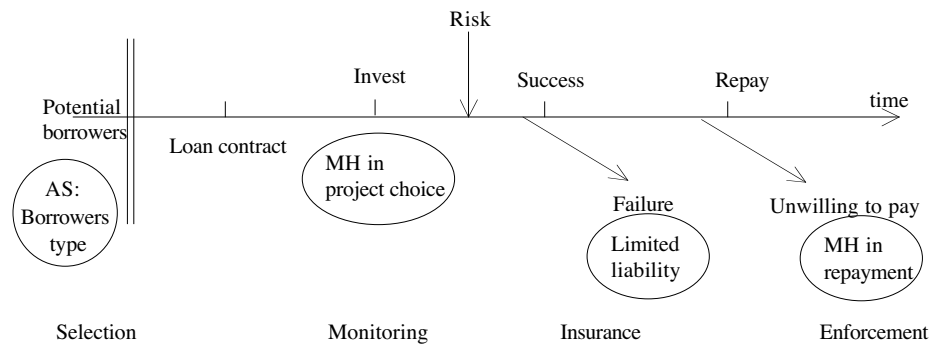


**Handout #8**  
**Access to Financial Services in Development**

**I. The lending problem**



- Loans are transactions over time, with risk  $\Rightarrow$  Need for insurance  $\Rightarrow$  MH problems  
 Risk: Borrower needs insurance (limited liability), as even loans for good projects cannot be repaid in bad years.  
 But lender cannot provide insurance as he cannot monitor genuine failures from false claims  $\equiv$  Problem of enforcement. (Moral Hazard (MH) in repayment).  
 Limited liability induces risk taking behavior - need for monitoring (MH in project choice)
- Screening: lender cannot screen risky from safe borrower ex-ante due to lack of information (Adverse selection (AS)).  
 If one knew which borrowers are risky or safe, one could give them each a contract with high interest rate for risky borrowers that pay less often and low interest rate for safe borrowers that pay more often. With a unique contract at an average interest, safe borrowers are subsidizing risky borrowers. This is not efficient

Solutions?

- Intense information collection for screening and monitoring, and punishment mechanism for enforcement
- Design a contract that makes borrowers reveal who they are (truth-telling) and that satisfies their best interest (incentive compatibility)

## **II. The banks' solution: Why the poor are excluded from formal financial institutions**

- Require collateral to overcome problems of MH. Access to credit restricted to those with collateral: wealth-constrained market.  
Collateral solves the problem of AS, although it is not the optimal solution. There are better contracts with a menu of combinations for collateral and interest at different levels  
No provision of insurance  $\Rightarrow$  Poor may not want to put their collateral at risk. They are "risk constrained".
- $\Rightarrow$  Efficiency cost: many good projects are not funded (allocation of credit is unrelated to the marginal productivity of capital).  
Equity cost: poor are excluded. Allocation of credit to wealthy reinforces inequality.

## **III. The traditional sources**

### **3.1. Local moneylenders**

- They have access to local information about borrowers: can avoid AS and give insurance.  
They can put pressure on borrowers to repay: e.g., take forms of collateral that bank could not use: animals, house, use of the land, reputation. Control of MH
- But high cost of credit:  
High correlation between outcomes of borrowers' projects (high covariation of project outcomes, money lender cannot diversify risk).  
Need keep high liquidity position to give immediately emergency loans.  
May have monopoly power.  
Very high cost of loans limits their use to insurance, short run needs, high return operations (buy-sell animals, merchants), and small amounts.

### **3.2. Local sources of credit based on interlinkages**

- Traders of products, providers of inputs: credit to clients  
Landlords, employers: credit to tenants, workers.  
Types of interlinkages:  
Borrower who sells output to merchant-lender.  
Borrower who purchases inputs from merchant-lender.  
Borrower who provides rent in labor services to landlord-lender.  
Borrower who transfers usufruct rights of land to farmer-lender (land pawning).
- Information: control of AS and eventually provision of insurance  
Interlinkage is used to pressure to repay: borrower would be cut-off from other parts of the transaction if does not repay, creating incentive to repay. Control of MH
- Disadvantage: highly segmented market.

## IV. Microfinance institutions (MFI)

### 4.1. ROSCAs (Rotating Savings and Credit Associations)

- Rules:
  - $N$  members.
  - Equal deposits  $d$  at regular intervals.
  - One member takes all contributions at one meeting: gets  $Nd$ .
  - Different rules of attribution: random draw, bidding on order of turns (creates interest revenue for others).

Example: 10 members that put \$10/week.

  - 1st winner: gets \$100 interest free. Repays weekly at zero interest.
  - 10th winner: gets \$100 having lost interest on all previous deposits.
  - However: Repeated game: random distribution of gainers and losers.
  - Loss is zero if money has zero opportunity cost.
- Advantages:
  - No AS and MH: members self-select and know each other well.
  - Insurance: some in the bidding ROSCAs, but weak.
  - No management costs.
  - Self-imposed forced saving: would have consumed the \$100 otherwise.
  - Social function: information sharing within club, other deals, women away from home.
- Disadvantages:
  - Rigid and limited access to credit:
    - Timing not effective for insurance.
    - Fixed quantity  $Nd$ .
    - No external injection of funds.
  - No long run savings: only serves for small investment with indivisibilities (durable goods and small equipment)

### 4.2. Group lending: solidarity groups

A technique to channel loans to borrowers without collateral (Grameen Bank in Bangladesh, Acción Internacional, Banco Sol in Bolivia).

- Rules:
  - Self-selected groups. Use local information. Solve AS problem.
  - Individual loans but joint liability:
    - Each member is responsible of repaying the loans of those who default.
    - Whole group loses access to future loans if any loan is not repaid.
  - Loans are small and increasing: dynamic incentives to induce borrowers to pay (MH in repayment)
- Group's control of AS, MH and provision of insurance:
  - Dynamic incentives should be sufficient to insure willingness to repay for the group, and selection by members insure that borrowers with no future plans (and hence unwilling to pay back their loan) do not creep in groups of willing borrowers.
  - Note that large heterogeneous groups are more effective for risk diversification

Group members have an incentive to mutually insure against idiosyncratic risks (but not against global shocks): Repay loan for member with true failure (advance his payment). This could create MH in repayment and risk taking within group. Members can and want to monitor/help each others' projects using local information: hence. Note that small homogeneous groups are more effective for monitoring. In addition, group exercises pressure on each member to repay if he can, based on social capital (ostracization in community), interlinkages among members, and seizure of collateral (e.g., personal belongings).

How large a group? Trade-off between control of MH in choice of project and insurance. Grameen: minimum 5.

- **Advantages:**
  - Access to loans for poor people with no collateral.
  - Lower transactions costs than individual loans from the bank:
    - Group self-select in types: bank only needs verify 1 or 2 members.
  - Can use intermediary NGO: Genesis (Guatemala) charges 7 % points on loans from commercial bank. Hence, unlimited expansion possible. Banks seek good financial NGOs to reach large potential market of borrowers among the poor (small loans, but very large number of people).
  - Link modern/global institutions (bank with access to broad financial and insurance market) with traditional/local institutions (solidarity group with access to local information and social capital).
  
- **Disadvantages:**
  - Expensive credit: 7% charge for management over the interest rate charged by the bank. But cheaper than usurer.
  - Weak insurance capacity, especially if group is homogenous. Can only insure for idiosyncratic shocks.
  - If increasing differentiation within the group: group explodes as increasingly unequal cost of insurance if loans are of different sizes.
  - Graduation problem from group loans to individual loans: individual needs collateral; needs public credit records. But NGO often prefers to keep good clients instead of graduating them!
  
- **Institutional problems:**
  - Culture of grants: clients used not to repay. NGO not used to be tough.
  - Culture of failure/nonsustainability of NGOs: clients don't repay ⇒ self-fulfilling failure
  - Group lending sustainable and replicable only if linked to commercial bank, not dependent on donations/grants for capital. Donations/grants only for start-up costs and learning period.
  - Best practice for lending not established: optimum group formation, product development.
  - Competition among MFIs:
    - Willingness to repay based on being the best alternative. Needs monopoly.
    - Cross-subsidization of more expensive borrowers (poor, rural, small loans, etc) by more profitable clients (several years in the program, more entrepreneurship, successful, etc.). However, with current competition, need to offer better clients better terms ⇒ less funds for reaching the poor ⇒ drift in clientele.
    - Uncontrol over-indebtedness of clients who belong to several MFIs

Recent advances in the creation of Credit Bureau, with the dilemma that it increases the competition for the good borrowers.

Incentive contracts for credit officers (that may not share the goals of financial sustainability and social inclusion of the MFI)

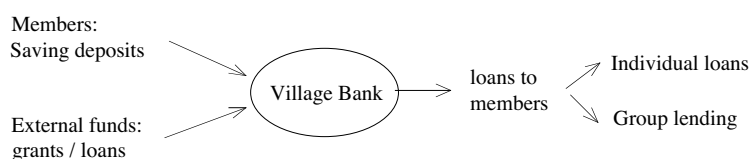
MFIs initially based on little financial constraint and agents motivated by a mystique (to reach the poor). With maturity and size, need to formalize the personnel management system. Incentives for financial performance are progressively put into place (bonus based on number of clients, volume of portfolio, and repayment rate; either individual or at the branch level). Not for social inclusion yet.

#### 4.3. Village banks (FINCA model)

MFI can not only give loans, but also offer savings services.

Safe and profitable savings services are important for consumption smoothing: self-insurance (risk coping) and life cycle (retirement).

- Rules: managed by members (20 to 200 members, elected committee)  
Committee decides on selection of borrowers and terms of loans.



- Advantages:  
Mobilize savings profitably and safely (vs. jewelry, food stocks, animals).  
Give access to loans for selected members: village bank can avoid AS and MH based on local information.  
Can insure based on local information and social capital: give limited liability on loans if genuine failure.
- Disadvantages:  
Assumes that members have banking managerial ability.  
Risk of loss of savings: theft, mismanagement. Hence, need legal regulatory framework. But often too rigid and demanding if regulated by government (e.g., Mexico).  
AS and MH may occur due to large size of group.  
Highly conservative management if depositors who do not borrow are more numerous than depositors who borrow: high interest rates charged, demanding conditions for borrowing that may exclude the poorest members.

#### 4.4. MFI with individual loans

Often by profit-oriented MFIs in the activity of microfinance to capture a market niche that commercial banks are unable to penetrate. Huge market of small loans for the microenterprise sector, very profitable, as long as there is little competition (Bank Ryat of Indonesia).

- Rules:  
Small loans, with a steep increase over time (dynamic incentives).

Loose access to credit if default.  
Collateral sometimes required.  
Intensive use of credit agents for selection and monitoring (with incentive contract for agents)

- MH in repayment held in check by dynamic incentives (future benefits of staying in the program. Works only if no better alternative.)  
Other functions based on performance of credit agents.

## V. Conclusions on MFI

- How useful for poverty reduction?  
To use loans, poor need good projects: good policy context, good institutional context, help from NGO to prepare projects. Hence, MFI complementary to those, not a substitute.  
Loans will help most entrepreneurial of poor, not the “poorest of the poor”.  
No panacea, but important partial solution.
- Analysis of participation:  
Lots of descriptive statistics on who participates (gender, age, education, assets), but no rigorous analysis of who is excluded.  
No rigorous analysis on the formation of groups and their functioning.
- Impact analysis of MFI: Lots of casual evidence, but few rigorous analyses. Exceptions are Pitt and Khandker, Morduch, and a few other.  
Need good experimental design for impact analysis:  
Control for program placement bias: projects placed in best regions.  
Control for self-selection bias: recipients most entrepreneurial.  
If not, better performance of recipients may not be due to credit but to better region and better entrepreneurship of recipients vs. non-recipients.

Example: using method of double difference (Morduch)  
- identify control (comparison) and treatment groups  
- observe indicators Y before (base line survey) and after for both groups.  
- calculate double difference to measure impact:  
Impact of credit = (Y after - Y before) for treatment - (Y after - Y before) for control

## VI. Challenges faced by MFI

- Credibility of sanctions  
Culture of grants: clients used not to repay. NGO not used to be tough.
- Financial survival of MFI  
Culture of failure/non-sustainability of NGOs: clients don't repay ⇒ self-fulfilling failure  
Group lending sustainable and replicable only if linked to commercial bank, not dependent on donations/grants for capital. Donations/grants only for start-up costs and learning period.  
Best practice for lending not established: optimum group formation, product development.

- Competition from other MFIs
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  - Competition may break the MFI system: gives alternative for the “bad” borrowers; draws out “good” borrowers and agents; encourages excessive debt as borrowers have access to multiple sources.
  - Role of credit bureaus
  
- Incentive contract for the agents that may not share the goals of financial sustainability and social inclusion of the MFI.
  - MFIs initially based on little financial constraint and agents motivated by a mystique (to reach the poor). With maturity and size, need to formalize the personnel management system.
  - Need to design a contract. Profit sharing for financial sustainability and random audit for social inclusion?
  
  - Observations: Incentives for financial performance are progressively put into place (bonus based on number of clients, volume of portfolio, and repayment rate; either individual or at the branch level). Not for social inclusion yet.