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CREDIT ANALYSIS

4RS, 5CS AND 7PS OF CREDIT, REPAYMENT PLANS

The principles of farm finance are stated as 'three Cs', viz,

1) Character
2) Capacity, and 3)

Capital.

The application of these principles facilitate largely the lending agencies, in the sense that the character of the borrower is a dominant factor for consideration before a lending agency decides to advance loan. Although the farm more net income, create good finance extended to a farmer may yield repaying capacity and buildup risk bearing ability he will not repay the loan unless he has good character. The second principle deals with the capacity of the borrower who not only produce more but also has to repay the loan in time. The third principle is intended to safeguard the interest of the lending agency. When the first two intangible assets prove inadequate during distress periods, the third, asset or capital will come to the rescue of the lending agency.

The principles of farm credit can also be stated as 'three Rs'. They are:

i) Returns from the proposed investment,
ii) Repaying capacity
iii) Risk-bearing ability of the borrower

To find out the feasibility of a project or a scheme or a farm plan, these principles can the applied as economic feasibility tests. **i) Returns**

The economic viability of a project indicates whether the proposed project is likely to contribute reasonable returns on the investment which in turn will lead to economic development of the farmer.

The economic viability can be measured by

1) Net Present Worth (NPW)
2) Benefit-Cost Ratio (BCR)
3) Internal Rate of Return (IRR)

1. Net Present Worth

The NPW of the project can be estimated using formula as given below:

$$NPW = \sum_{t=1}^{n} \underline{Bn}(1 + - i\underline{Cn})_n$$

Where,

Bn = Benefits in n'th Year.

Cn = Costs in n'th Year.

n = life span of the proect

i = interest or discount rate.

If the NPW of a project is positive, then it is considered that the project is economically feasible.

2. Benefit-Cost Ratio (BCR)

The BCR can be calculated using the following formula:

$$BCR = \frac{\sum_{t=1}^{n} \frac{Bn}{(1+r)^n}}{\sum_{t=1}^{n} \frac{Cn}{(1+r)^n}}$$

To compute the NPW and BCR, the opportunity cost of capital (normal/market lending rate) may be used as a discount rate. If the BCR is greater than 1, then it is worth wile to invest on the project.

$$IRR = r \sum_{t=1}^{n} \frac{Bn - Cn}{(1+r)^n} = 0$$

IRR is that rate of discount which makes the present worth of benefits and costs equal or the net present worth of cash flow equal to zero. If IRR is greater than the opportunity cost of capital, the project is feasible. **ii) Repaying capacity**

The repayment of loan depends on the amount of surplus income available with the farm household after providing some amount for the family expenses and pre-existing liabilities, besides keeping a margin for the risk factor. As the farming family is likely to get income from the farm business as well as from off-farm activities, the repaying capacity of the borrower should be judged by taking into account their total income.

The concept of repaying capacity can be expressed symbolically as:

$$Rc = ((Y2\text{-}rf) + (Y_1\text{-}rf) + Y) - ((X_2\text{-}X_1) + Fe+OL)) \geq I+i$$

Where,

Rc = Repaying capacity

Y = Income from other sources.

Fe = Family expenses

OL = Other liabilities

rf = risk factor margin

I = Loan installment

i = interest on investment and working capital.

If the surplus is greater than or equal to loan installment plus interest, the borrower may be judged as having the capacity to repay the loan. If the surplus is more, the repayment period of loan may be reduced and it is less than (I+i) either the period for the repayment of loan may be extended or the project can be modified.

iii) Risk Bearing Ability

The beneficiaries of the project should have risk bearing ability (for repaying the loan amount promptly), ie., they should withstand the shocks of probable financial losses irrespective of the fact that the project appraisal has taken care of all precautions to prevent such losses. While the technical feasibility test reveals the productivity of the investment, the economic viability test indicated the returns to the investment. How far the beneficiaries of the project are having the capacity to repay the loan promptly is revealed by repaying capacity test. However, the farm income is subject to variations and it is essential to account for this variations in farm income. The output and price are the factors which determine the farm income fluctuations in output may be due to:

1) Natural causes like floods, droughts, pests and diseases etc.
2) Technical causes like break down of machinery, non-availability of inputs, availability of defective inputs etc.
3) Social causes like theft, labour strike etc.

Fluctuation in prices is due to demand and supply factors besides lack of storage, transport and communication facilities, failure of government to control/regulate prices etc. The variation in farm income over a period of years is measured by coefficient of variation. The coefficient of variation is measured by the formula:

$$C.V = \frac{Standard\ Deviation}{Mean}$$

Where,

Standard Deviation (SD) = $\sqrt{\frac{\sum^{n} (Xi - X)^2}{n}}$

Estimation of Standard Deviation

Year	Farm Income (Rs./year) (X_i)	(X_i - X)	(X_i - X)^2
1988-89	4,600	-3,646	132,93,316
1989-90	6,150	-2,096	43,93,216
1990-91	7,900	-346	1,19,716
1991-92	9,880	1,634	26,69,956
1992-93	12,700	454	198,38,116
Total	41,230	0	403,14,320

$$SD = \sqrt{\frac{40314320}{5}} = 2839.518269$$

$$CV = \frac{2839.518269}{8246}$$

= 0.34 (or) 34.44%

Since the coefficient of variation is 34 percent for this farm, to determine the repaying capacity of the farmer, the gross income should be deflated by 34 percent. Suppose, if the farm income is Rs.10,000 and the coefficient of variation is 34 per cent, the real farm income is Rs.6,600 only. **7 Ps**

The modern rural financing institutions have to follow principles of farm finance not only to achieve commercial gains but also to bring about social benefits. By the combination of principles of economics, banking and farm management along with the existing principles, the following principles of farm finance have been evolved, on the basis of the definition adopted for the concept of farm finance for development:

1) Principle of Productive Purpose,
2) Principle of Personality,
3) Principle of Productivity,
4) Principle of Phased disbursement,
5) Principle of Proper utilization,

6) Principle of repayment, and
7) Principle of protection

1. Principle of Productive Purpose

While there is encouragement for production finance, consumption credit is discouraged at all levels. The CRAFICARD (1981) recommended consumption credit if it is meant to increase family labour productivity. Only the unproductive consumption credit needs such as loan for litigation, social functions, etc., of the farmers may be excluded from the purview of farm finance. The resource being scarce even for productive purposes, the most important and indispensable purpose should be served first. Though a scheme may be technically feasible, the economic viability, repaying capacity and risk bearing ability of the farmer should also be taken into consideration before accepting the scheme. Therefore, even among the productive purposes, the most important one like sinking of well or installation of pumpset may be considered on a priority basis for providing finance.

2. Principle of personality

This emphasizes that the criteria to extend farm finance is not only credit worthiness, but also trust-worthiness of the borrower. The farmer should be a man of character having entrepreneurship, capable of keeping up his promises, agreeable to adopt modern technology in farming and inclined to co-operate with the financing institutions in all aspects. One of the reasons attributed for the mounting overdues is the willful default of the borrowers, majority of whom are credit worthy-affluent farmers.

3. Principle of Productivity

In short, productivity can be defined as output per unit of input. Farm finance is used by a farmer to increase the 'marginal efficiency of capital' which is a ratio between increase in expected future returns of the investment and increase in the cost of investment. Farm finance aims not only at mere production, but also intends to increase the productivity of farm resources, viz., land, labour, capital and management. Apart from productive purpose for which the loan is disbursed and good character as emphasized under principle of personality, the economic returns that would be generated by the scheme is also very important. The economic viability of the scheme is measured by Benefit-cost ratio, Internal Rate of Return and Net Present Worth.

4. Principle of phased disbursement

The finance should be disbursed not only in time but also in a phased manner, because no project needs the entire finance at the initial stage itself. Phased disbursement enables the borrower to make use of the finance far the purpose far which it is granted and aids the financing institution to ensure the end-use of it. Disbursement has three facets, viz., i) disbursement in

cash, ii) disbursement in kind and iii) disbursement to suppliers of inputs directly. The institution itself may supply the needed inputs such as seeds, fertilizers, pesticides, etc., to the farmers as is being done by co-operatives. A portion of the finance may also be disbursed to the farmer in cash to meet out labour expenses. In case of machinery the institution may directly make payments to the suppliers after receiving the margin money from the borrowers.

5. Principle of Proper Utilization

The finance so extended to a farmer should be utilized far the purpose far which it is granted. The finance should be put into optimum use through backward and forward linkages which need basic infrastructure and supervision. When finance is provided for the cultivation of crops, inputs like seeds, fertilizers, pesticides, labour, etc., must be made available to him in time. Apart from technical guidance for production, marketing facilities will help him to realise mare returns. Farmers also divert the finance to meet their urgent needs, as a result they could not generate adequate returns for loan repayment. Thus, proper appraisal of the overall financial needs of the farmer and adoption of supervisory credit system in farm financing operations will bring the desired results.

6. Principle of payment

This helps to draw proper repayment schedule and emphasizes how and when the finance extended to the farmer should be repaid. Unrealistic repayment plan makes the farmer become a defaulter, even though he may have good repaying capacity. The repayment schedule should synchronize with the time of generation of income from the project. The repayment should be drawn in such a way that the principle and interest can be repaid out of the incremental income generated from the project, after setting aside a portion to meet his family expenses.

7. Principle of protection

This emphasis that all possible precautions should be taken to safeguard the funds which the financing institutions lend to the farmers. Some of the safety measures taken are: **i) Insurance cover**

Insurance cover is available for machines, animal husbandry projects and crops to some extent.

ii) Linking credit with marketing

Linking credit with marketing enables the financing institutions to ensure the end use of credit and to receive repayments regularly. A few examples are given below to indicate agencies with whom marketing arrangements can be made.

Finance for	Tie-up arrangements with

a) Growing sugarcane	Sugar factories
b) Growing crops	Co-operative Marketing Societies.
c) Growing coffee, tea, cardomom, rubber, etc.	Respective commodity boards. Co-Operative Milk Producers' Societies
d) Establishment of dairy unit	Poultry Development Corporation.

iii) Provision of infrastructure

One of the factors for the success of farm finance is the availability of infrastructural facilities like input supply, storage facilities, transport and communication facilities, good marketing system, availability of technical guidance, etc.

iv) Covering credit under small Loans Guarantee Scheme of DI and CGC

The loans extended to the weaker sections can be covered under small Loans Guarantee Scheme of Deposit Insurance and credit Guarantee Corporation (DI and CGC). **v) Taking Securities**

Neither the secured loans are invariably repaid, nor the unsecured loans completely remain unpaid. However, as a measure of caution, the loans maybe secured by mortgage / hypothecation of assets. But no project need be rejected merely for want of security, if it is considered feasible.

Knowledge of these principles enables the lending agencies to arrive at a correct judgment of the project/ scheme, to assess the financial requirements of the farmers, to determine the risk involved in such financing and to evaluate the extent of benefit that accrues to the farmers.

HISTORY OF FINANCING AGRICULTURE IN INDIA

Finance in agriculture is as important as other inputs being used in agricultural production. Technical inputs can be purchased and used by farmer only if he has money (funds). But his own money is always inadequate and he needs outside finance or credit. Professional money lenders were the only source of credit to agriculture till 1935. They used to charge unduly high rates of interest and follow serious practices while giving loans and recovering them. As a result, farmers were heavily burdened with debts and many of them perpetuated debts. With the passing of Reserve Bank of India Act 1934, District Central Co-op. Banks Act and Land Development Banks Act, agricultural credit received impetus and there were improvements in agricultural credit. A powerful alternative agency came into being. Largescale credit became available with reasonable rates of interest at easy terms, both in terms of granting loans and recovery of them. Although the co-operative banks started financing agriculture with their

establishments in 1930's real impetus was received only after Independence when suitable legislation were passed and policies were formulated. Thereafter, bank credit to agriculture made phenomenal progress by opening branches in rural areas and attracting deposits.

Till 14 major commercial banks were nationalized in 1969, co-operative banks were the main institutional agencies providing finance to agriculture. After nationalization, it was made mandatory for these banks to provide finance to agriculture as a priority sector. These banks undertook special programs of branch expansion and created a network of banking services throughout the country and started financing agriculture on large scale. Thus agriculture credit acquired multi-agency dimension. Development and adoption of new technologies and availability of finance go hand in hand. In bringing "Green Revolution", "White Revolution" and "Yellow Revolution" finance has played a crucial role. Now the agriculture credit, through multi agency approach has come to stay.

The procedures and amount of loans for various purposes have been standardized. Among the various purposes "Crop loans" (Short-term loan) has the major share. In addition, farmers get loans for purchase of electric motor with pump, tractor and other machinery, digging wells or boring wells, installation of pipe lines, drip irrigation, planting fruit orchards, purchase of dairy animals and feeds/fodder for them, poultry, sheep/goat keeping and for many other allied enterprises.

Agricultural Credit System in India

Farmers get external financial assistance from two sources namely, i) non-institutional or unorganized agencies, and ii) institutional or organized agencies. It is a fact that agriculture has been financed by non-institutional agencies for a long time and institutional agencies were started functioning only during the early part of this century.

Non-Institutional Sources of Finance in India

Non-institutional sources include money lenders, land lords, traders, commission agents, friends and relatives.

i) Money Lenders

There are two types of money lenders in rural areas. a) agricultural money lenders and b) professional money lender. Agricultural money lender's main occupation is farming and money lending is secondary one. Professional money lender's main profession is money lending. Although the reliance on money lender by rural poor declined over the years, the credit disbursed by money lenders still forms a major portion of the total credit obtained by the farmers.

Agricultural money lender's main occupation is farming and money lending is secondary one while the Professional money lender's main profession is money lending. Although the reliance on agricultural and professional money lenders by rural poor declined over the years, i.e., from 80 per cent of their total credit requirement in 1951 to 30 per cent in 2002, the credit disbursed by money lenders still forms a major portion of the total credit obtained by the farmers. **Advantages**

i. Unrestricted supply of credit for any purpose..
ii. Easy access by farmers as money lenders maintain close relationship with rural families.
iii. Method of business adopted are simple and flexible. iv. Timely availability of credit without much formalities.
v. Knowledge on local conditions and experience of money lender facilitate his business.
vi. Money lenders do not insist upon any particular type of security for the grant of loans.

Unfair Practices of Money Lenders

Money lenders deceive the farmers through many ways such as:

a. They manipulate bonds and promissory notes obtained from debtors and enter large sum than actually lent.
b. They give no receipt for repayments and often they deny such repayments.
c. They charge very high rate of interest
d. They give loans for both productive and unproductive purposes which results in indebtedness

Proportion of Borrowing* by Farmers from Organized and Unorganized Lending Agencies

(percentages)

Lending Agencies	1951	1961	1971	1981	1991	2002
I Organized Agencies						
1.Government	3.3	6.7	7.1	4.0	6.1	2.3
2. Co-operatives	3.1	11.4	22.0	29.0	21.6	27.3

3.Commercial Banks	0.9	0.3	2.4	28.0	33.7	24.5
4. Insurance, Provident Fund and Other Institutions	-	-	0.2	-	2.6	3.0
Sub-Total	**7.3**	**18.4**	**31.7**	**61.0**	**64.0**	**57.1**
II Unorganized Agencies						
1. Land Lords	1.5	0.9	8.1	4.0	4.0	1.0
2. Agricultural Money lenders	24.9	48.1	23.0	9.0	7.0	10.0
3. Professional Money lenders	44.8	13.8	13.1	8.0	10.5	19.6
4. Traders and Commission Agents	5.5	7.1	8.4	3.0	2.2	2.6
5. Friends and Relatives	14.2	5.2	13.1	9.0	5.5	7.1
6. Others	1.8	6.5	2.6	6.0	6.8	2.6
Sub-Total	**92.7**	**81.6**	**68.3**	**39.0**	**36.0**	**42.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

* Borrowing refers to outstanding cash dues.

Sources: a) Reserve Bank of India, All India Rural Credit Survey Committee Report, 1951-52.
b) Reserve Bank of India, All India Debt and Investment Survey Report, 1961-62,1971-72, 1981-82, 1991-92 and 2003.

ii) Land Lords

Small farmers and tenants rely on land lords for finance to meet out their productive and unproductive expenses. This source of finance has all the defects associated with money lenders. Interest rates are exorbitant. Often small farmers are forced to sell out their lands to these land lords and they become land less labourers. Landless labourers bonded labourers. The reliance on this agency by farmers has been decreased over years, i.e., from 1.5 per cent in 1951 to 1.0 per cent in 2002.

iii) Traders and Commission Agents

They are functioning either to get regular supply of products for their trade or to have a control over the provision of credit by other creditors. Though the rate of interest charged by them is not as high as charged by the money lenders, they charge more in the form of concessions and service chages, They mostly finance for the cultivation of commercial crops like sugarcane, cotton, ground-nut, tobacco, onion, etc. The share of credit provided by these agencies to total credit decreased from 5.5 per cent in 1951 to 2.5 per cent in 2002.

iv) Relatives

Farmers borrow from their relatives for temporary exigencies. It is simply a mutual help. Since all farmers are living under similar conditions, they can not lend large sums as loans. Normally, no interest is paid on such loans. Although, the private agencies satisfied some of the criteria of a good system of credit,their loan were not related to production purposes, they never cared for the end use of the loan extended and the loan is often used for wasteful purposes. However, institutions adopt a productive and purpose oriented credit policy while providing credit. So this policy made the institutions to discourage the provision of credit to consumption purpose. But it is evident that the need for consumption loan in rural households continues to persist. As the institutions deny consumption loans to farmer's, the non-institutional agency continues to dominate the rural credit system. Moreover, the institutional agencies could not provide more than 60-65 per cent of the total credit needs of the farmers. Therefore, the private credit agencies should be brought under a more realistic system of state regulation. Otherwise, the rural people would continue to suffer from indebtedness in spite of various efforts taken by the government to uplift their economic conditions. Their share has declined from 14.2 per cent in 1951 to 7.1 per cent in 2002.

Institutional Credit Agencies

As compared to the quantum of credit requirement and the capacity of institutions to meet these credit demands under multiagency system, it is impossible to completely wipe out the private agencies from the rural scene. The Banking committee, (1931) and the Banking Commission (1972) offered suggestions toget over the evil aspects of private lending agencies and bring them under sound credit system.These suggestions may be adopted till the institutional agencies attain the capacity to meet the full demand for credit.

The major institutions supplying credit to agricultural sector are : i) Government, ii) Cooperatives, iii) Commercial Banks, iv) Regional Rural Banks, v) Reserve Bank of India (National

Bank for Agricultural and Rural Development)

i) Government The Government provides both direct and indirect finance to farming sector. **Direct Finance** The government provides taccavi loans in times of distress like famine, flood, drought etc. Land Improvement Act of 1883 and the Agriculturists Loans Act of 1984 were enacted to extend long and short term financial assistance to farmers for agricultural development and also an relief measures during distress times.

Merits

1. They are granted for long period of time.
2. Low interest is charged.
3. The repayment plan is convenient, i.e., repayment in equal annual installments. **Demerits**

1) Quantum of loan is determined an the basis of value of security offered, by which, large farmers receive more credit than small and marginal farmers.
2) As these loans are not production oriented, they do not satisfy the standard needed for sound system of form credit.
3) The loan amount is inadequate.
4) The land less labourers were left out in the lurch at the time of distress.
5) The taccavi loans are not popular among farmers due to

- inordinate delay in sanctioning of loan.
- imposition of irrelevant conditions.
- incompetent supervision • in convenient recovery methods.

In view of these demerits, it was recommended to channalise these loans through cooperatives.

a) Indirect Finance to Agriculture by Government

1) It allocates subsidized fertilizer to states according to their needs.
2) It provides technical assistance to farmers through Tamil Nadu agricultural Development Programme.
3) It implements price stabilization schemes for various crops.
4) In consultation with the RBI, the government prescribes the rates of interest to be charged on loans granted to weaker sections of rural areas.
5) It contributes to the share capital and debentures of co-operatives.

Instead of playing direct role in providing form credit, the government may play a vital role in creating conditions or infra-structural facilities to the promotion of institutional credit.