible simultaneously to clients. For example, MFIs could offer emergency loans to good clients; such loans could be disbursed rapidly and for a short term (e.g. 1 or 2 months) and be designed especially to deal with the effects of an income shock or an unexpected expenditure need (for example, FAI *et al.*, 2011). Flexibility and discipline could be offered simultaneously through two distinct savings products, such as a flexible passbook savings account and a disciplined commitment savings account. The Grameen Bank II System is a good example of this approach.[25] Clients would use a passbook savings account for day-to-day money management, to deposit daily small surpluses and to have fast liquidity access when needed, while the commitment savings account would provide the structure necessary to accumulate a large lump sum for some future planned expenditure. Cross-selling various financial products would strengthen the relationships between the MFIs and the clientele, bringing comparative advantage to the service providers.

[25] www.grameen-info.org.

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Confianza www.financieraconfianza.pe

Equity Bank http://www.equitybank.co.ke/products.php?subcat=128

Financial Access Initiative http://financialaccess.org/node/2968

Financial Technology Africa www.financialtechnologyafrica.com

Kilimo Salama http://kilimosalama.wordpress.com/about/

Indian Association for Savings and Credit www.iasc.in

International Law Organization (ILO) Microinsurance Facility www.ilo.org/microinsurance

Islamic Finance Asia www.islamicfinanceasia.com

Mamakiba https://bitbucket.org/gmimano/mamakiba/wiki/Home

PT Bank Syariah BRI www.brisyariah.co.id

Safaricom www.safaricom.co.ke

SafeSave www.safesave.org; www.thepoorandtheirmoney.com

Vimo SEWA www.sewainsurance.org

Shohoz Shonchoy www.thepoorandtheirmoney.com

Vivekananda Sevakendra Sishu Uddyon (VSSU) www.vssu.in