Rural Finance

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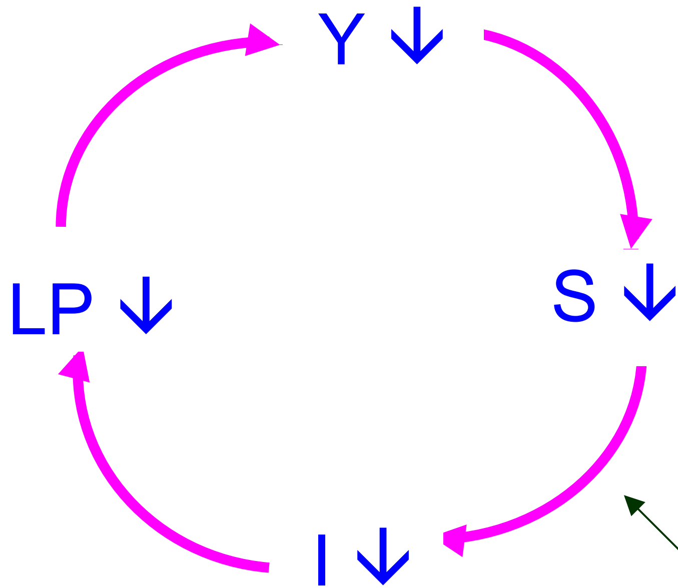
Vicious cycle of capital formation



Traditional approach towards agricultural credit

Key features of the traditional agricultural credit extension

1. **external (to the rural sector) financing by government and external donors**
2. **production credit (supervised credit, targeted credit)**
3. **no savings mobilization**
4. **subsidized credit (low interest rate)**
5. **collateral to overcome information asymmetry** (see also next transparency)

Why was the traditional agricultural credit approach not successful?

- uncertainties of Govt. Funding
- no won capital mobilization (savings)
  - ⇨ lack of independence
- distortions caused by subsidized credit
  - – ⇨ growth effect questionable, probably negative
  - – ⇨ income distribution effect regressive
  - ⇨ impact on institutional sustainability negative
- linkage between Govt. Funding and repayment performance
- Govt. influence undermines institutional independence

The credit cycle

Loan application

Credit Institution (Branch office)

for ***small and short-term*** **credit: approval**		**for *larger and medium* term credits: review and recommendation**
		Regional Office
		Central Office
		<u>Appraisal</u>: **a. Purpose** b. Feasibility of investment **c. Credit worthiness**
		Approval and determination of credit terms

Disbursement
- **in kind**
- **in cash**

Credit supervision

Repayment

Extension of credit

- Basic concepts and principles -

1. Forms of credit

productive ⇔ consumptive
in kind ⇔ in cash

2. Credit worthiness

Credit disbursement is the process of the temporary allocation of resources (financial means) with the expectation that they will be repaid.

↓

Freedom to select

↓

Credit worthiness (3 essential Cs)

Collateral | **Character** | **Capacity to repay**

Collateral: assets, persons, institutions

3. **Credit-terms**

4. **Costs of credit extension**
   Financial funds costs (see also next transparency)
   Transaction costs

5. **Information asymmetry, adverse selection, moral hazard**

Cost of Credit Extension

For the credit institution

1. Costs of finance:
   costs of procurement of funds
2. Transaction costs
   - staff remuneration
   - material costs
   - reserves

= Total costs for the credit institution

\+ profit margin

= Market rate of interest (including fees etc.)

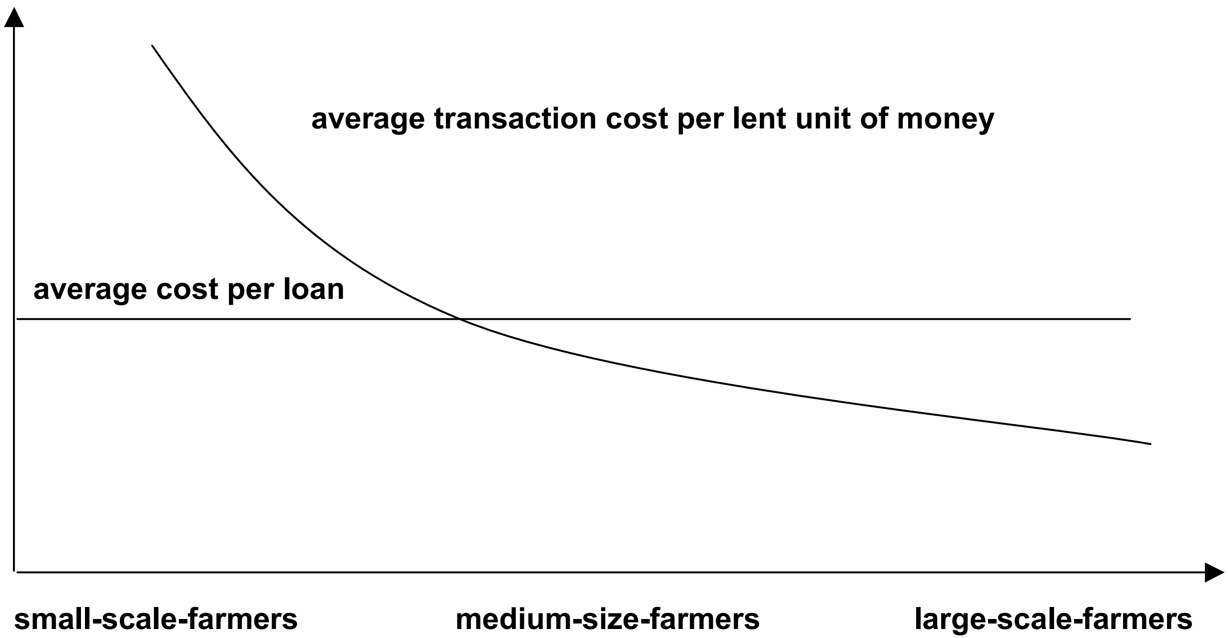
For the borrower

3. Costs of finance:
   interest payment to the credit institution (im)

Transaction costs
- transport
- opportunity costs of time
- costs of advice and procurement of information
- securities, guarantees
- certificates (f.e., certificate of residence, employment, good standing etc.)

= Total costs for the borrower

"As a rule, lending to agriculture is more expensive than lending to commerce and industry and lending to small farmers is more expensive than lending to others"



Effects of low interest rate policy

1. **weakening of rural finance institutions**
2. **adverse allocation effects**
3. **non-market (non-price) rationing**

lower cost/
larger loans

economic and political
power

4. **Distribution effect, regressive**

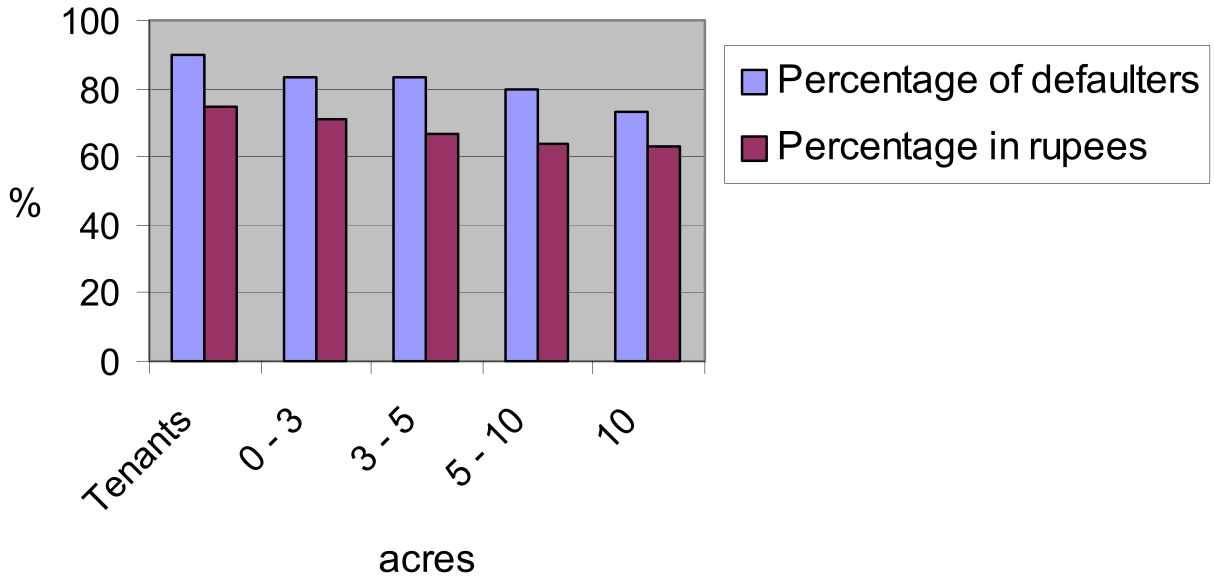
   But to be taken into account:Asymmetry of interest-rate-policy is possible

Information is asymmetric

when one party to an economic relationship or transaction has less information about it than the other party or parties. While asymmetric information characterizes many markets, one could claim that it particularly pervades financial markets

Three problems in particular have been associated with asymmetric information:

- **adverse selection**
- **moral hazard and**
- **herding behaviour (remember East Asia crisis)**


100
80
60
40
20
0
%
Tenants
0 - 3
3 - 5
5 - 10
10
acres
Percentage of defaulters
Percentage in rupees

Nominal and real rate of interest

The *real rate of interest* is equal to the *nominal rate of interest* minus the effects of inflation.
The *real rate of interest* (r) is derived from the *nominal rate of interest* (i) and the *inflation rate* (p) according to the following formula:

$$r = \left(\frac{1+i}{1+p} - 1 \right) \times 100$$

Example: i=18%, p=12%

$$r = \left(\frac{1{,}18}{1{,}12} - 1 \right) \times 100$$

$$= (1{,}0536 - 1) \times 100$$

$$= 5{,}36\%$$

Credit need and terms for investment financing

(Example: investment costs of 100)

Terms investment financing

	0	1	2	3	4	5	6	7
investment	100							
current expenditures		30	40	60	70	70	70	70
gross revenues		10	30	60	80	120	160	200
net revenues	**-100**	**-20**	**-10**	**0**	**10**	**50**	**90**	**130**
credit inflow	80							
equity contribution	20							
annuity	0	0	0	0	0	42	42	42
cash flow	**0**	**-20**	**-10**	**0**	**10**	**8**	**48**	**88**

Total debt outstanding after grace period 108,84

Annuityfactor A: 0,388

4 years grace; 7 years total maturity

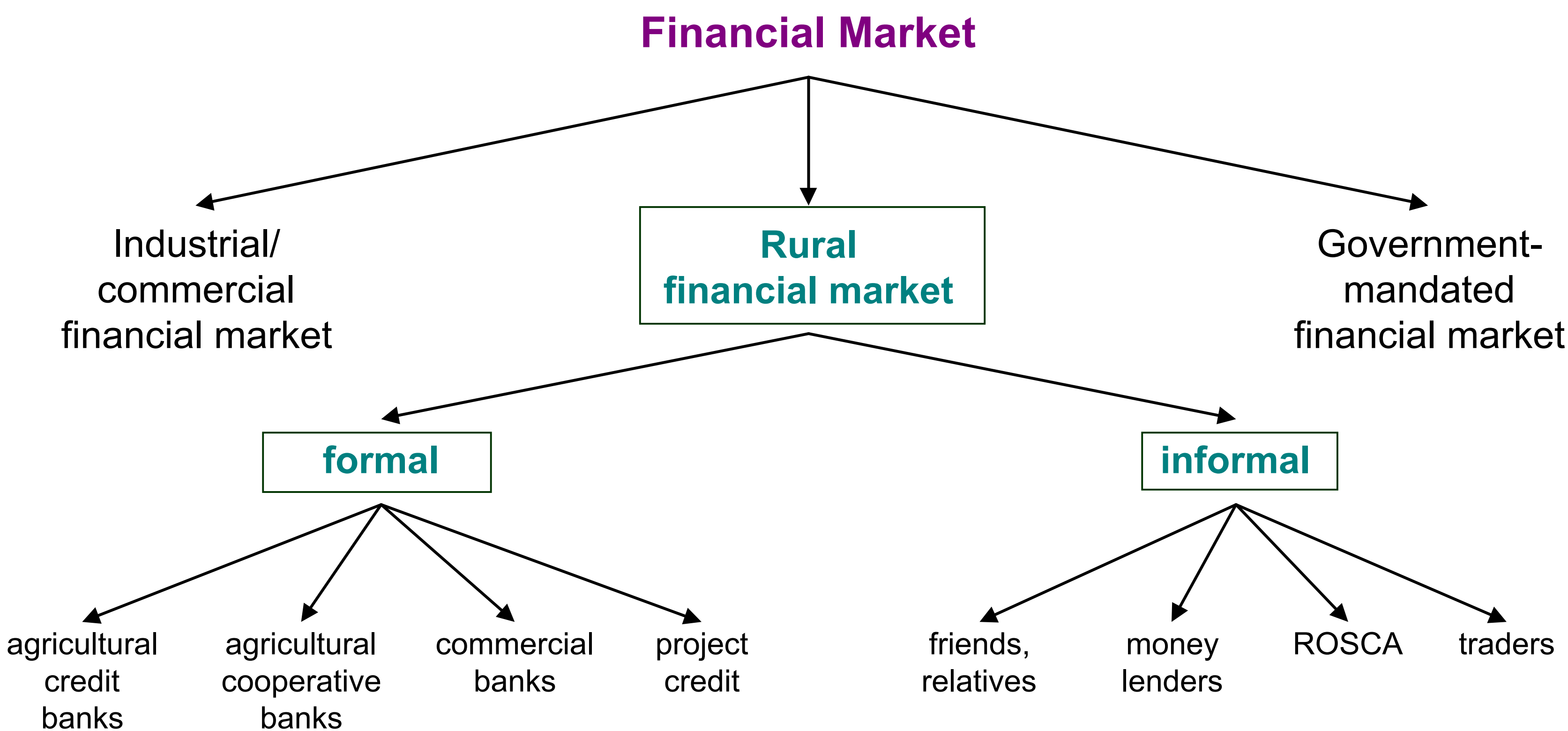
Interest being capitalized during grace, i: 8%

Credit conditions

I = 100; credit volume 80% of I; own contribution 20% of I

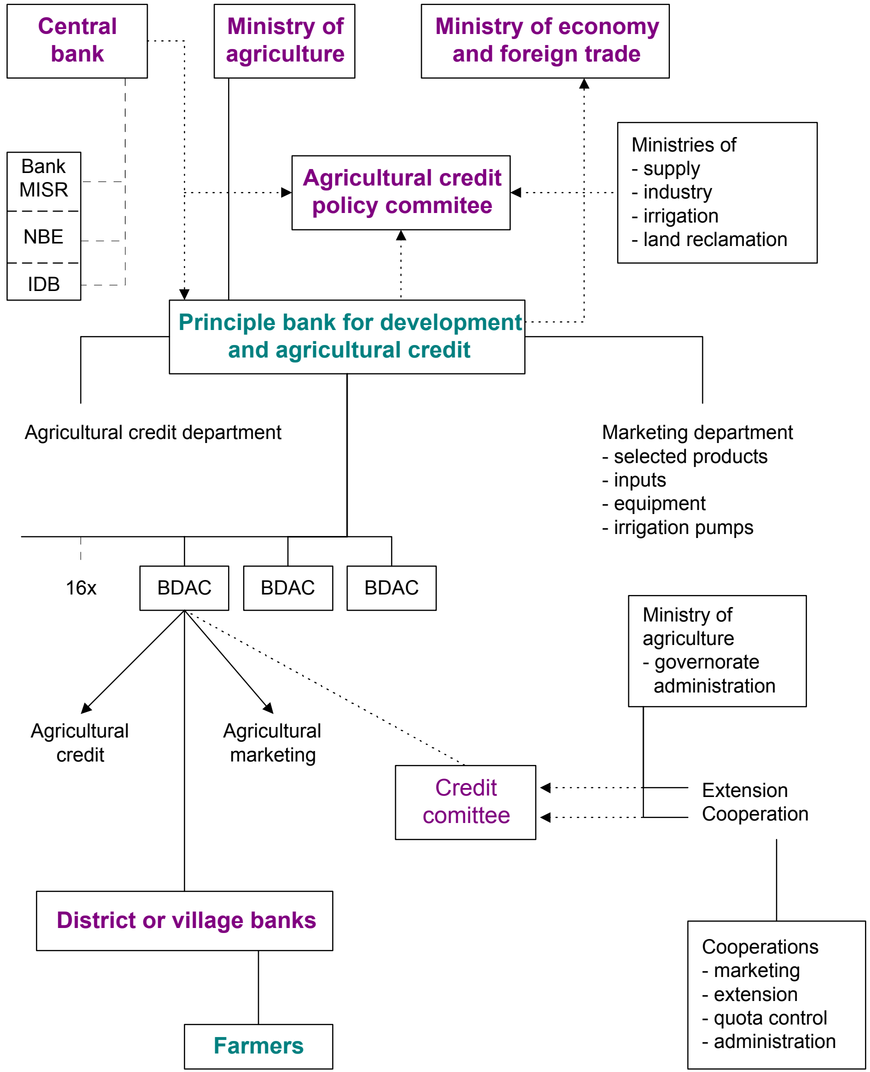
3 years grace period,

maximum maturity 6 years, i = 8%

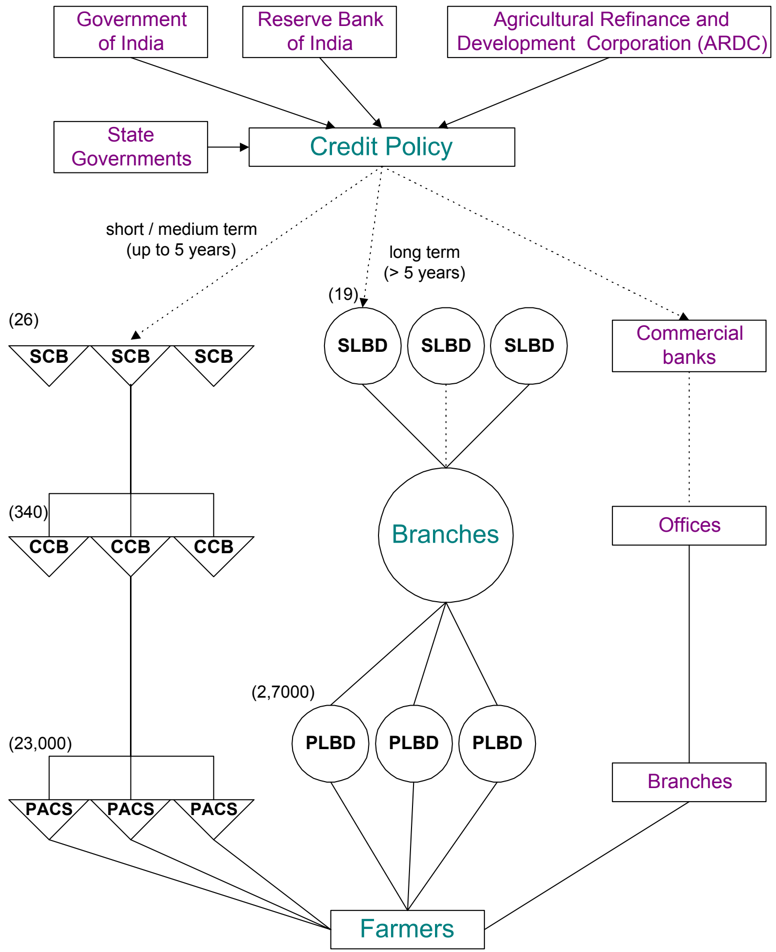

Financial Market
Industrial/ commercial financial market
Rural financial market
Government-mandated financial market
formal
informal
agricultural credit banks
agricultural cooperative banks
commercial banks
project credit
friends, relatives
money lenders
ROSCA
traders

Institutional Structures in the Formal Finance Sector

a) A Specialized Agricultural Credit Bank (Egypt)

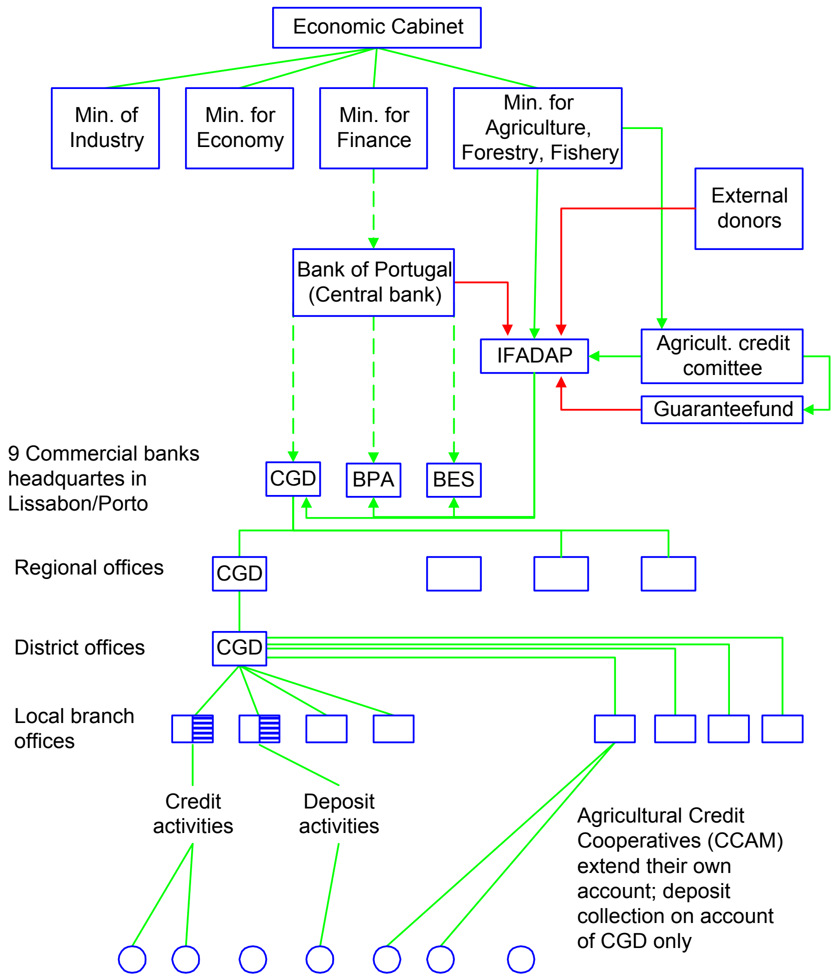


b) A Co-operative agricultural Credit System (India)

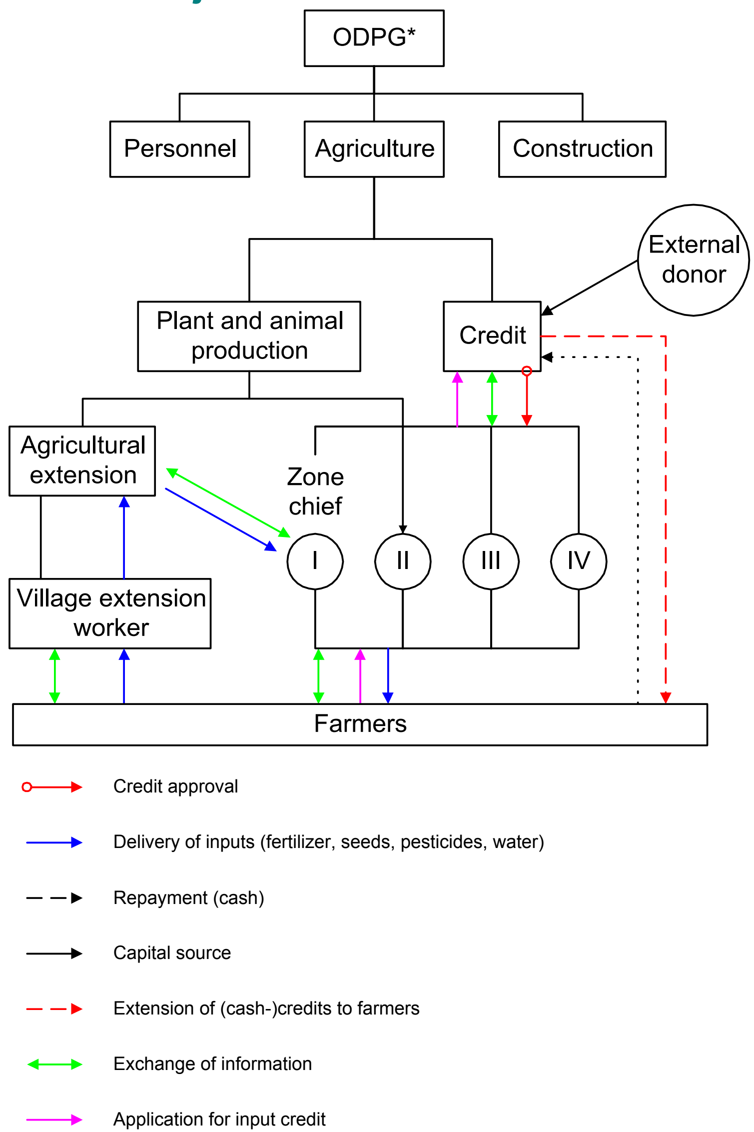


CCB Central co-operative bank
PACS Primary agricultural co-operative societies
PLBD Primary land development bank
SCB State cooperative banks
SLBD State land development bank

c) An Agricultural Credit System based on Commercial Banks (Portugal)



d) Agricultural Credit within a Project



Informal Finance

Operational Mode of Informal Financial Groups

The Case of Rotating Savings & Credit Associations (RoSCAs)

Case 1: All RoSCA members contribute the same amount at their periodic group meeting (Four members: A, B, C and D)

RoSCA members and their contribution	**A**	**B**	**C**	**D**	**Σ of individual contributions**
	50 **50** **50** **50**	**50** **50** **50** **50**	**50** **50** **50** **50**	**50** **50** **50** **50**	**200** **200** **200** **200**
Σ of contributions received by individual member	**200**	**200**	**200**	**200**	
Σ of net loan received by individual member	**150**	**100**	**50**	**0**	

Suppose: RoSCA beneficiary is determined by lottery. But for simplification suppose that member A receives the RoSCA pot first, then B, C, and finally member D. Thus, member A receives a net-loan of 150 and the last member to benefit is a net-saver which means his net-loan is zero.

Case 2: The individual contributions of the RoSCA members vary from group meeting to group meeting (Four members: A, B, C and D)

RoSCA members and their contribution	A	B	C	D	Σ of individual contributions
	X 50 100 200	50 X 80 120	100 80 X 60	200 120 60 X	350 + X 250 + X 240 + X 380 + X
Σ of contributions received by individual member	350 + X	250 + X	240 + X	380 + X	
Σ of net loan received by individual member	350	200	60	0	

Suppose: RoSCA beneficiary is determined by lottery. But for simplification suppose that member A receives the RoSCA pot first, then B, C, and finally member D. Thus, member A receives a net-loan of 350 and the last member to benefit is a net-saver which means his net-loan is zero.

Informal Savings- and Credit groups

pro	contra
+ low cost + high repayment rates + need orientation + unbureaucratic, quick loan decision process + no collateral + mutual insurance system	- generally relatively short-term oriented - cumulative credit need - no interregional inter-mediation (fragmentation) - operating outside governmental/central bank policy

Advantages and disadvantages of informal & formal finance

Informal financial sector		Formal financial sector	
Advantages	**Disadvantages**	**Disadvantages**	**Advantages**
• social cohesion (confidence ...) • closeness to clients/members • little bureaucracy • flexibility • low transaction costs	• short-term financial products • savings eventually insecure • low, locally limited capital mobilization, fragmentation • little professionallity & infrastructure	• little cost efficiency • little closeness to clients • political influence possible • bureaucratic procedures • fragmentation	• monetarisation, i.e. systemic savings mobilization • if formal financial sector accessible: economic development through income creating investments (transaction volume and time horizon)
Advantages	**Disadvantages**	**Disadvantages**	**Advantages**

	Formal financial sector	Informal financial sector
Advantage	economic	organizational / institutional
Disadvantage	organizational / institutional	economic

What is the role of the financial market ?

- Providing a medium of exchange
- Mobilization of resources
- Allocation of resources
- Risk pooling
- Enforcing financial discipline
- providing the framework for monetary policy

intermediation function

The new approach to rural finance

1. Secure institutional independence and sustainability
   → savings mobilization is important
   → covering costs is essential:
      cost covering i
      full/high repayment rate
      organizational efficiency
2. Offer services that rural clients demand
   a) savings instruments
   b) new forms of credit that can overcome the collateral issue:
      Why are banks asking for collateral?
      – information asymmetry issue
      – adverse selection issue
      – moral hazard problem
   group credit, savings, leasing
   c) include consumption credit
   d) offer insurance services

The new approach to rural finance (contin.)

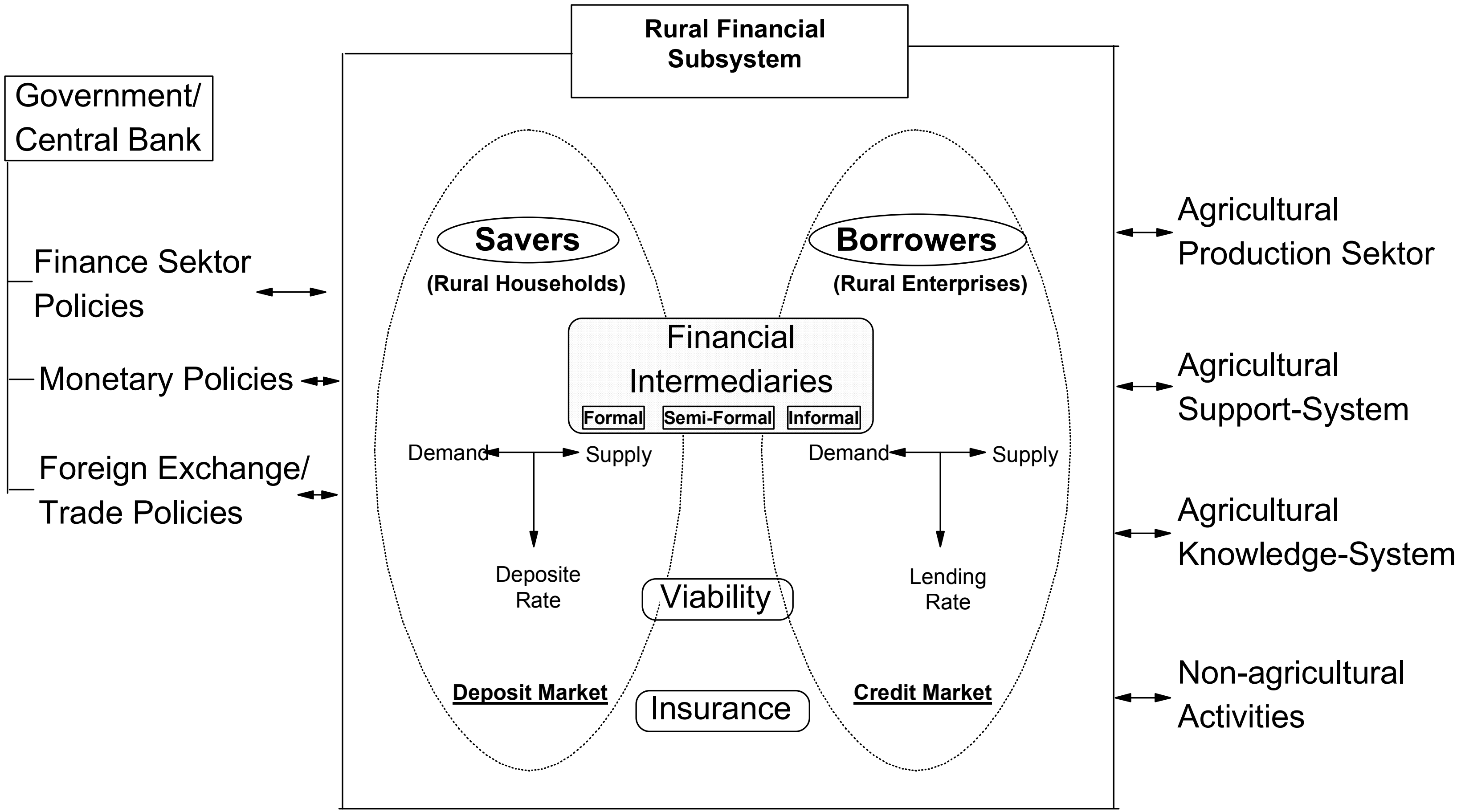
3. **Ensure outreach to the whole spectrum of the rural population**

   → it supports rural growth

   → it improves an equitable income distribution

   → it enhances portfolio diversification of the rural finance institution and reduces risk

4. **Observe the systems linkages**


Rural Financial Subsystem
Government/ Central Bank
Finance Sektor Policies
Monetary Policies
Foreign Exchange/ Trade Policies
Savers
(Rural Households)
Borrowers
(Rural Enterprises)
Financial Intermediaries
Formal
Semi-Formal
Informal
Demand
Supply
Demand
Supply
Deposite Rate
Viability
Lending Rate
Deposit Market
Insurance
Credit Market
Agricultural Production Sektor
Agricultural Support-System
Agricultural Knowledge-System
Non-agricultural Activities

Building of rural financial markets

DOs (innovative approaches)	DON'Ts
1. Mobilization of savings; savings as collateral 2. Group building and group-credit with group-liability 3. Credit allocation at the local level by clients 4. Integration of women 5. Building of guarantee and emergency funds 6. Unconditional enforcement of repayment (exclude group from access to further loans, seizing of group savings) 7. Cover costs 8. Credit/savings/plus-approach, i.e. offering of extension in addition to savings and credits (areas of extension: livestock, farming, household, nutrition, health)	1. Start from the beginning with cold money, i.e. (exclusively) funds by the government or international donors 2. Subsidizing of interest-rate (but support of institution building often indispensable) 3. Credit as appendage to a production project 4. Politically motivated debt relieve 5. Use of extension workers as debt collectors

Rural finance will be effective only if it is directed to profitable investments/activities

Source: Accra Declaration 13. November 1998

Innovative Rural Financial Institutions

(Example: Grameen Bank, Bangladesh)

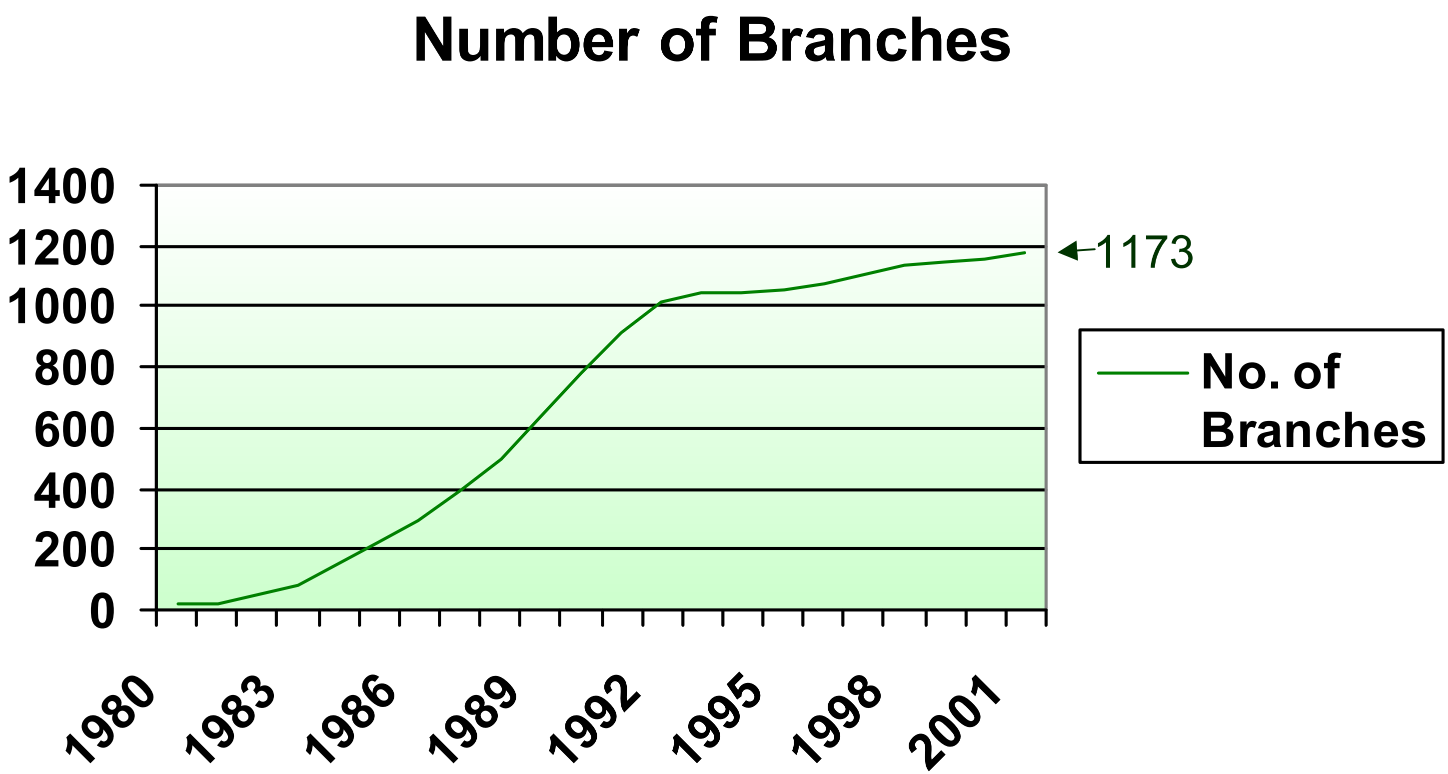
Established
1983 as an alternative to traditional credit programs which were based on collateral

Capital structure
25% government
75% members

Eligibility
$\leq$ 0,25 ha
$\leq$ or = assets equal to 0,5 ha

Credit-terms
i = 15% p.a.
no collateral required
membership in a group is necessary
(no lending to individuals)

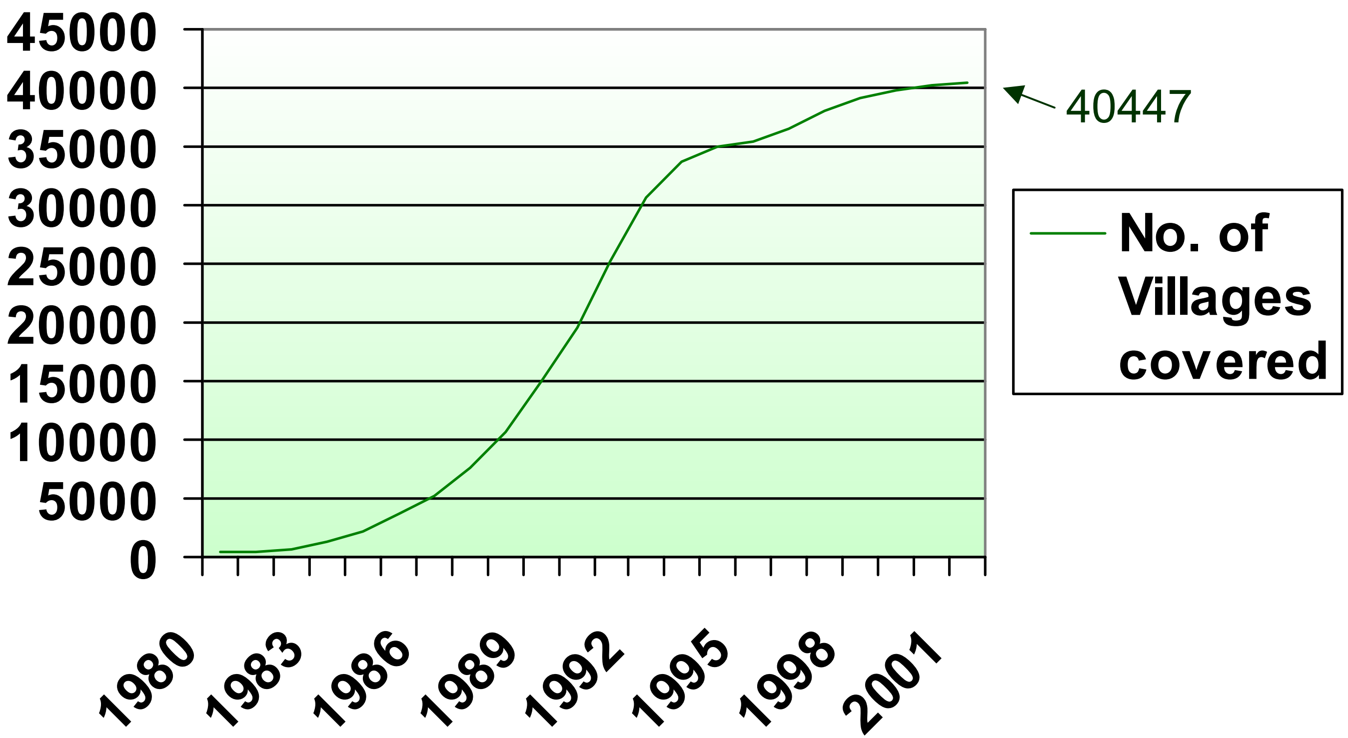
Development of Grameen Bank



Source: www.grameen-info.org

Development of Grameen Bank

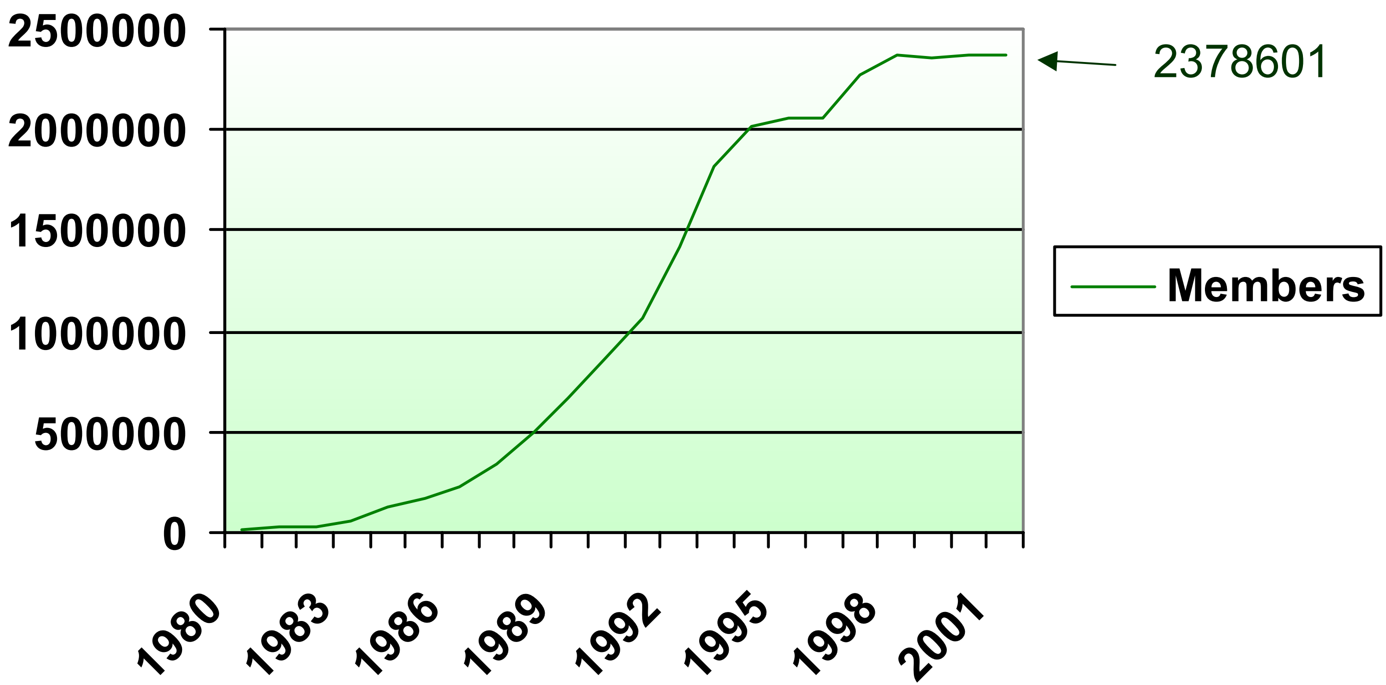
Number of Villages Covered



Source: www.grameen-info.org

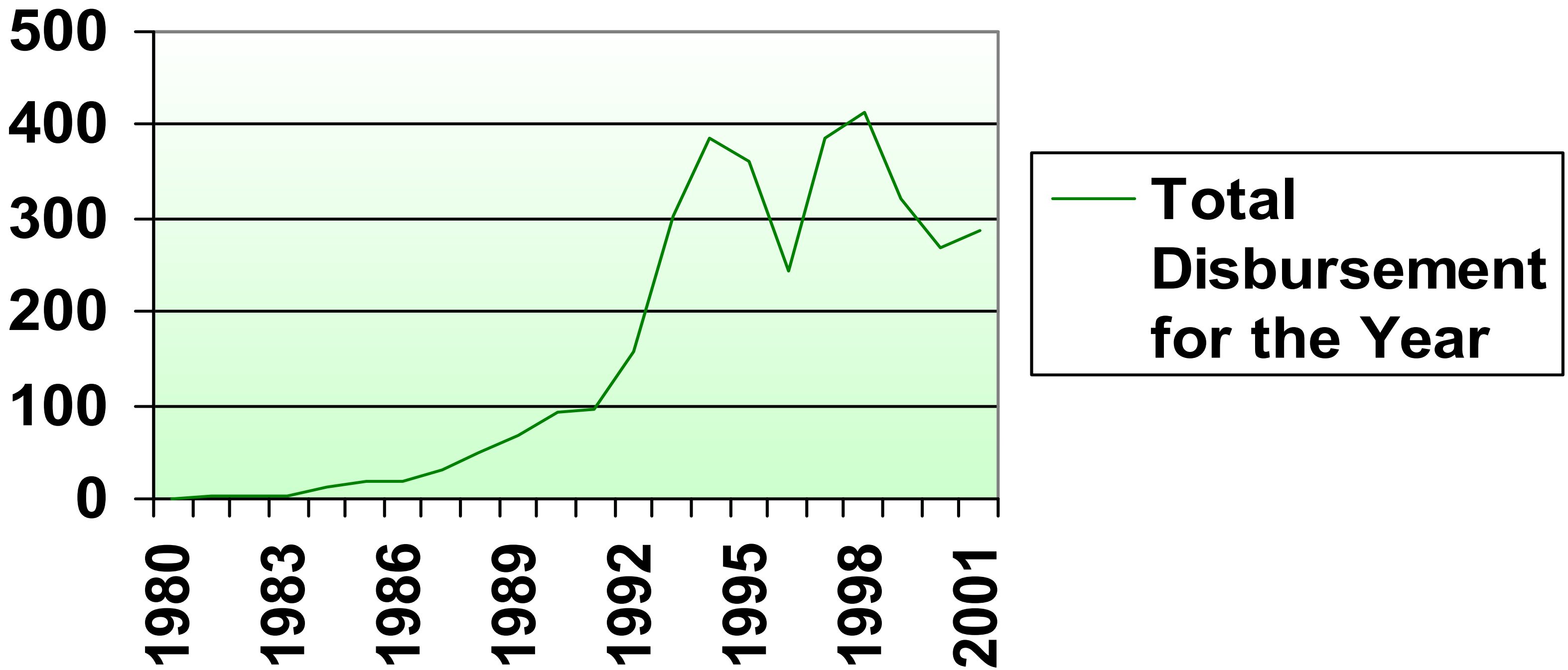
Development of Grameen Bank

Number of Members 1980-2001



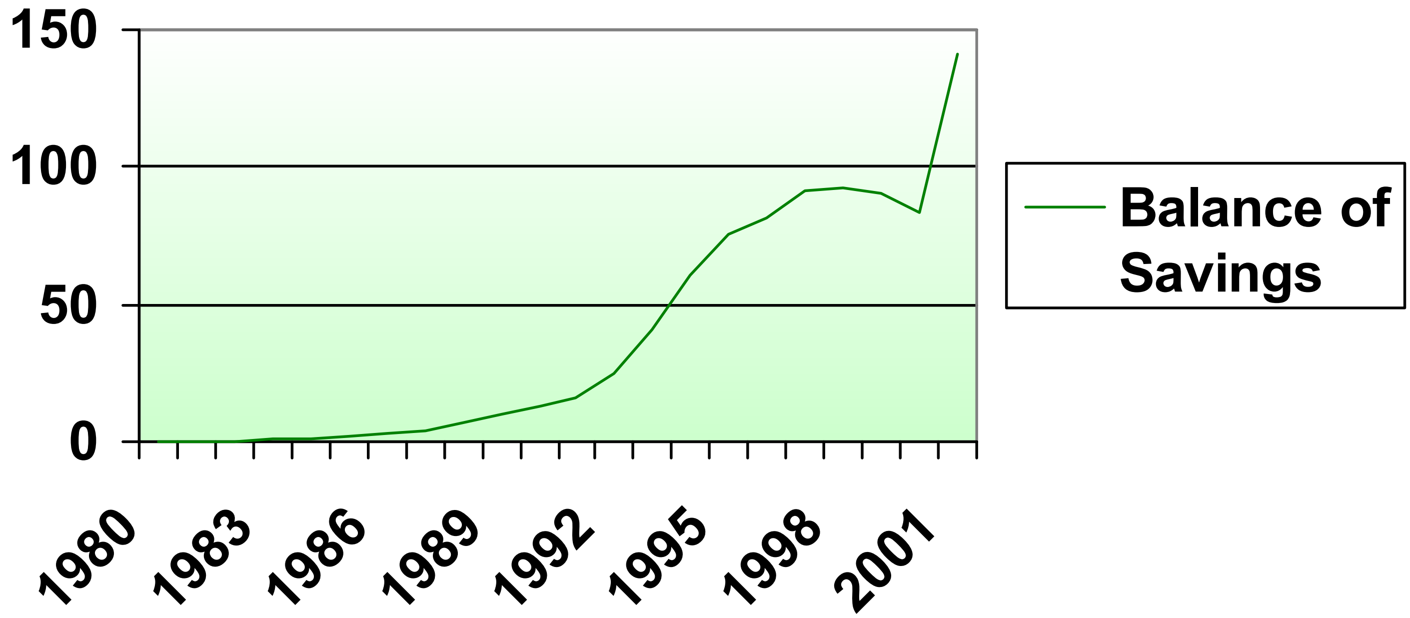
Source: www.grameen-info.org

Grameen Bank: Total Disbursement for the Year (in Mio USD)



Source: www.grameen-info.org

Grameen Bank: Balance of Savings (in Mio USD)



Source: http://www.grameen-info.org/

Grameen Bank: Profitability

Ever since Grameen Bank came into being, it has made profit every year except in 1983, 1991 and 1992.

Low interest

Three types of loans:

a) income generating loans (20% interest)

b) housing loans (8% interest)

c) higher education loans for the children of Grameen families (5%)

Scholarships

- Given on children of Grameen families
- Priority of girl children – to encourage for better grades
- Ca. 3700 scholarships per year

Education Loans

Students who succeed in reaching the tertiary level of education are given higher education loans.

Women prevail

According to the website of Grameen Bank at March 2003 the total number of borrowers is 2.6 million, 95% of them are women.

90% Self-Reliant

- Total outstanding loan is Tk 13,52 billion
- 90% from the loan financed from banks own fund and the savings from depositors
- Over 82% from depositors are ist own borrowers

Recovery Rate

The Bank reported in March 2003 recovery rate from 98,74%.

(Source: www.grameen-info.org/bank/GBGlance.html)

Reasons for the high repayment rate

1. **Target group oriented credit disbursement; only group-membership allows access to credit; strict compliance with group discipline and group solidarity.**
2. **Excellent management and decentralized structure of decision.**
3. **Continuous training of the bank employees and strong motivation.**
4. **Adjustment of the repayment to the repayment capacity and the income-cycle of the target groups.**

Results of an impact assessment

	Members	Non-Members
Growth of assets	2,5%	1%
Livestock per 100 borrowers (No. of animals)	102	61
Income	43% higher than income of non-members	
Outreach to "ultra poor"	48%	75%

Costs: 21,7% of the disbursed credits
\+ 5,0% interest on principal

26,7% total cost