

# **Customized microfinance products and potential for risk coping and management**

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## Outline

- I. The search for micro-finance products: from **standardized** to **customized**
- II. Toward **flexible** microfinance products
- III. **Savings and credit** to address risk: what **theory** tells us
- IV. **Case studies** of flexible financial products to address risk
- V. **Conclusion: Proposition** for the design of customized flexible financial products for risk

## I. The search for micro-finance products: from standardized to customized

- Significant **progress** has been made in microfinance to give access to financial services to the poor/SHF
- **Services** include transfers, savings, credit, and insurance
- In a **first phase, rigid standardized** microfinance services have been offered to secure repayment and induce good behavior in spite of:
  - Lack of **collateral** and of formal contract enforcement
  - Precarious “**lives of the poor**”
    - ♣ Erratic income opportunities
    - ♣ Imperfect information; complex decision-making environment
    - ♣ High risk aversion and high discount rate
    - ♣ Pressures to share with kin and social networks
    - ♣ Temptations to consume and time inconsistencies

- But with access to social networks (mutual insurance, ROSCAS), local information (joint liability), informal services (money lenders)
- **Remarkable products have been introduced (“microfinance revolution”):**
  - **Transfers:** cellular phone-based M-Pesa
  - **Savings:** help to save (SMS reminders, collectors, pledged savings, earmarked savings, lotteries, constraints on dis-saving)
  - **Lending:** joint liability group lending (Grameen), self-help groups (India), ultra-poor loans (BRAC village organizations), village banks (Finca)
  - **Insurance:** index-based insurance (regulation, smart subsidies, institutional-level insurance contracts)

- In a **second phase**, increased access to financial products and better performance is being sought by **customizing** products to clients' needs and capacities. This includes in particular the following financial products:
  - **Savings: Menu** of savings accounts, pledge options, earmarkings, and disciplinary devices offered
  - **Credit:** Customized credit contracts to the needs and capacities of clients
    - **Individual** as opposed to group loans
    - **Less frequent** repayments
    - Loans based on **past repayment performance** and **accumulated savings** as opposed to collateral
    - Repayment **calendars** adapted to anticipated client cash flows and crop cycles
    - Interest paid only on **outstanding balances**.

## II. Toward flexible microfinance products

A **third phase** in microfinance services consists in:  
Providing greater **flexibility** in use so they can serve to manage risk and cope with shocks (from rigid to customized to ex-post flexible)

**Flexibility features** include the following:

- **Transfers:** Electronic transfers such as M-Pesa allow immediate discretionary transfers in response to shocks. Transfers can be international (remittances, international solidarity), allowing quick mobilization of mutual insurance to cope with locally covariate shocks (e.g., earthquake in Rwanda, Blumenstock 2012).

- **Savings**

- Passbook savings account with no minimum balance and instant **unlimited withdrawal**
- Long-term savings account with **right to borrow** on accumulated balance
- Difficulty is to preserve **motivational**/commitment devices to help people save while maximizing **flexible access** for risk response
- One option is to use motivational devices that are **orthogonal to flexibility**: reminders, collectors, peer pressure, lotteries, renegadable pledges (CHN experiment)
- Another option is to link the right to dis-save to the **motivation** to save. This is the case when saving is earmarked for a verifiable emergency health expenditure (Dupas and Robinson, 2011).

- **Credit:** Major progress in introducing **more flexible** loans
  - This includes open **credit lines**, Kisan credit cards, BRAC “good borrower loans”, payday loans, contingent loans (flexible duration, borrower chooses when to repay principal), early repayment options without penalty
  - Difficulty here is to maintain **discipline** while allowing greater **flexibility**.
  - Options are stricter selection, closer monitoring, and heavier sanctions or rewards (Hamp & Laureti)
- **Composite financial products**
  - Combine index insurance with savings: welfare cost of basis risk in index-based weather insurance is reduced by **precautionary savings** (de Nicola, Vargas Hill, and Robles, 2012)



### III. Savings and credit to deal with risk: what theory tells us for the design of instruments

#### 1. Savings and credit with perfect capital markets (Deaton, Besley)

- Save if positive income shock in the first period. Borrow if negative income shock in first period. Never save and borrow at the same time

#### 2. Adjustments to market imperfections

- Increase precautionary savings if future income is **more uncertain**
- Increase precautionary savings if expect a **credit constraint** in the future
- If interest earned on savings is less than interest paid on credit: Creates an income range with **autarky** (no saving or

borrowing): consumption adjusts to small shocks; saving and borrowing are triggered by larger shocks

- If there is a **credit constraint**, the borrowing instrument fails for large negative shocks. The constraint induces more precautionary savings, and less borrowing

### 3. Adding behavioral limitations to savings

- **Difficult to save** due to pressures from others to share and from own temptations to consume (time inconsistency)
- **Commitment devices** to induce saving for earmarked expenditures can increase savings but reduce flexibility in using savings for discretionary expenditures in periods of negative shocks.
- Hence, need **reconcile** savings pledges and earmarking (self-discipline) with precautionary objective of savings (**flexibility to respond to shocks**)

#### 4. Implications for design derived from theory

- Savings and credit are **both** necessary for risk, but use is **sequential**. MFIs need offer **both** flexible savings and credit, with quick state reversals according to the sign of shocks
- Reducing the **interest rate spread** (30 % points at SafeSave) between saving and borrowing will improve the use of saving and credit for risk (reduce autarky zone)
- Access to loans to cope with emergencies should be related to **past behavior, not current** accumulated savings. Depositors should be allowed to **fully withdraw** savings before borrowing in response to a large negative shock
- Help should be given to **reconstitute precautionary savings** after a negative shock. One option (CHN experiment) is to help pledge savings as a share of loan

## IV. Case studies of flexible financial products to address risk

### 1. SafeSave in Bangladesh (Stuart Rutherford & Rabaja Islam, BRAC)

	Savings	Credit
Product type	Passbook account Long term saving (LTS) account 3 to 10 years	Loan linked to passbook saving balance as collateral (1/3) Loan linked to LTS balance as collateral (80%)
Flexibility features	Passbook w min limitations on withdrawals (daily max) Can borrow 80% of balance in LTS account	Flexible duration Flexible repayment schedule
Incentive features	Daily visits collectors; pledged monthly deposits in LTS Interest on LTS reduced to passbook on early withdrawal	
Disciplinary features		Daily visits collectors Dynamic incentives

**Advantages:** **flexibility** in savings and loans, with both **incentives** to save and **discipline** in repayment

**Disadvantages:** large interest spread between borrowing and saving; limits on savings withdrawal to serve as collateral on loan

**Suggestions:** use reputation (past accumulated savings and repayment history) as collateral instead of current savings; give help to save when repaying emergency loan; analyze what flexible loans are used for.

## 2. Kisan Credit Card in India (National Bank for Agriculture and Rural Development)

	Savings	Credit
Product type	Passbook account	Credit card
Flexibility features		Maximum borrowing linked to minimum saving & collateral Credit limit with flexible use
Disciplinary features		Flexible repayment within 12 months of drawing 3 to 5 year card renewal Distributed by local and regional banks

**Advantages:** high flexibility in borrowing within idiosyncratic limit

**Disadvantages:** need collateral (large farmers), lacks evaluation

**Recommendation:** delink savings from use as collateral to better use for risk coping; help motivate savings both pre- and post-shock

### 3. BRAC “good borrower loans”, Bangladesh

	Savings	Credit
Product type	Passbook saving	Emergency loan to current borrower with good record on past loans
Flexibility features		Quick disbursement Flexible repayment in 5-9 months for a current 1 year loan
Disciplinary features		Savings in excess of 20% of last outstanding loan Emergency loan between 25 and 50% of current loan

**Advantages:** links credit to savings

**Disadvantages:** savings used as collateral on loan, limit on withdrawal of savings for emergencies, no assistance to save

**Recommendation:** develop the saving side as precautionary (contingent on emergencies) and complement to good loans

## V. Conclusion: Suggestions for the design of customized flexible financial products for risk response

Flexible financial products for transfers, savings, and loans and composite financial products offer promising **complements** to index-based insurance in risk management and shock coping.

Six suggestions for their improved use:

1. **Savings and credit** must **both** be used to address uninsured risks. Yet there are few/no MFIs that offer the right combination of flexible saving and credit instruments for this purpose. Savings continue to be used as **collateral** for lending instead of a complementary instrument for handling risk
2. **Incentives to save**, and not to dis-save, can be provided without compromising **flexible** access to savings for risk response. This includes reminders, peer pressure, lottery,

mental accounting, dedicated savings indexed on verifiable shocks.

3. **Flexible loans** can be offered without compromising on repayment **discipline**. This requires careful selection (credit scoring, collateral, reputation), careful monitoring (visits), and enhanced sanctions or rewards (punishments, ostracization, prizes)
4. **Composite products** can be constructed to build on complementarities between financial products in handling risk. This includes flexible savings/credit to reduce basis risk in index insurance contracts
5. **Customization** is essential to flexibility: market failures are idiosyncratic and determine the optimal combination of financial products to deal with risk.



6. Based on lessons from theory and practice, **design of a flexible saving-credit-insurance financial product** to deal with uninsured risks would have the following features:
- a. **Motivated flexible savings**, where motivation does not reduce flexibility or is congruent with it
  - b. **Flexible credit lines** to respond to shocks under strong discipline
  - c. **Indexation** of access to savings and loans in a way similar to insurance: observable idiosyncratic or covariate shocks
  - d. Assistance given to **reconstitute precautionary savings** after taking an emergency loan (pledged savings linked to loan repayment)
  - e. **Index-based insurance** provided at the institutional level to cope with extreme events. This can take the form of club goods

(e.g., insuring cooperatives) or local public goods (e.g., insuring states or municipalities).