

Section Chapter 13: Financial Services

1 Four Types of Financial Services:

1. Transfers
2. Loans
3. Insurance
4. Savings

1.1 Important Concepts:

1. **Adverse Selection (AS) : Hidden Information.** People or products have fixed characteristics that determine their quality, but this quality is not observable. Classic example is Akerlof (1990) in his theory of the market for “lemons” (used cars that have some hidden problem). In the financial services market, lenders cannot screen for responsible borrowers, and insurers cannot screen for low-risk people.
2. **Moral Hazard (MH): Hidden Actions.** People’s behavior responds to incentives, but only to the extent that behavior is observable. Often, observed outcomes only partially reveal behavior. For example, shirking at work. Examples in the financial services market: lender does not know if borrowed funds are used unproductively or the borrower just had bad luck, insurers do not know if the insured behaved more recklessly or just had bad luck.
3. **Limited liability (LL):** in case of an adverse event, the borrower is not responsible for paying the full amount of the loan.
4. **Joint liability:** a group as a whole is responsible for repaying the loans of its members. In cases when one person is no longer able to repay a loan, the group is responsible for the payment. Joint liability works as a “social collateral” to reduce the risk of the lender.
5. **Dynamic incentives:** In a one shot game, there are no incentives to repay a loan. However, when future outcomes are in stake in the current period, the borrower has the incentive to repay the loan. Dynamic incentives works by lending less than what the borrower asks for, and the system works only if there is little or no competition in borrowing.

2 Market Failures in Loans: The Lender's Problem:

There are four main problems that the lender has to address in order to successfully obtain repayment from the borrower:

1. Selection problem: AS of borrower. The lender has difficulty in screening ex-ante good from bad borrowers due to incomplete information.
2. Monitoring problem: MH in project implementation. The lender cannot closely monitor the borrower's behavior. Hence, he cannot be certain that the borrower will be making good use of the loan so that she will be able to repay.
3. Insurance problem: MH in limited liability. The borrower needs insurance (i.e., limited liability in repaying the loan), otherwise even loans for good projects will not be repaid in bad years. But the lender cannot easily provide insurance as he cannot distinguish genuine failures from false claims.
4. Enforcement problem: MH in loan repayment. The lender cannot easily force the borrower to repay. He does not know if the borrower will be willing to repay, even if he is able to do so having made successful use of the loan.

Events	Potential borrower applies	Loan made	Borrower invests: Failure/Success	Risk: unexpected shocks	Project outcome: Failure/Success	Time to repay the loan	Loan repayment: Willing/Unwilling
Four problems to be solved by lender for success	Selection: Avoid AS of borrower		Monitoring: Avoid MH in project implementation		Insurance: Avoid MH in insurance claims		Enforcement: Avoid MH in loan repayment

Time line →

2.1 Traditional Institutional Solutions to the Lender's Problem:

	Selection	Monitoring	Insurance	Enforcement	Problems
Formal Sector	Require Collateral	Require Collateral	Unresolved, Separate insurance market necessary	Require Collateral	Poor lack collateral & need insurance
Money Lender	Local Info, non-standard forms of collateral	Local Information	Local information for idiosyncratic risk, but cannot insure for covariate risk	Social capital, Dynamic incentives from repeated game, Non-standard collateral	Interest rates are very high (avg 1% per day), lack of insurance for covariate risk
ROSCA	Self-selection	N/A	N/A	Social capital, Dynamic incentives from repeated game - not perfect	Foregone interest, risk of defection, rigidity in timing of payments

3 Microfinance

1. Group lending / solidarity groups (Grameen model)
2. Village banks (Finca model): Provide not only loans, but savings services. Leverage local knowledge but concerns about management ability, transparency, and mission drift
3. Individual loans: Small loans growing over time create dynamic incentives.

3.1 Microfinance with Group Lending

- Self-selection by group members (AS)
- Individual loans, with joint liability providing social collateral
- Peer monitoring (MH monitoring)
- Mutual insurance (MH insurance)
- Social capital and inter-linkages among members (MH enforcement)
- Dynamic incentives: induce borrowers to repay current loans in hopes of getting larger loans in the future
- Frequent installments and self-control
- Collective sanctions

3.1.1 How group lending helps overcome the “Lender Problem(s)”

	Selection	Monitoring	Insurance	Enforcement	Problems
Group lending	Self-selection by group members and “social capital” as collateral	By group members due to joint liability	Within group idiosyncratic risk is insured	By group members due to joint liability	See below

3.1.2 Does group-based microlending work for poverty reduction? There have been remarkable success stories in taking people out of poverty through microfinance, particularly in creating income opportunities for women. Mixed empirical evidence from impact evaluations.

- **Pitt and Khandker - RD (1998):** Made an evaluation of the impact of the Grameen Bank and two other group-based micro credit programs in Bangladesh on labor supply, schooling, household expenditures, and assets. They use a cross-sectional survey including villages with and without branches. Within village, they instrument household loan size by the discontinuity rule according to which households must own less than 0.5 ha of land to qualify for a loan, a regression discontinuity design with a fuzzy threshold. They find large effects on household consumption, especially when women are the borrowers. They also observe increases in girls’ schooling, boys’ schooling, and women’s labor supply when credit is provided to women, but not to men.
- **Banerjee et al. - RCT (2010):** Using a randomized control trial in 104 slums of Hyderabad, with MFI branches placed in a randomly selected half, Banerjee et al. (2010) find that 15 to 18 months later results fall somewhat short of expectations. Investment in durable goods increases among households with existing businesses, but there is no impact on measures of average monthly expenditure per capita, health, education, and women’s decision-making.
- **Kaboski and Townsend - Dif-in-Dif with IV (2012):** Used a pre- and post-program panel of households and quasi-experimental cross-village variation in credit per household. This was due to the fact that each of the 70,000 villages received a US\$24,000 allocation irrespective of population size, making credit availability exogenously heterogeneous across households in different villages. They find that Thailand’s “Million Baht Village Fund” had positive effects on consumption, investment in agriculture and existing businesses, and local wages, creating benefits for non-borrowers as well. However, there was a decline in savings (possibly because precautionary savings are less needed when there is access to credit) and no impact on new business startups.

3.1.3 Key Caveats to MF Lending

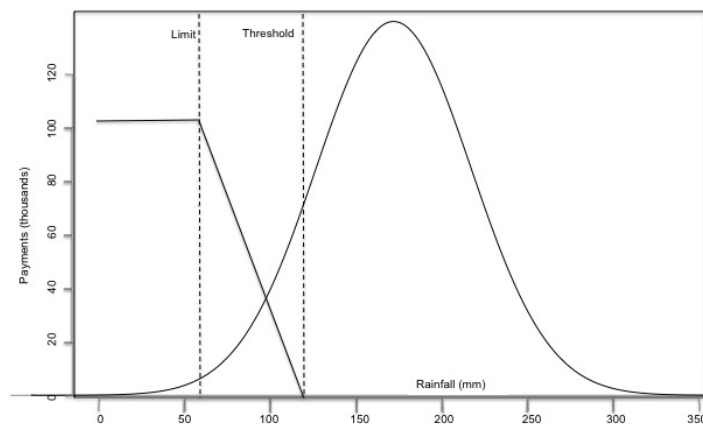
- **Good projects needed:** Successful use of loans by the poor requires them to have access to good projects, which necessitates a favorable investment climate. Hence, the development of MFIs is complementary to these determinants of success, not a substitute.

- **Not the poorest of the poor:** Loans will tend to be most useful for the most entrepreneurial among the poor, not the “poorest of the poor” for whom loans will be used for immediate consumption needs. In that sense, the MFI approach is a complement to social assistance, not a substitute.
- **Competition:** As commercial providers enter the field and competition rises two problems arise: **Mission drift** requires regulation of MFI to assure they are serving poor clients. Increased rate of default due to competition requires **credit bureau** for MFIs
- **Not a silver bullet:** Other types of financial services are needed.

4 Other Financial Services/ “Technologies” for the Poor

4.1 Index Based Weather Insurance

Insurance payment triggered by index exceeding threshold measured at a weather station. Eliminates adverse selection and moral hazard in damage-verification based insurance. But leaves uninsured “basis risk”: difference between index measurement of shock at weather station and size of shock at the level of the insured party. Hence, poor quality product. Notably, there has been very low uptake of insurance products without large subsidies.



4.2 Credit Bureaus

Reputation based on past repayment performance made available to all lenders. Allows MFI to reduce AS. Induces good behavior among clients, reducing MH in monitoring and enforcement. Risks: errors in information recorded and no recourse

4.3 Savings Accounts

Merely providing access to formal savings accounts of different varieties may help the poor accumulate assets, discipline their own consumption, protect assets from being borrowed by needy friends and relatives, etc. A wide variety of savings account structures have been tested and deployed in a wide variety of settings (though we didn’t really cover this in class).

5 Worksheet

1. The role of financial services in your life?
 - (a) What financial service do you use?
 - (b) What financial risks do you face? Have you ever directly or indirectly suffered from an unexpected income shock?
 - (c) What forms of insurance do you enjoy?
 - (d) If you wanted to borrow money for a startup idea, who would you borrow from?
 - (e) If you needed to borrow money for a random injury not covered by insurance, who would you borrow from?
 - (f) What percent of this class do you think would not be in college if student loans interest rates were 25% or 50% annually?
2. Why do we refer to the lack formal lending in the developing world as a “market failure”? What are the negative consequences of this failure?
3. Group lending
 - (a) Why might loans to individuals be more at risk of default than loans to joint-liability groups? Why might they be less risky?
 - (b) In group lending, is it better to have a large or a small group for group lending? What is the tradeoff in terms of solving the lender’s problem?