

# **1 The Role of Rural Finance in Economic Development**

## **1.1 Introduction - An Overview**

Capital formation is generally recognized as a necessary condition of development. Efficient financial markets play a key role in capital formation (McKinnon 1973; Shaw 1973). Of the two principal sources of capital, external and domestic, the internal funds are by far the most important component. In most low-income countries internally mobilized funds account for the major part of investment funding, often financing 90 % and more of overall investment. Thus, internal resource mobilization is vital for development not only because of its relative importance in investment financing, but also because self-sustaining growth can and should not rely predominantly on external sources. Well functioning financial systems play a key role in domestic resource mobilization.

Financial markets are also important in guiding the flow of scarce financial resources to investments of highest return. The most essential instrument in the financial markets allocation function is the interest rate, i.e. the price of capital. In a situation of limited financial resources the interest rate selects from the total investments planned for a certain period those that have a profitability that exceeds or equals the interest rate; all investments with a return lower than the interest rate cannot be carried out (given rational economic behavior and full information and fully competitive markets). The interest rate as the relative price of capital in relation to wages (price of labor) also influences the sectoral allocation of capital and the choice of technology. A relatively high ratio of interest to wages will discourage capital intensive technologies and promote labor intensive production methods. Distorted interest/wage ratios, as they are often found as a result of subsidized interest rate policies and minimum wage regulations, can cause heavy biases towards capital intensive production. The capital intensity promoting bias of subsidized interest rates is particularly strong if other policy distortions, such as over-valued exchange rates, work in the same direction and reinforce such distortive interest rate policies.

An efficient financial system provides those services that are most essential in a modern market economy. The use of a stable, widely accepted medium of exchange (money) reduces the costs of transactions. It facilitates specialization in production and trade and exchange of commodities. Financial assets with attractive returns, liquidity structure and risk characteristics encourage saving in financial form. By comparing alternative investment possibilities and selecting those with the highest return, financial intermediaries contribute to raising the efficiency of resource use. Access to different financial instruments enables investors and savers to exchange financial means in a way that suits their return, price, maturity and risk expectations. The efficient use of resources, savings, trade and risk taking are the essential elements of a growing economy.

In the past, a key component of Government policy to promote economic development has been the subsidization of interest rates and the targeting of credit to development priority sectors. These policies in most countries had negative effects on financial market development. In addition, in many countries financial institutions came increasingly under stress, when as a result of developments in world markets (declining commodity prices, increasing borrowing interest rates and declining demand from industrial countries) many borrowers were unable to repay loans and pay interest. In many developing countries, notably in sub-Saharan Africa, governments were forced to assist financial institutions or see them collapse under the burden of debts and non-repayment of loans. The collapse of a financial institution involves heavy costs on resource allocation, resource mobilization and confidence in the financial system.

These situations have forced many countries to reshape financial institutions and restructure their entire financial system. Reform towards a more market oriented financial system will contribute to growth through improved resource mobilization and allocation and risk pooling.

For a financial system to function efficiently, the macro-economic and institutional framework is essential. It is necessary to maintain macro-economic stability to establish a reliable legal, accounting and regulatory system, to specify rules for full disclosure of information and to design taxes that do not excessively burden the financial sector and that do not distort resource allocation. In building a stable and reliable macro-economic policy framework and institutional environment, governments can contribute significantly to the formation of financial systems that will promote economic growth.

## **1.2 Financial Markets in Centrally Planned as Compared to Market Based Economic Systems**

In a centrally planned economy, the role of the financial system is fundamentally different. Resources for development are mobilized by the Government through its pricing, tax and income payment system, and they are distributed to enterprises and other investors which are mostly Government controlled, through the mechanism of the "Plan" and the planning bureaucracy. The financial system role is solely that of a facilitator. It provides the investors with the funds, as the Plan has determined; banks have no decision power whether to finance a certain investment or to refuse to do so. They are charged with the resource mobilization function only in a limited way. They often accept savings deposits, but these resources enter the pool to finance the investments of the Plan.

In market based systems financial markets perform these functions on the basis of voluntary actions of the market participants, i.e. savers and investors. They are driven by the motives of income/profit maximization, and they are controlled by risk considerations and the institutional framework (legal, regulatory and social norms). Competition ensures that transaction costs and margins are kept low, that risk is borne by those who are willing to assume it and that investments are undertaken by those who have the most profitable opportunities.

## **1.3 The Institutional Set-up**

A financial system consists of a variety of institutions. In general, we distinguish between an informal and a formal sector.

Informal finance institutions are those that fall outside the Government/Central Bank regulatory system in monetary affairs. They normally include moneylenders, traders, pawnbrokers and friends and family members as well as group based credit and savings associations; informal institutions are still important in many less developed countries. In rural areas they can even be more important than the formal sector.

Formal finance institutions include those institutions that fall under the monetary regulations, rules and laws of the Government and/or the Central Bank. They grow more important as the economy develops and the need for financial services expands. The formal sector includes such institutions as commercial banks, development banks, cooperative finance institutions, insurance institutions, leasing companies etc.

## **1.4 The Intermediation Role**

All financial institutions have a common role to fulfil: the intermediation role, i.e. they bring supplies of funds together with those who demand finance. Without financial instruments an economy would be limited to self-consumption, barter trade and commodity stocks; specialization and division of labor, essential components of economic progress would be difficult and costly. Savings could only occur by storing goods; investments would be limited to producers' own capacity to save. Cost of transactions would be extremely high and many activities, characteristic of any complex industrial society could simply not take place. In this intermediation function they transform financial assets so that the different preferences of savers and investors are synchronized. For example, financial institutions transform the size and maturity of financial assets and in this way make the preferences of many rural depositors for liquid assets congruent with the demand of large investors who need large, long-term loans to finance investment.

## **2 The Role of Rural Financial Systems**

### **2.1 Objectives of Rural Financial Market Development**

In building rural financial markets, the following objectives are being pursued:

- (1) to promote economic growth through mobilizing resources and providing financing for financially and economically viable investments and economic activities;
- (2) to further efficient resource allocation;
- (3) to contribute to better income distribution and poverty reduction by enabling access to financial markets also for the poor;
- (4) to support the building of sustainable, self-supporting rural finance institutions.

In achieving these objectives, a realistic, i.e. market-based interest rate policy plays the most vital role. Interest rates, their formation and their role in selecting investments for financing and in allocating resources efficiently will take a prominent place in the following discussion.

#### Re (1): Promoting economic growth

The growth promoting role of rural financial markets requires that rural financial institutions are placed in a position to mobilize savings. For this purpose they need to be entitled to provide savings facilities (some rural credit institutions, in the past, have been prevented to do so by their statutes and Government regulations) and to actively promote this side of their activity. It is important that transaction costs for savers are kept low, particularly if the institutions cater to a low income clientele. This means that rural finance institutions need to branch out into villages to keep transport/travel costs for rural savers low. It is also important that procedures are kept simple and that savers have easy access to their savings in case of their need. Withdrawal restrictions need to be minimal as they can be a serious hindrance to savings mobilization. Also the macro-economic evidence support the correlation between savings and economic growth (see Table 2.1).

**Table 2.1 Savings and Growth in Developing Countries, 1965 to 1987**

Country group by GDP growth rate	Gross national savings/GDP	Gross investment/GDP	Change in GDP/investment	M2/GDP
High growth (over 7 %)				
7 countries	28.0	28.6	26.3	43.0 <sup>a</sup>
excluding China	23.2	26.7	33.1	
Medium growth (3-7 %)				
51 countries	18.5	22.6	23.6	31.2
Low growth (less than 3 %)				
22 countries	19.0	19.0	10.1	23.8

Note: Data are weighted averages times 100 and are based on a sample of 80 developing countries. M2 is currency in circulation plus demand, time, and savings deposits at banks. Investment is gross domestic investment.

<sup>a</sup> Because of lack of data, average is for 1977-87 only. Source: IMF, International Financial Statistics, and World Bank data.

To promote growth, rural finance institutions need to be able to enter into a constructional relationship with investors that propose financially and economically profitable activities. This requires that they adjust the lending terms (maturity, grace period, capitalization of interest) to suit the needs of those investments. Often, Government imposed restrictions on maturity and grace period prevent designing a financing plan that suits the needs of a good investment.

#### Re (2): Promoting efficient resource allocation

To further efficient resource allocation, interest rates play a key role (see chapter 3). Also, rural finance institutions contribute to efficient resource allocation by screening credit-worthy from non-credit-worthy borrowers. They need to assess the seriousness of a potential borrower to fulfil his obligations, i.e. particularly to pay interest and amortization as scheduled. This requires to assess his capacity to repay, his character (in the sense of honoring commitments made) and his capability to provide collateral. In many societies or in lending to the poor, the traditional way of securing credits by pledging land or assets is not feasible. Innovative approaches to lending in those circumstances have been developed. They are discussed below.

#### Re (3): Financial markets for the poor

Providing financial services to the poor has the potential to efficiently and effectively contribute to income generation and income stabilization, thereby addressing the long-term and short-term food security problem of the poor. Financial services for the poor poses some specific problems of policy and program design. The poor have little or no collateral to offer. Savings and credit amounts and installments are small, raising per unit transaction costs. Credit needs for production and consumption cannot be clearly distinguished in poor households where spheres of production and consumption are intertwined and often inseparable. Given the poor's vulnerable position, risk aversion and related risk insurance behavior play important roles. The poor have traditionally obtained such services almost exclusively from informal networks. In advocating credit for the poor, there is a need for a thorough understanding of existing indigenous and informal institutions at the household and community level. It provides the key to designing sustainable rural financial systems that serve the poor (Zeller et al. 1996). Innovative approaches are needed for linking - and, thereby, expanding - informal systems, built bottom-up, with the formal credit/savings systems of rural banking institutions and cooperatives. However, in order to be sustainable, financial services for the poor must be economically viable. Experience shows that this can be

achieved through institutional innovations with participation by the poor in many settings. Innovative approaches addressing particularly these objectives are discussed in chapter 6.

#### Re (4): Building sustainable rural finance institutions

Experience has shown that rural finance institutions often collapsed as a result of major institutional and policy deficiencies. Institutional sustainability requires efficiency and integrity in organization and management. Without these, savers will not be willing to entrust their savings to a rural finance institution, and without savings mobilization, a self-supporting institution cannot be built (see also chapter 5.2). Similarly on the crediting side, an institution that is subject to nepotism and cronyism in its decision process to grant a credit will most likely have great difficulties in recovering those loans. Secondly, institutional sustainability requires a high credit recovery performance. Institutions with recovery rates falling below 95 % to 90 % have often been found to get into difficulties. Provisions for bad debts raise lending costs and can hardly protect an institution if the recovery rate declines substantially below those levels. Effective screening of borrowers and sanctions in case of default are important instruments to maintain a good recovery performance. Thirdly, rural finance institutions need to be able to cover their costs through charging a cost covering interest margin. Often the Government's low interest rate policy has been a serious impediment to charging cost covering margins on lending to rural borrowers. If institutions cannot cover their costs, their capital base may get eroded, and they become dependent on Government subsidies. If budget constraints lead to delays or non-payment of the subsidies required, the institutions are likely to collapse. Fourthly, institutional sustainability requires, as discussed above, the mobilization of savings. Being dependent solely on Government and/or external funding raises the risk of continuity of those sources of funding. Experience has shown that institutions with a substantial part of their funds being raised through savings mobilization have a substantially higher resilience to fluctuating flows of resources from Government or external sources.

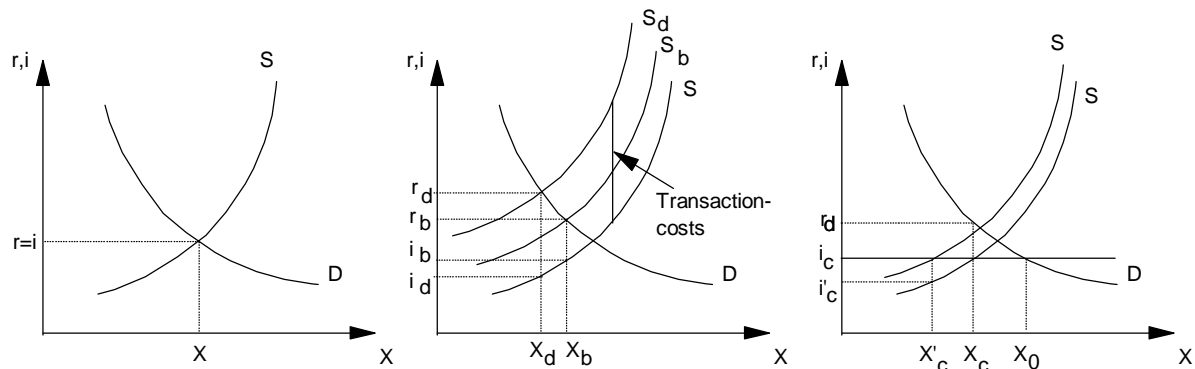
## **2.2 Interest Rate Policy and Rural Financial Market Development**

As discussed above, interest rates play a key role in achieving the objectives of rural financial market development. We will first discuss the interest rate formation in a free market and the effect that ceilings on interest rates have on savings and investment. We will then turn to the selection function of interest rates and how it affects economic growth. Finally, we will discuss the impact of interest rates on resource allocation and technology selection.

### Interest Rate Formation

The impact of financial intermediation and interest rate ceilings on credit can be demonstrated geometrically (as shown in Figure 2.1).

**Figure 2.1 The supply of and demand for credit**



In the above diagrams, the horizontal axis measures the quantity of borrowing or lending per unit of time ( $X$ ), and the vertical axis measures the cost of borrowing ( $r$ ) and the return for lending ( $i$ ). The economy's demand for credit is depicted in the first diagram by the downward-sloping curve labeled  $D$ . Its negative slope reflects, in part, the increasing quantity (per unit of time) of profitable investment as the cost of borrowing declines. The upward-sloping curve labeled  $S$  depicts the economy's supply of credit, the amount of saving offered to others either directly or through intermediaries such as banks. Its positive slope reflects, in part, the increasing share of total saving provided for financial assets as their return rises relative to the return on real assets or investment abroad. If there were no transaction costs or interest rate regulations, the market-determined rate of interest would be  $r=i$ , and the amount of credit per period would be  $X$ .

### Transaction Costs

It is costly, however, for lenders to locate credit-worthy borrowers directly. In the centre diagram, the amount lenders must charge borrowers to cover that cost is reflected in the curve  $S_d$ . The vertical distance between this curve and the supply of funds curve ( $S$ ) is the amount of these transaction costs (including the cost of covering the expected defaults). If lenders had to find borrowers on their own, they would be willing to supply  $X_d$  in the expectation of earning (after deducting expected costs)  $i_d$ . For that amount of credit borrowers would be paying  $r_d$ . Transaction costs introduce a wedge between the cost to borrowers and the return to lenders which reduces the amount lent.

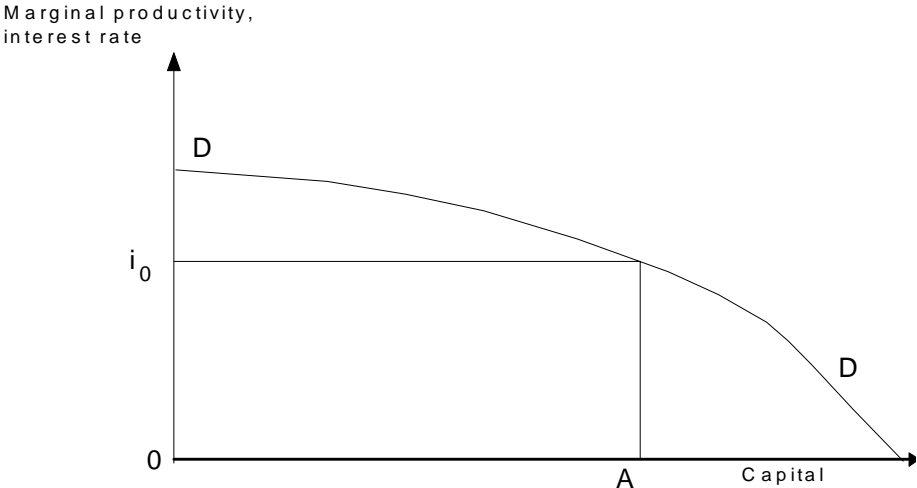
Banks or other intermediaries exist, in part, because they are able to reduce the transaction costs of borrowing and lending. This is reflected in the curve  $S_b$ . The wedge between the cost to borrowers and the return to lenders is now the bank's spread. Assuming that bank spreads are less than the costs of direct lending, the amount lent increases from  $X_d$  to  $X_b$ , the return to lenders increases from  $i_d$  to  $i_b$ , and the cost to borrowers falls from  $r_d$  to  $r_b$ . The better banks are at reducing transaction costs, the greater these effects. Reducing taxes on banking (such as unremunerated reserve requirements which are part of these costs) has the same effect.

### Interest Rate Ceilings

The third diagram shows the effect of an interest rate ceiling (the horizontal line at  $i_c$ ). If the ceiling is applied to deposit rates, it will reduce the amount lent (to  $X_c$ ) and raise the cost to borrowers (to  $r_d$ ). If the ceiling applies instead to lending rates, banks will set deposit rates at  $i'_c$ , deducting transaction costs. The amount deposited (and lent, when abstracting from

reserve requirements) will be  $X'_c$ . The excess demand for credit ( $X_0 - X'_c$ ) cannot be satisfied, and lenders will ration the available supply. The selection function of the interest rate is illustrated in Figure 2.2

**Figure 2.2 Selection Function of Interest Rates**



On the horizontal line potential investments are shown; on the vertical axis the marginal productivity of investments and the interest rate is indicated. The curve DD describes the declining marginal productivity with increasing level of investment. At a given interest rate  $i_0$  the investments  $0A$  are feasible, as their rate of return exceeds the interest rate (or just equals the interest rate in  $A$ ) that investors would have to pay for financing the investment. Investment beyond the point  $A$  with a rate of return lower than the prevailing interest rate would not be feasible. The interest rate, in selecting the profitable investment from those not profitable, promotes economic growth.

Interest Rates and Resource Allocation

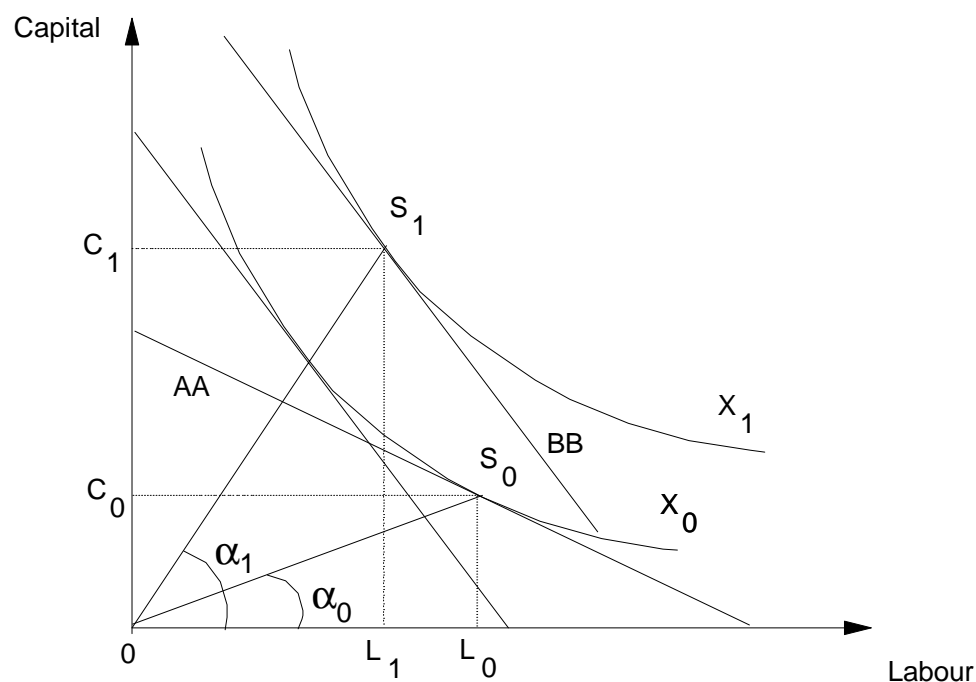
The resource allocation effect is demonstrated in Figure 2.3. It describes a simple production function producing the output  $X$  with two production factors capital and labor.

Let  $AA$  denote the original situation of an enterprise facing an interest to wage ratio of  $\frac{i_0}{w_0}$

Under the assumption of a competitive market and with a given amount of expenditures available for employing capital and labor the optimal use of capital and labor is realized in  $S_0$ . At that point the enterprise will employ  $0C_0$  capital and  $0L_0$  labor. Let us assume the Government had decided to subsidize interest rate, resulting in an interest to wage ratio of  $\frac{i_1}{w_0}$ ; this new price ratio of capital to labor is reflected in a steeper expenditure line, here denoted as  $BB$ .

The optimal solution would be  $S_1$  with  $0C_1$  capital and  $0L_1$  labor employed. The ratio of capital to labor employed in  $S_0$  and  $S_1$  increases ( $\alpha_1 > \alpha_0$ ) as a result of the subsidization of the interest rate. In other words, a subsidized interest rate encourages the use of more capital-intensive technologies (which often at the same time are also the more import-intensive technologies).

**Figure 2.3 Interest Rates and Resource Allocation**



The Macro-Evidence

The relationship between real interest rates, growth rates, financial depending and investment rates are shown in Table 2.2. Similarly, Figure 2.4 shows the relationships for 19 developing countries.

**Table 2.2 Growth Rates and Other Economic Indicators for Country Groups with Positive, Moderately Negative, and Strongly Negative Real Interest Rates, 1965 to 1973 and 1974 to 1985 (average percentage)**

Indicator	1965-73			1974-85		
	Positive	Negative		Positive	Negative	
		Moderately	Strongly		Moderately	Strongly
Real interest rate	3.7	-1.7	-13.7	3.0	-2.4	-13.0
GDP growth rate	7.3	5.5	4.6	5.6	3.8	1.9
M3/GDP	28.9	27.0	29.1	40.3	34.0	30.5
Investment/GDP	21.4	19.7	21.4	26.9	23.2	23.0
Change in	36.7	31.1	21.7	22.7	17.3	6.2
GDP/investment						
Change in real	18.7	12.7	6.4	16.6	8.2	-0.9
M3/real savings						
Inflation rate	22.2	7.1	40.2	20.8	23.9	50.3
Volatility of inflation rate	17.1	5.3	27.2	12.2	9.1	23.5

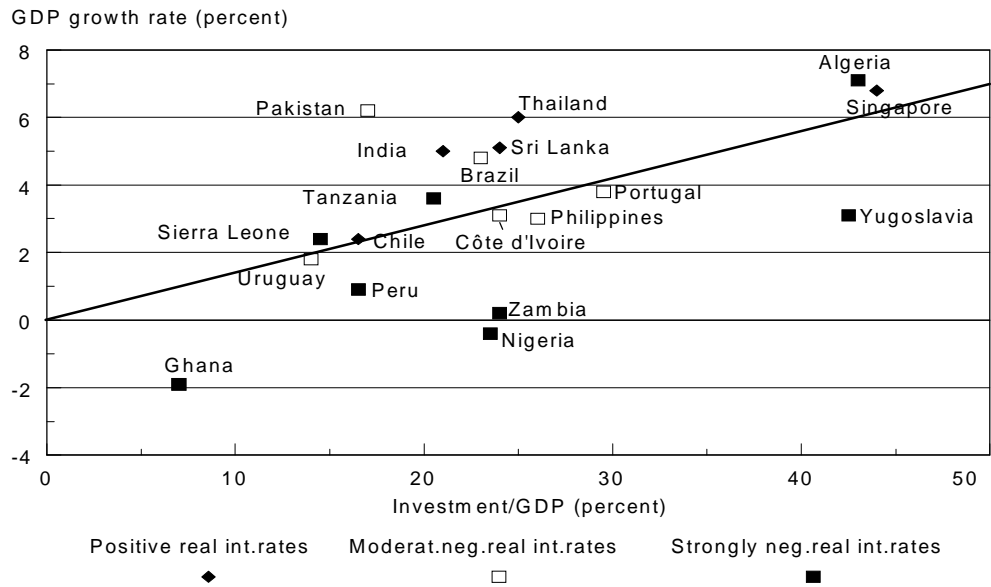
Note: Real interest rates were calculated from nominal rates according to the following formula:

$[(1+r)/(1+p)-1]*100$ , where  $r$  is the deposit rate and  $p$  is the inflation rate. Inflation is the percentage change in the consumer price index (CPI). M3 is currency plus the sum of non-bank deposits of the public at all identified deposit-taking institutions. Real saving is domestic savings deflated by the average annual CPI rate. Volatility of inflation is the absolute deviation of the inflation rate from its level the year before.

Source: World Bank (1989).



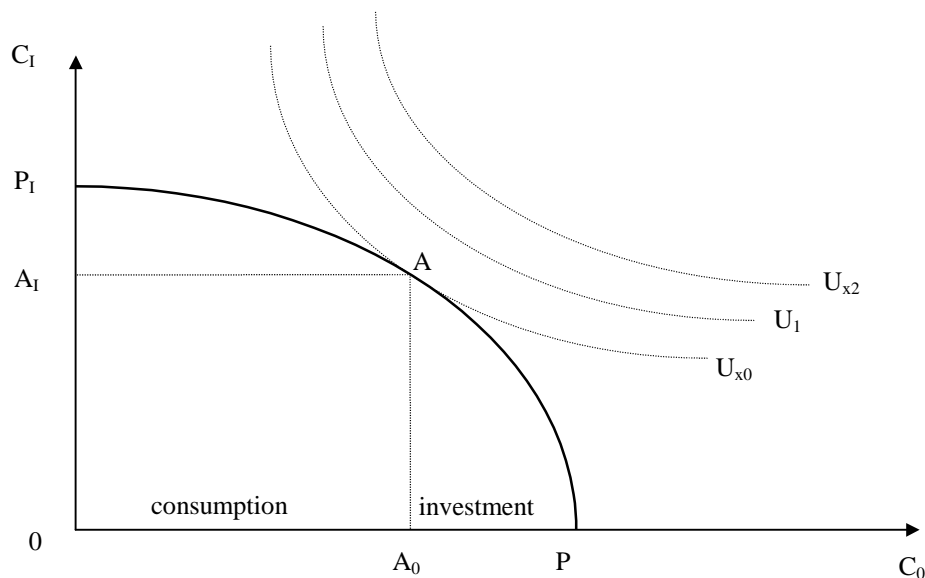
**Figure 2.4 Real interest rates, investment, productivity, and growth in 19 developing countries in 1974-85**



### 2.3 Financial Markets - The Household Level View

The impact of financial market access on the welfare of individual households will be discussed using Figure 2.5, a two period household decision model with perfect capital markets and a given production and price situation.

**Figure 2.5 Rural Household Resource Allocation without Access to Financial Market**



$PP_0$  = income possibility curve, with the slope of  $-(1+r)$  with  $r$  = marginal productivity of savings

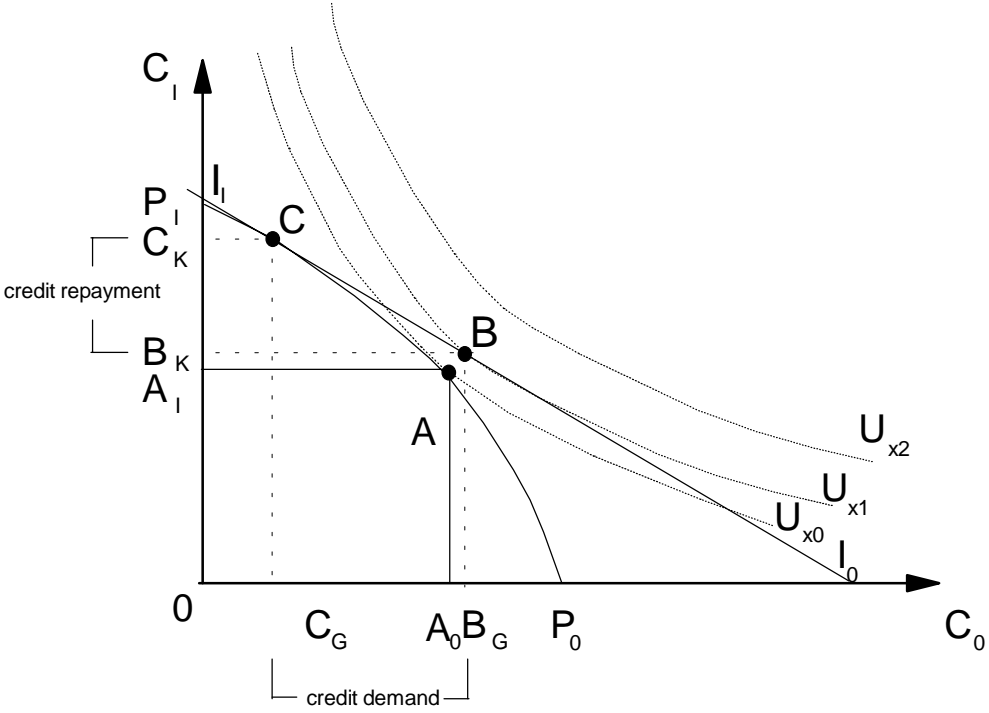
$N_{x0}N_{x1}$  = utility function of household for present and future consumption

A = optimum

In Fig. 2.5, the horizontal axis shows present consumption ( $C_0$ ) in period 0 and the vertical axis future consumption ( $C_1$ ) in period 1.<sup>1</sup> Income may be spent either in period 0 or period 1 according to  $P_1 P_0$ , given factor endowments, output and input prices and production technology. The slope at any point on  $P_1 P_0$  is  $-(1+r)$  where  $r$  measures the marginal rate of return on investments. The utility function of the household given its time preference for present and future consumption is represented by the family of indifference curves  $U_{x_0}$ ,  $U_x$ , etc. The curves, both for income possibilities as well as for time preference have the usual neo-classical properties.

Assuming that the household is maximizing its utility, subject to the income possibility curve, and without financial market access it will realize Point A in Fig. 2.5. In A, the maximum utility of the household is realized, given the income possibilities in the two periods; in A the marginal rate of transformation is equal to the marginal rate of substitution. Consumption in period 0 is  $OA_0$ ;  $A_0P_0$  is saved and invested for consumption  $OA_1$  in period 1.

**Figure 2.6: Rural Household Resource Allocation with Access to Financial Market (two period decision model)**



- A = optimal allocation of income to  $C_0$  and  $C_1$  without finance
- $I_1I_0$  = market opportunity line with constant interest rate and slope to the line:  $-(1+i)$
- B = optimal consumption
- C = point of optimal production
- $C_GB_G$  = credit demand in period 0
- $C_KB_K$  = repayment in period 1

Figure 2.6 describes the situation with the household's access to a perfect financial market. At the interest rate  $i$  (which is constant), the market opportunity line is given by  $I_1I_0$ ; it has the slope  $-(1+i)$ . With access to a financial market, the household will produce at C and consume

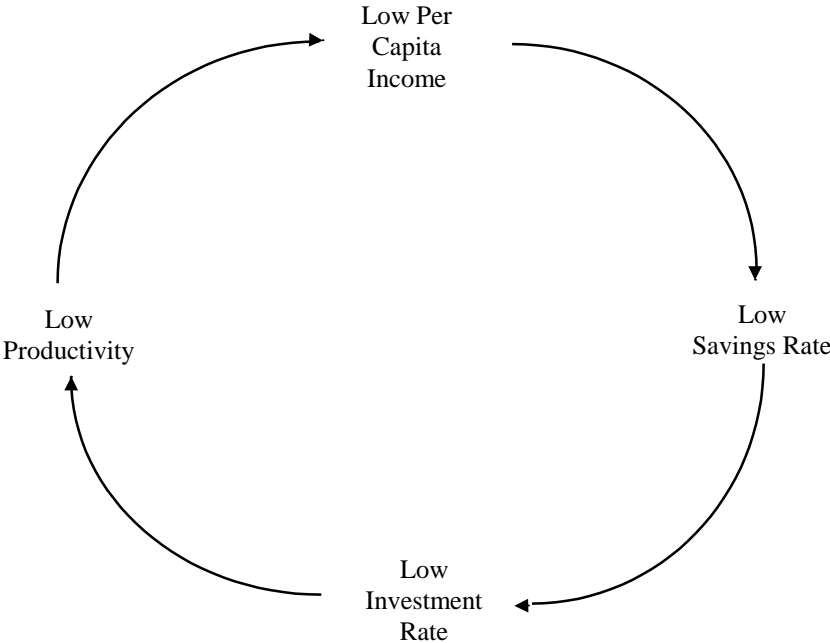
<sup>1</sup> For a detailed presentation of the two period household decision model see C.C.David and R. Meyer, A Review of Empirical Studies of Demand for Agricultural Loans. Ohio State University, Economics and Sociology, Occasional Paper 603. Columbus, Ohio 1979.

at B; in period 0 production/income will be  $OC_G$ , consumption  $OB_G$  and credit demand  $C_GB_G$ . In period 1, production/income ( $OC_K$ ) exceeds consumption ( $OB_K$ ) and  $B_KC_K$  will be available for credit repayment. The financial market raises present consumption by  $A_0B_G$ ; future consumption by  $A_1B_K$  and the household's utility from  $U_{X_0}$  to  $U_{X_1}$ .

### 3 The Traditional Approach to Rural Finance

The basis for the traditional approach to rural finance development focused on agricultural credit. It was based on the vicious circle of capital formation.

**Figure 3.1 The Vicious Circle of Capital Formation**



As indicated in the vicious circle of capital formation, the traditional approach assumed that the savings potential in rural areas is so low that it is not worthwhile to collect savings or to offer savings facilities. According to this view, the vicious circle can only be broken by channeling external funds into rural areas to help raising the low investment rate. For this purpose, special agricultural credit institutions were established. Normally they were Government owned and funded from state budgetary or external resources. Their mandate was to extend credit to specifically defined, productive agricultural investments and activities. Consumption needs of rural households were normally excluded from crediting. To encourage farmers to take credit and to promote rural investments, those credits were in most cases subsidized. These types of credit programs became known as supervised agricultural credit. It has also been referred to as targeted agricultural credit extension.

The experience with this type of agricultural credit has been dismal. The low interest rate policy and the neglect of savings mobilization, both closely related to a poor repayment performance and increasing dependence on Government subsidization, have been central to their failure.

The experience may be summarized as follows:

- There is little evidence that these agricultural credit programs contributed to agricultural growth. The fact that the subsidized interest rate allowed the implementation of investments of low profitability has probably had a negative impact on agricultural growth.
- The approach most likely had a negative impact on income distribution. Only a small percentage of farmers had access to these formal sources of subsidized credit. These often were the larger farmers and wealthier members of the rural population. The poor had to rely for their financial needs on the informal sector.
- Poor repayment performance, the inability to cover costs (often as a result of the low interest rate policy), inefficient management and bureaucratic organization led to loss making institutions which suffered under an erosion of their capital base and which became increasingly dependent on Government subsidies. Some of them, being faced with the Government's inability to pay the necessary subsidies, collapsed.

Based on this experience and observing at the same time a flourishing informal finance market, a new approach to rural finance was developed. It is the subject of the following discussion.

#### **4 Theoretical base of the new finance approach<sup>2</sup>**

In the past, scholars and practitioners have underscored the demand for rural financial institutions that offer appropriate savings, credit and insurance products. Nevertheless, with respect to institution strengthening and building, the efficient and future-oriented satisfaction of the target clientele out to be a predominant task. This requires the creation of an enabling legislation and the establishment of appropriate institutions (Von Pischke et al. 1983).

These institutions - be they private commercial, non-governmental or governmental - ought to consider the demands of their clients on a sustainable and flexible basis (IFAD 1988, Bechtel and Zander 1994). Evidence shows that rural households demand savings as well as credit schemes. Financial market development programs in the past, however, often neglected customer savings due to the assumption that they are incapable of savings financially (Adams and Vogel 1985). With the upsurge of empirical evidence in the 1980s, major development organizations revised their financial system development strategy with respect to savings mobilization modules. WOCCU and World Bank staff stated that donor support should not replace local endeavors for portfolio and operation funding (WOCCU 1990).

In the theoretical works of Williamson (1985), Bardhan (1989), Hoff and Stiglitz (1990), and Besley and Coate (1995), three major constraints to financial market development have been identified. These are information asymmetries between market participants, lack of suitable collateral, and high transaction costs as a result. Nevertheless, appropriate forms of constructional arrangements and organizations can circumvent or ease these constraints of efficient financial intermediation.

According to Hoff and Stiglitz (1990), imperfect information at the financial agent level concerning the ability and willingness of potential borrowers to honor the debt payment schedule leads to three problems:

- (1) *Screening*. Borrowers differ in the likelihood that they will default and it is costly for the lender to determine the default risk of each borrower. Also, there exist

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<sup>2</sup> This section follows closely the framework for finance institution analysis as described in Zeller *et al.* (1996b).

information asymmetries between borrower and lender as the borrower knows his probability of default while the lender does not.

(2) *Incentive*. It is costly to ensure that borrowers take those actions that make repayment more likely.

(3) *Enforcement*. It is difficult to compel repayment.

Zeller et al. (1996b) hypothesizes that it is the market's response to these three problems that explain many of the observed features of rural credit markets, and that they must be therefore considered when adapting the financial market policies and proposing financial innovations. Similar problems exist for insurers and for savers who are entrusting their funds to a third party.

Lenders attempt to overcome these problems by demanding collateral which they can seize in case of loan default (Binswanger and Rosenzweig 1986). Because many credit demanders lack conventional collateral items, informal lenders use collateral substitutes, such as

- tied contracts (specific credit cum labor, cum land, or cum marketing arrangements in which the lender gains control over part of the output or the production resources of the borrower);
- third-party guarantees;
- threat of loss of access to future borrowing opportunities; and
- social sanctions of household members, extended family, informal groups, or the community at large.

Also a major impediment to increased household access to credit and savings services are transaction costs (TCs) which are either incurred by the financial institution delivering the service or by the households demanding the service, or both. Transaction costs include any costs involved in an exchange of assets or services other than the price or the asset or service. The price of borrowing is the interest. TCs are costs resulting from an information search and market entry and exit costs for borrowers, savers, and financial intermediaries. Since TCs have the character of fixed costs, smaller transactions have *ceteris paribus* higher unit TCs.

Recent research by Platteau (1992) shows that high transaction costs due to information asymmetry appear less of a hindrance in networks of close social interaction. Indigenous group-based systems may not only link with formal savings and credit systems but may also assume functions of insurance - at least for idiosyncratic risks (Hazell 1991). Udry (1995) states that some form of coinsurance is even found between informal agents and clients: the level and timing of debt repayment in Nigeria has been found to be contingent on whether a borrower or lender experienced shocks to income or not.

## **5 The functioning and role of the informal rural finance sector and linking informal and formal rural finance**

In regions with an underdeveloped formal finance infrastructure, informal self-help groups frequently take on the function of a financial intermediary. A self-help group (SHG) is defined as a "voluntary group valuing personal interactions and mutual aid as means of altering or ameliorating problems perceived as alterable, pressing, and personal by most of its participants" (Smith and Pillheimer 1983). Self-help groups designed to cope with daily problems enjoy a long tradition in developing countries. Prior to the monetarization, working and social associations dominated. Today, informal groups frequently offer assistance in

savings and credit needs. These informal financial groups can be distinguished according to their organizational framework and the services rendered. The most frequent type of financial SHGs found in Sub-Saharan Africa are the savings associations, the savings and credit associations (rotating or nonrotating), and the credit associations.<sup>3</sup>

In many developing countries with a dual sector economy (real and financial formal and informal sector), there exists a relatively high incidence of intersectoral finance and business relationships. Given this high degree of intersectoral business activities, numerous attempts for the purpose of economic development have been made to link the formal and informal financial sectors. In this context, a direct relationship between a formal financial institution or a non-governmental organization (NGO) that engages in microfinance and an existing SHG is referred to as linking.

### **5.1 The informal finance sector<sup>4</sup>**

In the group-based informal financial sector, the commitment of the members to contractual savings is essential to become creditworthy. These contractual savings, peer pressure, and membership restrictions replace the need for other collateral (see Chapter 4). Membership and compliance with the group's rules suffice to gain access to its funds.

Financial SHGs frequently assign different funds for different purposes. These are the primary, emergency, and mutual aid funds. The primary fund corresponds to the members' contractual savings. The emergency and mutual aid funds consist of nonregular but obligatory member contributions and/or fine revenues from participants that disobeyed group rules. The primary group fund generally serves as credit portfolio for member loans. These loans are not restricted to income-generating investments. Human and operational capital loans dominate, as Table 5.1 indicates. Especially, education expenditures are frequently financed through informal financial sector loans. This position steadily increased from 1971 to 1988 (Table 5.1).

The emergency fund covers unexpected and urgent loan demands of members. Furthermore, it is used to cover contributions of defaulters and to assist members that are temporarily unable to observe their savings obligations (Miracle, Miracle, and Cohen 1980). Emergency loans are predominantly called upon to cover medical, funeral, and other social expenses. The mutual aid fund provides help for the same circumstances as the emergency fund. The emergency loans, however, ought to be repaid in contrast to the mutual aid. While the emergency fund is mainly an insurance substitute, the mutual aid fund is a genuine form of member-financed insurance. Most often, a financial SHG offers either an emergency or a mutual aid fund (Schrieder and Cuevas 1992; Zeller et al. 1993). The determinants of the existence of either fund need still to be researched.

Clearly, financial SHGs offer a wide variety of services. However, these services are subject to constraints. These are, foremost, the financial and geographical limitations of their activities. In addition, the homogeneity of the membership in terms of profession and financial scope may endanger the group's financial stability. Natural hazards may prompt participants of a rural financial SHG to demand loans or emergency aid all at once. Due to the

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<sup>3</sup> For a complete description of financial SHGs' conceptual framework, refer to Adams and Canavesi de Sahonero (1987), Ardener (1964), Bouman (1977, 1979), Geertz (1962), Meyer (1940), Schrieder (1989), Seibel and Marx (1987), and Soen and De Comarmond (1972).

<sup>4</sup> This section draws on Zeller et al. (1996a).

financial limitation of the group's funds, such demand peaks cannot be satisfied. Thus, informal financial groups appear less suited to insure against covariate risks, such as natural or other hazards that affect all group members at the same time. However, a linkage of informal or formal member-based financial institutions at the grassroots level, with a liberalized banking sector could be an effective response to the threat of covariate risks.

**Table 5.1 Uses of loans from self-help groups, Cameroon**

Use in %	1971 <sup>a</sup>	1968-70 <sup>b</sup>	1988 <sup>c</sup>
Family expenditure	26.6	12.7	...
Education	16.0	18.2	23.2
Health, medical expenses	8.5	...	18.4
Dowries, obligations to in-laws	9.5	3.6	...
Trade	7.4	...	7.4
Housing improvements, construction	2.0	10.9	...
Saving for other djanggi	8.5	...	...
Paying debts	7.5	...	...
Open a business or a farm	...	3.6	...
To buy things, for example, farm input	...	23.6	30.1
To meet normal expenses, e.g., food	...	14.5	11.8
Acreage expansion	...	...	1.8
To pay farm labor	...	...	7.3
Other	14.0	12.7	...
Total	100.0	99.8	100.0

Source: Adapted from Bouman and Hartefeld (1976), Miracle, Miracle, and Cohen (1980, 701-724); and Schrieder (1989).

<sup>a</sup> Survey of 54 members interviewed in Babanki, Cameroon, in 1971.

<sup>b</sup> Survey of 56 members, West Cameroon, 1968-70.

<sup>c</sup> Survey of 136 members, West, Northwest, and Central Cameroon in 1988.

In summary, the brief presentation of several empirical findings indicates that

- ⊗ the rural poor often lack access to formal credit (Zeller et al. 1993);
- ⊗ the larger share of credit obtained is used for consumptive purposes, so, in particular, among the poorer segment of the population (Zhu, Jiang Zhong, and von Braun 1995);
- ⊗ informal self-help groups as well as social networks based on community, kinship, or friendship provide insurance services in addition to savings and credit services, while formal institutions often narrowly focus on specialized production credit (Schrieder and Cuevas 1992; Platteau 1992; Zeller et al. 1993); and
- ⊗ rural households save in order to smooth consumption or to self-finance lumpy investments. Security and liquidity seem to be more preferred characteristics of savings options than profitability, especially among risk-prone and vulnerable households (Schrieder and Cuevas 1992; Zeller, Ahmed, and Sharma 1995; Zeller et al. 1993; Zhu, Jiang Zhong, and von Braun 1995).

The formal sector should seek to better address the diversified demand for credit, savings, and insurance services. Finance for poverty alleviation not only implies agricultural production

credit, but also credit for consumption smoothing and income diversification as well as the provision of savings options with different maturity, risks, and interest rates. Savings and credit services may also be interlinked with insurance services in order to better address the demand of households for ex-post consumption smoothing. Much remains to be learned from informal institutions in this respect.

## **5.2 Interrelationships of the formal and informal finance sector<sup>5</sup>**

Formal and informal finance activities can be generally well distinguished. Nevertheless, there may be an intensive relationship between them. This relationship may take the form of competition, complementarity, or cooperation (Germides et al. 1991).

According to Germides et al. (1991), rigid regulation of the formal financial sector causes financial transactions to be shifted to the less or non-regulated semi-formal or informal sector. In this case, competition between the formal and informal sector may develop if both sectors target the same segment of the potential clientele. In the past, the financial market policy in developing countries has been repressive and interventionist, entailing strictly regulated interest rates for savings and credit, rigid control of foreign exchange markets, and the weakening of the competition regarding savings and credit services in the formal financial sector. These and other aspects may enhance the growth prospects of the tax- and regulation-free informal financial intermediaries. Krahn and Schmidt (1994) point out that for these reasons some economist believe that reducing the degree of regulation would more or less put the informal financial sector out of business. Nevertheless, as long as the formal financial intermediaries are not capable and thus interested to service small scale clientele with the appropriate financial products in an efficient way, even a lesser degree of financial market regulation will not seriously enhance the competition between the formal and informal financial intermediaries.

Also, it seems that the formal financial and informal financial sectors complement the respective real sectors. Often, there exists a connection between the economic activity in the informal real sector, on the one hand, and the informal finance sector, on the other. The same holds for the formal sector. According to this view, the development of informal financial activities is the result of the dual overall socio-economic structure in developing countries.

The third type of relationship is cooperation. Krahn and Schmidt (1994) give the example of a farmer who sells cash crops on the formal market and then deposits the proceeds in an informal savings and credit association where he participates. In this case, informal financial activities are refinanced with funds from formal-sector economic activities. Intersectoral finance, meaning the exchange of funds between the formal and the informal sector are frequently observed in developing countries (Krahn and Nitsch 1987). Economic development strategies, that attribute some importance to the financial sector as a driving force for economic growth, stress the importance of an efficient and effective cooperation between the formal and informal financial sector. A formal-informal financial sector cooperation benefits the national economy until the informal financial intermediaries graduate to effective formal intermediaries or the formal financial intermediaries become capable of extending demanded financial services in a sustainable way to the clientele presently unserved by them.

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<sup>5</sup> This section draws strongly on Chapter C of Krahn and Schmidt (1994).



### **5.3 NGO-led micro-enterprise finance<sup>6</sup>**

There are a growing number of examples of microenterprise development organizations, generally non-governmental organizations (NGOs), that have decided to move toward financial intermediation. According to Otero (1994), NGOs that get engaged in microfinance activities need to fundamentally transform their approach to microenterprise development to address the demand for financial services over the long term and in a viable manner. She outlines seven characteristics as prerequisites for NGOs to engaging in efficient and sustainable financial intermediation. These are briefly summarized in Table 5.2.

The progress in microfinance NGOs is most notable in the evolution away from donor grants as the main source of funding towards funding from savings deposits and commercial bank loans at market rates. This element of financial self-sufficiency in microfinance NGOs has been neglected too long although financing through savings deposits provides programs such as Bank Rakyat Indonesia (BRI) and Banco Solidario (BancoSol) with real donor independence. Nevertheless, microfinance NGOs operate within legal boundaries that may inhibit them from transforming liabilities into financial assets. In Uganda, e.g., NGOs are prohibited by the Financial Institution Statute 1993 (GoU 1993) to transform their savers' deposits into financial assets for debtors. Therefore, they are forced to remain dependent on donor funds for their lending operations, particularly if their loan interest rates differs from commercial bank rates.

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<sup>6</sup> This section draws on Otero (1994).

**Table 5.2** NGO characteristics necessary for financial intermediation

Characteristics	
Governance and board	The importance of an active, well-informed board with financial expertise becomes a priority. Private sector individuals play a decisive role in obtaining resources and setting the vision for the organization. Boards assume additional risks by helping gain access to commercial money and investing in the organization.
Client population	Main emphasis is on scaling up the size of the program. Focus is on reaching tens of thousands or more microentrepreneurs. Borrowers are reconsidered as „clients“.
Sources of capital	Funding from grants, soft loans and bank loans is blended moving toward borrowing only from banks. Financing through savings deposits.
Financial service operations	Use methods that have been fine-tuned. Experimentation may be worthwhile in early phases of the program. Reach economies of scale and specialization. Developing savings instruments becomes very important.
Self sufficiency / financial standing	Attaining operational and financial self-sufficiency becomes a requirement. Transaction costs decrease due to increased efficiency and scale.
Financial management	Effective financial analysis and more complete management information systems become a priority. Financial projections are more sophisticated. Financial analysis is integrated into program implementation.
Personnel / staff development	Technical expertise in financial intermediation increases. More emphasis is placed on training the staff. Areas of emphasis are client relationship, portfolio management, planning, and institutional development.

Source: adapted from Otero (1994)

## 6 Innovative approaches to rural finance institution building<sup>7</sup>

Rural financial markets in developing countries display a typical dualistic structure; they comprise formal and informal financial intermediaries with differing degrees of interactions between them. The formal sector has been beset by several problems and complete failures. An intensive theoretical and empirical research effort has been devoted to identify causes and formulate remedies (Adams and Vogel 1985; Bardhan 1989; Besley and Coate 1995; Graham 1989; Hoff and Stiglitz 1990; Von Pischke et al. 1983; Williamson 1985;).

The formal intermediaries are subject to government and central bank regulations, while the informal financial sector may be influenced by, but operates essentially outside of, these controls. Five types of formal intermediaries contribute services to the rural financial market. Traditionally, these are commercial and development banks, specialized agricultural finance institutions, savings and credit cooperatives, and during the last two decades also non-governmental organizations (NGOs).

The performance of many formal institutions in rural finance has been disappointing. Commercial and development banks showed little interest in rural lending, particularly in lending to small farmers. Specialized agricultural credit institutions and NGOs were able to extend credit to a limited clientele only. They often suffered under low recovery rates and narrow margins, while high administrative costs and lack of efficiency led to losses and government

<sup>7</sup> This section benefited from the following papers: Heidhues (1995), Schrieder (1996b), Schrieder and Heidhues (1995) and Zeller et al. (1996).

dependency. Adding to their difficulties were a distorted macroeconomic and repressed financial environment that left little room for a dynamic development. The perceived high risks and transactions costs in small-scale rural lending (see Section 4), together with targeted credit extension for production purposes only, as well as a failure to provide other financial services, particularly savings opportunities, led to a bypassing and alienation of the major part of the rural clientele. Particularly the failure of commercial and development banks to design and offer conducive services for the rural poor ought to be pointed out (see Section 5 and 7).

Developing sustainable, broadly-based financial markets with outreach into distant rural areas is a challenging task confronted with a complex set of issues, some internal to a rural finance program (Christen et al. 1994), others exogenous in the sense that their solution depends on changes in the sectoral and macroeconomic policy and institutional framework (Jayarajah and Branson 1995).

The large array of problem areas, their complexity, and the absence of empirically based solutions<sup>8</sup> has doubtlessly contributed to the modesty that characterizes new approaches being attempted. Most innovative programs still show the character of pilot efforts operating on a limited scale. They often integrate elements observed in informal financial arrangements. Systematic research on the effects of these new approaches has started only recently (e.g. Otero and Rhyne 1994). Nevertheless, it seems worthwhile to review the experiences gained so far and particularly to identify factors of success that are promising in being followed up.

The lessons learned from the formal financial market failures, the thriving of the informal sector, the need to adapt to the general decline in foreign capital inflows, structural adjustment, and the rapid transitions in finance policies, techniques, and banking practices encouraged most developing countries to reshape their approach to financial market development (World Bank 1989). It is widely recognized now that financial innovations are crucial in the economic development process, especially for financing small- and medium-sized enterprises and mobilizing local resources from low- and middle-income groups. Thus, this chapter contributes a review of financial innovations found to be imperative to the development of the rural finance market. The first section of this chapter briefly defines and examines financial innovations in the context of economic development. It follows a brief discussion of principal elements and issues of innovative financial market design as recognized in earlier literature. From these, performance criteria are derived and applied to the evaluation of financial institutions and programs. Finally, essentials of the innovative design of financial institutions and research necessities are highlighted.

## **6.1 Financial innovations in development economics**

The role of technical innovations and their diffusion in the process of economic development has been recognized since the works of Marx, Schumpeter, and Kuznets. Institutional innovations have received greater attention only during the last three decades. Less consideration has been even placed on the significance of financial innovations<sup>9</sup>. In principle, innovations are

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<sup>8</sup> Recently, consumer theory and research methods, particularly Conjoint Analysis and plan maneuver games, have been employed to empirically assess the demand of Third World rural clients for various financial service profiles. Conjoint Analysis provides a tool for financial institutions wishing to invest in the rural poor to empirically estimate the demand for different types of services and to design the appropriate service in a participatory effort (Schrieder and Heidhues 1991; Schrieder 1996a). These techniques permit to solve some internal problems of rural financial institution building and re-building.

<sup>9</sup>For more detailed information on the nature and characteristics of financial innovations refer to Bhatt (1988), Binkowski (1989), Eilenberger (1991), Franzen (1988), and von Stein (1991).

defined as new ideas, behaviors, products or services that are substantially different from existing ones (Engel et al. 1993; von Stein 1991). In the field of rural financial market development, Adams and Romero (1981) defined financial innovations relatively narrow as any change in the operations of a financial intermediary. They argue that an innovation may be either cost-decreasing or cost-increasing for the intermediary and/or for the society. In contrast, Desai (1980), Burkett (1988) and this work take a much broader position, namely that innovations in the sense of technical progress comprise the development of new products (services) or changes in processes, institutions, and market systems that raise efficiency. It should be pointed out that the cost decreasing effect of an innovative financial service, in practice, may be difficult to assess, particularly if the costs are shifted from the financial intermediary to the client or society (Desai 1980). Thus, what may appear as a cost reduction for the financial intermediary may in fact be a shift of costs to another level.

Considering the macro, institution (sector) and micro levels of the financial intermediation process, financial innovations can be categorized as financial system innovations, financial institution innovations, processing innovations, and product/service innovations. In categorizing innovations in this way, it is important to keep in mind that the boundaries between the innovation categories are somewhat fuzzy and strong linkages exist between them (Schrieder and Heidhues 1995; von Stein 1991).

### **6.1.1 Financial system innovations**

Financial innovations can relate to changes in the finance system as a whole. Typically, they affect all participants in the intermediation process. Examples for financial system innovations are joining a monetary union, moving from a fixed to a flexible exchange rate system, introducing foreign exchange auctions, but also alterations of existing operation and service structures, and the establishment of new finance organizations and changes in the legal and regulatory framework.

A typical financial system innovation occurred in the 1980s, when the rural financial markets of developing economies were fundamentally altered and formal and informal financial intermediaries, which had been operating separately side by side, were increasingly integrated, respectively a cooperation emerged. Before the mid 1970s, financial market experts and policy makers looked at informal financial intermediaries with suspicion. They were considered as too narrow in the range of services offered, fragmented and inefficient. The informal financial market research of Bouman (Bouman 1977 and 1979) and The Ohio State University Rural Finance Group gave redress to the much maligned private and institutional informal financial intermediaries in developing countries (Adams 1977, Adams and Ladman 1979). In 1970, the African Studies Center of the Michigan State University devoted a special issue of its journal 'Rural Africana' to savings and credit institutions in rural West Africa (African Studies Center 1970). The relevance of the informal financial market as a source of innovative financial service schemes, and the appraisal and introduction of these innovations for servicing the poor's financial needs was recognized and in part conceptualized (Adams and Fitchett 1992, Bhatt 1988). From the 1980s on, significant efforts were made to incorporate informal financial structures into formal financial programs, e.g., Lilongwe Land Development Project-Malawi, Savings Development Foundation-Zimbabwe, Grameen Bank-Bangladesh, PHBK (Project Linking Banks and Self-Help Groups)-Indonesia, etc. (Bhatt 1988, Hossain 1988, Kropp et al. 1989, Morna 1990).

Also group lending as a new organizational form of formal financial intermediation is a financial system innovation. It emanated from observing intermediation strategies in the informal

financial market. The group lending approach can have two basic designs: either already existing groups expand the range of their activities and add formal financial services, mainly credit; or credit groups are founded specifically for the purpose of on-lending.

Although opinions differ, the group lending scheme is now often and successfully employed in formal RFIs (Achomuma 1992, DEG 1992, Gadway 1986, Hossain 1988, Schmidt and Zeitinger 1994). Early group-lending attempts were not always successful since experience with such banking techniques was still lacking (Adams and Romero 1981, Bechtel 1988). However, with increasing expertise, as the Grameen Bank in Bangladesh and other group lending examples show (Chao-Beroff and Delhaye 1989, Hossain 1988), the integration of informal financial intermediaries turned out to be not only a method to successfully reach the poor but also a way to improve the financial viability of the formal intermediary. Group lending combined with joint liability (collective credit responsibility) is a further refinement of the approach to reach the poor. Joint liability replaces tangible collateral with a personal guarantee of the group. In not requiring capital assets, it is particularly suited for the poor and food insecure (World Bank 1989 and 1990). For the lending institution, group lending can reduce the risk of default and lowers TCs to reach dispersed and low-finance-volume clients. Group lending is often tied to contractual savings mobilization (Ellsäßer and Diop 1990, Hossain 1988). This increases the self-financing potential, raises credit access and expands the debt capacity of the clientele.

Rural financial systems in many developing economies benefited also from a general decline of government interventions and lower market entry barriers for financial institutions. Especially savings and credit cooperatives and non-governmental organizations (NGOs), previously held back by often severe restrictions, can now enter more easily the field of rural financial intermediation. In Cameroon, e.g., the new cooperative law, enacted in 1992, officially recognizes indigenous savings and credit associations as financial market intermediaries if they are locally registered (Republic of Cameroon 1992).

An important financial system innovation is closely related to socio-cultural changes. In many developing economies, formal financial institutions started only recently to accept women as full-fledged customers. Often, the formal legal and even more importantly the traditional value system hindered women to freely access formal finance institutions. Frequently, the father or husband needed to give his permission for women to open accounts or apply for credit. In Malawi, e.g., formal credit is mostly administered to members of farmer's clubs; by custom, women do not belong to these clubs. In some Latin American and Caribbean countries, it is considered inappropriate for a woman to travel alone. It is also improper for them to offer the occasional necessary bribe to a male official in charge of financial transactions. Such customary constraints make banks inaccessible to women (Holt and Ribe 1991).

While women's access to financial services has certainly improved, they are still under-represented in formal finance programs considering that they play a most prominent role in securing national and household food security. In sub-Saharan Africa they produce, for example 70 % of the staple food. It is therefore vitally important that women's needs are taken into account in the design of savings and credit programs (von Braun 1992, Holt and Ribe 1991). Women, contrary to male farmers who tend to demand mainly production loans from formal financial programs, prefer to have a choice between production and consumption loans (Schrieder 1996a). Women's farm and household occupations and responsibilities are closely related and intertwined which explains their different preference pattern regarding credit services. Also, rural women's cash revenues are often limited. If they spend cash for productive purposes, thereafter they often need to cover expenses for family consumption by borrowing.

### **6.1.2 Financial institution innovations**

The term financial institution innovation refers to changes in the structure, organization, and legal form of an institution (von Stein 1991). They may be caused or made possible by financial system changes. Financial institution innovations often seek to overcome legal and economic constraints on the extension of financial services to additional market segments, such as the rural poor.

A financial institution innovation in the classical sense would be the transformation of an informal financial institution into a registered and officially recognized financial association. In Cameroon, the legal turf for such institution innovations has been prepared by issuing a new cooperative law (Republic of Cameroon 1992).

From an economic point of view, extending financial services into rural areas can be expensive for banking institutions. Transaction costs of lending to geographically dispersed customers with low volume transactions for often risky agricultural investments are high. The integration of informal financial groups as potential field-outlets for RFIs makes substantial cost reduction feasible and allows even conservative formal financial programs and institutions to extend rural financial services. The supplementation of regular field outlets with eventually informal village banks changes banks' operations in so far as the informal financial groups are often independent legal entities. The pilot project of the *Crédit Agricole du Cameroun (CAC)* is an example of a successful rural financial institution innovation that cuts costs. The CAC, a universal commercial bank in Cameroon extends its services to rural areas by building bottom-up village banks which combine and organize savings and credit groups (Achomuma 1992). Similarly, there are numerous other promising examples of financial institution innovations such as the Grameen Bank and the village banks in Mali and Burkina Faso. They are discussed in more detail in section two below.

### **6.1.3 Processing innovations**

Processing innovations focus on improving organizational and service distribution aspects of financial institutions (von Stein 1991). They are often introduced to increase efficiency and expand market shares. Frequently, technological progress, such as computerization, lays the ground for a more efficient information, accounting, and data management which then translate into process innovations at the financial institution level.

Processing innovations in rural credit extension are, e.g., simplifying credit application forms, or approval procedures, raising the approval authority of field offices or paying performance premia for the field staff. A processing innovation in the area of improved marketing would be a participatory client approach (Heidhues 1990). To ensure that process innovations are beneficial to the rural poor, the target group must be included in the design process of rural institution building. Thus, the CAC in Cameroon employs for example a participatory approach in the building of vertically integrated village banks. The pilot project of the participatory village bank approach of the CAC is functioning well. CAC's experience also demonstrates that socio-cultural factors need to be carefully taken into account. The cooperation of the designated CAC personnel and the rural target population depends strongly upon their cultural-ethnic affinity (Rauch 1994). If the ethnic affinity is not given, financial development efforts are prone to fail.

Examples for financial institutions experimenting with processing innovations can be found in many countries. A few examples may illustrate this type of innovation. The *Caisse Nationale de Crédit Agricole (CNCA)* in Burkina Faso participated in a research project to establish an

innovative credit risk evaluation technique to improve its credit portfolio. Also in Burkina Faso, the Caisse de Village d'Epargne et de Crédit de BANH, a poverty and women oriented finance program, introduced successfully personal computers to facilitate the operational tasks of administration and monitoring (Ellsäßer and Diop 1990). The World Council of Credit Unions (WOCCU) is encouraging its member credit unions to institute computer aided administration procedures (WOCCU 1994).

#### **6.1.4 Product innovations**

Financial product innovations are defined as new or modified financial services that have not existed in the market before or differ substantially from existing services (Engel et al. 1993, Franzen 1988, von Stein 1991). Financial product innovations can be categorized either based on their effects on consumer behavior (Engel et al. 1993), or their effect on the institution's risk, liquidity, and credit portfolio (Franzen 1988). Product innovations may be introduced to better reflect the demands of the target clientele, to improve efficiency or to expand the institution's market and outreach. They can be vital in securing the institutional viability of the financial intermediary.

Product innovations play a critical role if rural finance markets are to address poverty alleviation in subsistence agriculture, as has been emphasized recently (Schrieder 1996a, Zeller 1993, Zeller et al. 1996). The adoption of new agricultural technologies requires not only the target group's access to financial instruments but also a design of financial services according to their needs. Flexible and easily accessible credit and savings schemes allow the poor to better cope with unforeseeable and seasonal income fluctuations (von Braun 1992). The poor's motivation to demand financial services is a function of several factors. These include accessibility which is dependent on institutional density, infrastructure, price factors such as loan, savings, and deposit rates, and other non-price factors such as family size, education, scope of services, and client participation (Schrieder 1996a, Zeller 1993).

An often emphasized product innovation is the introduction of flexible savings facilities in rural financial institutions. The saving service was a long time excluded from the service portfolio of rural financial institutions. Early rural finance programs totally ignored the rural savings capacity assuming there was none. Empirical evidence suggests a considerable savings potential among the rural population including the poor. The institutional and national needs to mobilize domestic resources has in the meantime prompted many rural financial market (RFM) development programs to incorporate voluntary and mandatory savings schemes (Adams 1983, Heidhues 1993, Schrieder 1996a, Von Pischke 1991, World Bank 1989).

At the household level, offering rural individuals flexible and sustainable savings schemes reduces the risk of seasonal income shortfalls as stress periods can be bridged through dis-saving. Savings mobilization as an integral part of rural financial programs for the poor can be an important element to improve their capital and income situation (World Bank 1989 and 1990). The benefit derives from the availability of a risk cushion against expected as well as unexpected income and food shortages. In stress periods, the poor may draw down their financial savings, they may be able to borrow against accumulated savings or they may have, through regular payments into their savings account, established their credit-worthiness sufficiently to borrow without security. It should be emphasized that a savings scheme should be phased in as soon as the target clientele regains its savings capacity (Ellsäßer and Diop 1990). The benefits of active savings mobilization for the financial intermediary, most notably the expansion of its financial base and independence from government interference, have been extensively discussed elsewhere (Adams et al. 1984, Von Pischke et al. 1983).

The subsidization of interest rates in poverty oriented rural credit programs is a hotly debated issue. Past agricultural lending programs often operated with subsidized interest rates on their loan products. Most successful finance programs have chosen not to subsidize interest rates. Charging market interest rates on loans does not necessarily inhibit the poor from accessing the credit market (World Bank 1990) as the cheap credit policies assumed. However, there is new evidence suggesting that the demand for rural loans in developing countries is elastic with a negative elasticity coefficient while the supply of rural savings is relatively inelastic but with a positive elasticity regarding real interest rates. This implies that raising interest rates reduces loan demand more than it would encourage savings. Agricultural growth, income, and thus purchasing power and food security may suffer if credit interest rates for subsistence agriculture are raised beyond the level of return from agricultural investments (Desai and Mellor 1993). Desai and Mellor (1993) suggest to set 'conducive' credit interest rates that relate to the expected return of agricultural investments in rural environments. They argue that conducive interest rates may be set temporarily below market interest rates, provided there is continuous support from government or international agencies to guarantee the intermediary's financial viability and sustainability. The authors point out that lower than market determined interest rates may be necessary to attract new clients and that, with broadened client coverage, the financial intermediary will reap economies of scale, resulting in decreasing transaction costs which will allow the institution to set and maintain cost covering interest rates for agricultural lending. The other position, taken by the demand oriented rural finance literature (Adams 1977 and 1980, Adams et al. 1984, Von Pischke et al. 1983), recommends financial liberalization with market interest rates that cover operational cost, lead to efficient credit use, and attract financial savings. This process promotes the efficient use of capital that is crucial for investments and thus economic and agricultural growth.

More recently, the discussion of financial product innovations focuses on the need to provide insurance services for the rural population as more of the population needs to make old age provisions, since the rural to urban migration of the young leaves the rural elderly more and more without the financial support of their children (World Bank 1989). Formal insurance schemes are rarely found in developing countries; they are practically non-existent in rural areas (Alderman and Paxson 1992, von Braun 1992, Heidhues 1993, Platteau 1992, Zeller et al. 1996). It has been argued that access to credit can act as insurance substitute. In addition, there is a market opportunity to develop contractual savings schemes, that can work like life- and health-insurance or pension provision. The contractual savings arrangements need to be adapted to the issuing organization's and its clients' socio-economic constraints. A pre-mature use of contractual insurance and pension savings should be discouraged. In this regard, much can be learned from the premium insurance funds of financial SHGs, the mutual aid and emergency funds (Schrieder 1989).

Recently, financial product innovations comprising incentives for careful natural resource management gained in relevance since agricultural production expansion in developing countries is pushing increasingly against environmental limits (Gudger and Barker 1993). Financial services encouraging environmentally sound agricultural activities improve not only the sustainability of agricultural production at the farm household level but can produce also positive external effects for the national economy.

### **6.1.5 Environmental banking innovations**

Environmental banking innovations fall most often into one of the above categories. Due to the pertinence of sustainable economic development and resource management, innovations in



environmental banking are, however, separately presented here. Investment has a vital role to play in correct resource management. Through appropriate financial engineering, the environmental direction of investments can be influenced (Gudger and Barker 1993). Environmental banking innovations can be tied to the system or the institution level. At the system level, environmental banking innovations inflict upon the institution and/or the clientele. At the institution level, internal and external environmental banking submits incentives to the institution itself and its clientele, respectively. The incentives draw attention to sound environmental management (adapted from UNEP 1993). At the macro level, sustainable resource management may be determined a national priority. Subsequently, the Government may implement financial system incentives and regulations to promote environmentally sound investments. Due to their scale and scope, poverty focused national financing programs, such as the Grameen Bank, could play a vital role in fostering environmental banking. An environmental banking innovation at the institution level is the introduction of an environmental cost-benefit analysis or the less stringent environmental impact assessment (EIA). EIA is an analytic tool that evaluates the likely environmental effects arising from a planned activity. By this means, a financial intermediary could incorporate the social, economic, and environmental consequences of its lending decisions. Introducing a system of environmental cost-benefit analysis into banks' operating procedures would clearly have far-reaching practical and theoretical implications. With regard to the latter, there is the problem of mitigating the inherent clash between commercial gain and social need. In the long run, however, banks would clearly benefit from a broader investment approach, since a well managed environment gives rise to a healthy economy and population (Gudger and Barker 1993; UNEP 1993).

## **6.2 Rural financial institution's contribution to poverty alleviation**

At a national level, an adequate level of food production is a necessary condition for food security but it is not sufficient to ensure access to food for all people at all times. Access to adequate food is largely governed by income and purchasing power. There exist four strategies at the household level to cope with food insecurity: income generation and diversification, saving and dis-saving (in kind and in cash), borrowing, and inter-household gift exchange. Financial markets play an important role in the first three of these strategies.

In assessing rural financial institutions' (RFIs) contribution for poverty alleviation all four categories of innovations play a role. System's innovations can improve financial market integration and expand customer coverage; institution innovations can improve service accessibility for the poor; process innovations are cost reducing and increase institutional efficiency; and product innovations ameliorate the banking institutions' orientation towards customer's demands. In offering demand oriented, accessible, and sustainable financial services, financial institutions can significantly contribute to generating income and improving food security, specifically through the provision of

- (1) Production credit to finance income/wealth generating investments and inputs;
- (2) Consumption credit to maintain and expand human productive capacity;
- (3) Quality savings schemes to efficiently manage liquidity over time and increase risk bearing capacity; and
- (4) (Inter-temporal) insurance schemes to cope with personal and local covariate risks (Zeller 1995).

Particularly at the institution (sector) and micro level, financial innovations for rural financial sector building have been advanced. Thus, this work primarily discusses financial institution and product innovations at these levels. Financial system innovations (macro level) are not particularly addressed here in the sense that they refer to changes in the policy and legal framework of formal financial intermediation. In developing countries, the policy framework is more or less exogenous to financial institutions and often outside their influence. Also, processing innovations, such as computerization are still relatively rare among rural financial institutions and their effect on the efficiency may be ambivalent, especially in the beginning. The search for financial innovations with a food security perspective leads to institutions that experiment with new forms of collateral (institutional innovations), diversify their lending portfolio, and offer savings and insurance services (product innovations). Direct or indirect, these services address the rural poor and ameliorate their economic and food security position.

The effectiveness of RFIs in reducing poverty can be assessed through three criteria: coverage of the poor and their financial needs; fair access for disadvantaged groups, e.g. women and landless; financial viability and long run sustainability (Zeller et al. 1996a). Along these criteria, some empirical evidence regarding RFIs' impact on poverty alleviation is summarized in the following.

The advantage of community based RFIs in comparison to conventional food security instruments is the RFIs' potential flexibility and adaptability to local and individual needs and their possibility to react immediately to emerging food insecurities. Access to appropriate financial services increases the self-help capacity of the poor without making them dependent on public support and food services. RFIs that are ready to adopt product innovations such as a consumption loan line or adjustable loan repayment schedules can efficiently complement and support conventional food policies.

Also, institutional sustainability is important in improving the poor's living standard. For example, India's Integrated Rural Development Program (IRDP) succeeded in increasing the income of large numbers of disadvantaged households. However, it did not establish sustainable financial relationships since only few of its clients who had repaid their debt were receiving additional credit (World Bank 1990).

In sub-Saharan Africa, the Cameroonian credit union movement CamCCUL, is one of the most successful financial market development stories in terms of sustainability, gender equality, and services rendered. CamCCUL provides financial services to predominantly small savers and borrowers who are neglected by other formal financial institutions (Cuevas 1988). CamCCUL, and also the other programs discussed in this section, allow its members to spend at least part of their loans for consumptive purposes. Nevertheless, the institution strongly promotes productive investment loans. For this purpose, CamCCUL initiated the Small Farmer Production Credit (SFPC) program in 1975. The hypothesis behind this financial institution innovation was that the savings rate rises as income grows due to revenues from credit financed productive investments. SFPC borrowers are also encouraged to attend agricultural and commerce courses to increase the productivity of their investments (Rosenthal et al. 1992). Savings growth in SFPC credit unions is 16 % higher than in other credit unions and farmers participating in the SFPC program are reported to be financially better off than non-participants (Gadway 1986).

A successful example of a financial system innovation is the Caisse Villageoise d'Epargne et de Cr dit de BANH in Burkina Faso. It is a vertically integrated and multi-product village bank movement that appears to have achieved economic sustainability. Initially, the program did not stress savings mobilization since its target clients were decapitalized due to a severe drought in the early 1980s (Hossain 1988). The program emphasized production loans but also recognized the members' need for emergency and consumption loans. Access to consumption loans can be

considered a risk buffer and insurance substitute (Deaton 1992; Platteau 1992). The Bukinabé Caisses Villageoises d'Epargne et de Crédit de BANH recognize this insurance need in their service lines. Through their work with credit groups they successfully combine the institutional need to secure loans with the clients' insurance need. As long as no default occurs, credit groups may resort to their Village Group Fund (which is funded by a 5% share of each disbursed loan) to extend emergency loans to members. One of the main accomplishments of the program is the building of savings capacity among its clientele that was totally decapitalized before the start of the program (Ellsäßer and Diop 1990; Kabore 1990). This is a clear indication for an improved food consumption situation since part of the financial income can now be set aside for future consumption or investment instead of immediate consumption.

Poverty reduction is a much emphasized but often difficult to implement objective of poverty oriented RFIs. The Grameen Bank (GB) in Bangladesh is characterized as a poverty focused development bank (McKee 1989). The GB's emphasis on poverty alleviation of its clientele exerts high pressure on the institution's profitability. Although the GB offers the most successful micro-enterprise credit program worldwide in terms of poverty alleviation and sustainability (Berger 1989; Hulme 1990; Meyer Hubbard 1994), it is not yet independent of international subsidies. Nevertheless, the bank reaches its target groups, particularly poor women, and ensures productive utilization and recovery of its loan portfolio. Hossain (1988) found that more than 90 % of the GB's clientele enjoys a living standard that is higher than prior to their participation in the GB. In 1988, the GB members had a 43 % higher income than comparable population groups living in non-GB villages (Hulme 1990).

Another financial product innovation is practiced by the Savings Development Foundation of Zimbabwe. It puts its emphasis on collective savings mobilization and agricultural input provision to increase the self-financing capacity and agricultural productivity of its clientele. Part of the group members' accumulated savings is converted into productive inputs that are bulk-ordered through the Foundation. About 97 % of the group members are poor rural women. Under the Foundation they can acquire new skills, improve housing, and become financially more independent (Berger 1989; World Bank 1990). Improved agricultural productivity and financial liquidity is crucial to enhance food security. These aspects are clearly addressed by the Savings Development Foundation.

There exist numerous other financial institutions and programs that offer, among other services, finance to the poor. Examples are the Caisse Villageoises d'Epargne et de Crédit Autogerées in Mali, The Gambia, and Madagascar; and ACCION International in Latin America. All of these RFIs have demonstrated the potential to raise productivity and income of the poor. Because of their example and the growing experience with innovative rural finance schemes, the number of similar schemes has grown rapidly in recent years.

### **6.3 Final remarks**

Before the mid 1970s, informal finance was widely considered exploitative by governments and donor agencies. A re-orientation of the formal and informal finance concept came along with the international oil- and debt-crisis in the 1970s. Governments and donor agencies realized the necessity of generating domestic savings and searching for new and effective credit channels to develop sustainable financial markets (Adams 1983). The advocates of service linkages and cooperation between the informal and formal financial markets were increasingly recognized in the 1980s (Adams and Ladman 1979; Adams et al. 1984; Hossain 1988; Kropp et al. 1989; Seibel 1985; Von Pischke 1991). A whole range of financial innovations was conceived, experienced with, and put into practice in pilot projects and other programs. The geographically scattered and multifaceted financial innovations can be categorized in systems, institution, processing, and product innovations. Implementing an innovation in one category is often directly linked to the establishment or existence of innovations in other categories. For instance, NGOs can only extend financial services if the legal framework in the financial system allows non-banks to be financially active.

Successful poverty oriented innovations in RFIs have common characteristics and key features. The review of RFIs has shown that they almost always comprise mandatory and/or voluntary savings arrangements. Furthermore, group savings and lending schemes proved promising in reaching small savers and borrowers while at the same time keeping the financial intermediaries' operation cost low. Most of the innovative rural finance programs provide not only production but also consumption loans. It could be seen that consumption loans do neither undermine the sustainability of financial intermediaries nor the repayment capacity of the debtors (Heidhues 1994). Besides addressing a wide range of customers' financial demands, poverty oriented financial innovations thrive also to increase the coverage of the rural clientele. In the future, it will therefore become increasingly necessary to emphasize processing innovations such as computerized administration to increase institutional efficiency and thereby facilitate the expansion of customer coverage.

More recently, the trend in reshaping formal financial markets in developing countries goes towards a client-oriented transformation of the financial institutions and their corporate cultures. Organization, services and marketing are transformed by actively searching and adapting financial innovations to the socio-economic landscape of the target clientele. The reshaped approaches of financial market development have positive effects on the advancement of financial institutions and their clientele. Financial institutions and services which become increasingly adapted to the agro- and socio-economic environment of the clientele allow the financial institutions to arrive at dynamic and improved performance and they lay the ground for profitable growth. Financial products that suit the clients' needs stimulate financial activities which can promote a more efficient allocation and use of resources. This in turn increases production and wealth and thus alleviates poverty.

Economic growth and socio-cultural transitions at the macro level induce corresponding changes at the micro level. The economic and socio-cultural transformations at the household level put market pressure on the financial sector to adapt to the shifting socio-economic environment. Therefore, it is important to have a continuous feedback between rural clients and institutions to maintain a high degree of market coverage, accessibility, and finally institutional viability.

## **7 Adaption, adoption and diffusion of financial innovations: The case of Cameroon<sup>10</sup>**

The financial systems in developing countries have undergone substantial changes over the last two decades. Apart from the lessons learned from formal financial sector failures and the thriving of the informal sector, the rapid transition in financial engineering and banking practices prompted most developing countries to reshape their approach to financial system development, particularly their attitude towards poverty oriented microfinance.

### **7.1 Informal finance**

Informal financial institutions use different financial intermediation strategies than formal institutions. Financial services from informal institutions are indigenously developed and thus closely adapted to the demands of their clientele. In contrast to formal financial services, they are continuously and flexibly adjusted to the changing socio-economic environment and client demands.

Schrieder (1996a) interviewed 109 leaders of Cameroonian informal financial associations (IFA) in 1991/92 regarding changes in their organizational structure to assess whether IFAs are actually as flexible as they are often quoted to be in literature. Almost 25 % of the total group sample remembered having changed their organizational structure or adopted a new service at least once, and 11 % even mentioned two changes/innovations during the past five years. Table 2 depicts the financial innovations recalled by the group leaders.

According to the innovation categories outlined above, Table 7.1 shows that the majority of the innovations mentioned by the group leaders fall into the category of institution innovations. About 45 % (17 groups) of the IFA sub-sample introduced financial institution innovations by changing their organizational structure. Pure savings associations adopted credit services, meaning they became savings and credit associations (27 %; 8 groups). This may be an indication that the members of the association demanded access to a loan facility in case own resources would not suffice. About 16 % (6 groups) of the associations changed their organizational structure from rotating (RoSCA) to non-rotating savings and credit associations (Non-RoSCA).<sup>11</sup> This structural change mitigates a disadvantage of RoSCAs, their inability to provide continuous access to member loans. A basic RoSCA only provides a loan to a member once in a group's cycle. A Non-RoSCA is more able to satisfy multiple loan demands by one member (Tankou and Adams 1995). This institution innovation prompts an increased flexibility of the group's credit service, eventually a more efficient allocation of its funds, and finally larger incremental income gains through high return investments.

The most prominent product innovation concerned the insurance service of the groups. More than 15 % of the IFAs that had reported to have adopted innovations, changed their mutual aid service from in-kind to in-cash assistance. This means that the disbursement form of the insurance service changed. One can conclude that the group members had expressed a more acute demand for cash than physical insurance.

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<sup>10</sup> This section draws on Schrieder (1996b).

<sup>11</sup> See Bouman and Hartefeld (1976) regarding the functioning of rotating financial associations (RoSCA).

**Table 7.1 Financial institution and produce innovations in Cameroonian IFAs**

Type of Innovations	First Change		Second Change		All Changes	
	N=26	% of Groups	N=12	% of Groups	N <sup>a</sup> )	% of Groups
From in-kind mutual aid to in-cash	6	23.1	...	...	6	15.8
From RoSCA to non-rotating structure	5	19.2	1	8.3	6	15.8
From savings-only to Non-RoSCA	7	26.9	1	8.3	8	21.1
From Non-RoSCA to RoSCA	1	3.8	...	...	1	2.6
Introduction of emergency fund, fine system or joint business	5	19.3	6	50.0	11	29.0
Transitory emergency fund or fine system	1	3.8	2	16.7	3	7.9
Acceptance of women members	...	...	1	8.3	1	2.6
Community level registration	...	...	1	8.3	1	2.6
Reduction of loan term	1	3.8	...	...	1	2.6
<b>Total</b>	<b>26</b>	<b>99,9<sup>b</sup>)</b>	<b>12</b>	<b>99,9<sup>b</sup>)</b>	<b>38</b>	<b>100.0</b>

Source: University of Hohenheim/IFPRI, Credit for the Poor in Cameroon, Own Data, 1991/92

Notes: ... = not applicable;

a) 'N' refers to the total of organizational changes, not to the absolute number of groups that had changes.

b) Numbers may not add up to 100 % because of rounding.

Informal financial associations (IFA) in Cameroon frequently administer premia funded insurance funds (62 %), the emergency and the mutual aid fund (Schrieder 1989 and 1996a; Tankou and Adams 1995; Zeller et al. 1996a). The emergency fund covers unexpected and urgent expenditures of members. The emergency fund is primarily called upon to cover personal risks such as sickness, death, and other social expenses. Furthermore, it is used to cover contributions of group defaulters and to assist members that are temporarily unable to observe their savings obligations. The mutual aid fund provides help for the same circumstances as the emergency fund. Financial assistance from the emergency fund, however, ought to be repaid, although mostly interest free, in contrast to mutual aid. While the emergency fund is mainly an insurance substitute, the mutual aid fund is a genuine form of member-financed insurance. Most often, an IFA offers either an emergency or a mutual aid. The determinants of the implementation of either fund need still to be researched (Schrieder and Cuevas 1992; Zeller et al. 1993 and 1996a). Nevertheless, Schrieder (1996a) found that 61 % and 13 % of the associations (N = 109) insure personal risks by providing mutual aid and emergency funds, respectively. It is also a common practice to append a Non-RoSCA to a RoSCA to be able to provide the RoSCA fund but particularly emergency loans to RoSCA members out of the funds accumulated in the Non-RoSCA. Frequently, the members of the Non-RoSCA are the same as in the RoSCA or at least otherwise associated to the RoSCA members (Hospes 1992; Schrieder 1996a).

More sophisticated Cameroonian RoSCAs overcome the financial intermediation inefficiency, namely their incapability of allocating their funds most efficiently, by applying a bids-technique to determine the rotation of their funds (Schrieder 1989; Tankou and Adams 1995). Schrieder (1989) observed this technique in 1988. Funds are allocated most efficiently if they go to the group member who has the highest expected marginal return from the use of

additional liquidity. Because the simpler RoSCAs typically determine the allocation of their fund by lot or on the basis of need perceived by the group leader, There may be a mismatch between those who receive the fund in a given rotation and who has the investment opportunity with the highest expected rate of return (Tankou and Adams 1995).

## **7.2 Formal finance**

Formal financial institutions, such as commercial banks and cooperatives, have often begun only recently and tentatively to adjust their organization and product profile to the demands of their rural target clientele. Often, these services are somewhat adapted from the informal sector. This section assesses several financial innovations and their impact on the clientele of three formal Cameroonian institutions: the Crédit Agricole du Cameroun (CAC), the Caisse Communautaire de Crédit et d'Épargne (CCEI Bank), and the Cameroon Cooperative Credit Union League (CamCCUL). While CamCCUL offered rural financial intermediation right from its foundation in 1968, the relatively new universal banks CAC and CCEI introduced rural banking only in 1991. The financial depth (available banking outlets per 10,000 persons) of CamCCUL compared to Cameroon's banking sector is 0.319 credit unions (in 1993) to 0.137 bank branches (in 1990). Due to the anew collapse of commercial banks since 1990, the financial depth relation of credit unions to banks must have shifted even more towards CamCCUL (Schrieder 1996a). Table 7.2 below summarizes the financial innovations applicable to or diffused by the formal financial institutions discussed in this section.

**CAC:** CAC has launched a pilot project regarding rural financial institution building. It founded its first CAC village bank (Caisse Locale: CL) in 1991. The CLs build on already existing local organizations and elite, and must register with the governmental authority at the sub-division. The CLs comprise multiple savings and credit groups that unite the individual village bank members. It is the CL which designs its financial and organizational regulations according to its specific demands. This may include the provision of productive and consumptive loans. The CAC intervenes in the transactions of the CLs only in the sense of monitoring and technical assistance. While the concept appears promising, there exists just one CL up to this day that is affiliated to CAC. While in the beginning the outlook was promising, this CL is mal-functioning in terms of loan repayment and self-administration. CAC attempts to adapt this concept by designating special staff to this task and by cooperating with local NGOs that are experienced in working with village groups. According to CAC, one problem of the CLs is their „ethnic isolation“. This is to say that bank staff that enjoys the trust of CLs in one region will not necessarily associate successfully with CLs in a different region due to ethnic animosity.

Since May 1994, the CAC operates its own professional training center, similar to the German vocational apprenticeship system. Presently, 25 apprentices are trained in the banking business. The training period is two years, thus, the first lot should start working full-time this year. CAC expects to obtain qualified and loyal bank personnel by means of this outstanding institutional innovation.

**CCEI Bank:** The CCEI Bank has adopted financial institution as well as product innovations. Particularly one of the institution innovations, the Mutuelles Communautaires de Croissance (MC2), has the potential to diffuse demanded financial services to the rural target population. In addition, CCEI has a Research & Study Division in its headquarters to follow up the new developments in financial engineering.

In 1995, 10 MC2 already existed and 14 were in the planning phase (Bomda 1995). The MC2 are micro-banks that are linked to the central bank through their affiliation to the CCEI. This is a major advantage as compared to the credit unions affiliated to CamCCUL since the latter operate under the cooperative law and, thus, have no access to the credit refinancing lines of the central bank (Schrieder 1995). The MC2 are generally launched by the CCEI together with the urban elite in their village of origin. The CCEI subsidizes its MC2 through technical and professional assistance. The urban elite generally buys shares of the MC2 to make it operational, knowing that the operation will draw in losses in the first 3 to 5 years. Furthermore, it subsidizes the institution financially and through in-kind donations (e.g., furniture). Bomda (1995) found in a survey of the four MC2 in the West Province of Cameroon that already 84 % of the savings account bearers (1225) are rural and that 70 % of the mobilized shares and savings balance are of rural origin (francs 125,338,396 CFA, DM 364,356). Women constitute 16 % of the membership and 50 % thereof are rural women. Almost 100 % of the loans disbursed go to rural applicants. Presently, the repayment ratio is 100 % and the investment activities are predominantly business and agriculture.

CCEI diffuses also a financial product innovation, the Flash Cash Checks (FCC) to its customers. According to bank officials, this product was designed in association with local businessmen. Based on the amount deposited on the client's Flash Cash checking account, the CCEI Bank issues FCCs of the same amount to the client. The checks have many features of traveler's checks and credit cards (Adams 1995a). As with the traveler's checks, the issuing branch of CCEI registers each number of the FCCs for security purposes. Particularly businessmen and traders find the FCC attractive, since they can reduce the amount of cash they travel with and since the FCCs are already widely accepted by stores in the major towns to pay merchandise. In contrast to a check drawn on a regular checking account, recipients of FCCs can be certain that a FCC is covered by the FC account. This is a crucial feature of financial transactions, particularly in a country where the legal system often fails to assist the recipients of bad check to acquire their money (Schrieder 1995). Since the FCCs can be deposited to any MC2 account, urban Cameroonians with relatives in MC2 villages start to send remittances in form of a FCC. The rural remittee must have a MC2 account to which the amount of the FCC is deposited. This transaction may take a week since the CCEI headquarters verify the validity of each FCC. Afterwards the money can be withdrawn. This reduces traveling and accommodation expenses as well as transaction costs of time since neither the remitter nor the remittee has to move. In the future, the CCEI plans to introduce a money transfer service from CCEI branches to MC2 accounts.

**CamCCUL:** Its cooperative structure (self-control etc.) enables CamCCUL to be close to the heartbeat of its members, to their financial service demands and to their changing socio-economic situation. Thus, CamCCUL frequently adopted financial innovations to improve its service. Due to the popularity of Non-RoSCAs in Cameroon and their need to safeguard the collected member savings, CamCCUL always accepted collective group clients, even if they were not registered. The commercial banks started only in recent years to adopt this institutional innovation. A novel development is CamCCUL's application at the Ministry of Finance to open its own bank, the Union Bank (Schrieder 1995). Up to now, it deposited its reserves with local commercial banks. Due to the collapse of the banking sector in the 1980s, the viability of CamCCUL was sometimes endangered. Also, its members appear to have grown economically. Their financial service demands have changed with their upgraded economic status. Particularly the urban clients demand more financial market integration, such as money transfer services that only a bank but not a cooperative can furnish. CamCCUL intends to satisfy this member demand by opening its own bank.



On the product side, CamCCUL offers flexible credit services that allow loans for productive as well as consumptive purposes. Savings mobilization is basic to the concept of savings and credit cooperatives. CamCCUL closely observed the financial transaction design of IFAs and a prerequisite of successful product diffusion and market success, namely compatibility. Compatibility refers to the concept that newly introduced services should be somewhat consistent with existing values and past experiences of the potential clients. CamCCUL’s financial products are consistent in this sense.

Presently, CamCCUL also cooperates with the Food and Agriculture Organization (FAO) and the World Council of Credit Unions (WOCCU) regarding the installation of a computerized accounting system (processing innovation) in two of its larger credit unions. The league is already computerized (WOCCU 1994).

**Table 7.2      Formal financial institutions in Cameroon and their rural financial innovations**

Innovation Categories:	Financial innovations applicable to or diffused by:		
	CAC	CCEI	CamCCUL
System	...	MC2 Central Bank agreement	Cooperative law 1992
Institution	Apprenticeship Center Caisses Locales	MC2 Research & Study Division	Union Bank
Processing	PC banking <sup>1</sup>	PC banking <sup>1</sup>	PC banking <sup>1</sup>
Product	Human capital loans	Flash Checks Human capital loans	Human capital loans
Environmental banking	...	...	...

Notes: <sup>1</sup> PC banking is only introduced physically in urban or semi-urban branches.

**7.3 Final remarks**

A better understanding of the complex interactions of poverty adapted financial engineering and income and food security provides guidance for financial policy and food security programs.

Cameroon’s formal financial market is rich of experiences in innovative rural financial engineering. Therefore, it surprises that the coverage of the potential rural bank customers is still that weak. Nevertheless, formal financial institutions that have a long term commitment to service the rural population with adapted services have a positive impact on the economic and food consumption situation of their clients, as the case of CamCCUL shows. It strikes that the formal financial institutions willing to operate in the rural environment Cameroon’s do not cooperate, e.g., exchange experiences in rural financial intermediation and subsequently divide the rural market among each other to avoid competition for the same customers. An encouraging development regarding a coherent financial engineering strategy is their (CAC, CCEI, and CamCCUL) established or intended affiliation to the African Rural and Agricultural Credit Association (AFRACA) in Kenya. The following comprises recommendations regarding financial market policies in general and institution policies in particular.

Health problems, malnutrition and the responsibility for a large number of minors significantly reduces a person’s access to the financial market. It must be emphasized that the existence of a financial system and the diffusion of appropriate and poverty oriented financial services do not substitute for public health and social insurance. Nonetheless, idiosyncratic

risk insurance is a demanded financial service among the rural poor. This statement is confirmed by the practice of the informal financial sector world-wide which often establishes a complementary mutual aid/emergency member service to protect their clients from personal risks that could undermine their repayment capacity and credit worthiness. A parallel policy strategy of the public and private sector, both offering insurance services, could generate synergetic effects and the greatest benefits for the rural poor in improving their food security, health and economy.

Empirical evidence from all over the world has shown that innovative financial engineering in the rural microenterprise sector must account for the target clientele's demand for attractive savings schemes. However, livestock-in-kind-savings frequently generate a higher profit rate for the saver than microfinance programs offer on their financial savings schemes. Therefore, microfinance programs must thrive to successfully compete with in-kind savings schemes (eventually with complementary non-financial services or lotteries) to attract customers and their savings.

Women's enterprise and household occupations and responsibilities are closely related and intertwined. Therefore, their demand for financial services is distinctly different from the male market segment. Not only in Cameroon, does family nutrition benefit from loans taken by women. Since women are often cash-constrained, they tend to spend cash revenues on productive purposes and finance urgent consumption needs through loans. Despite their tight budgets, women honor their debt obligations. Cameroonian women, contrary to men, who tend to mainly demand production loans from formal finance programs, prefer to have a choice between production and consumption loans. It is vitally important that women's service preferences are taken into account when adapting and diffusing rural financial services. Especially as they produce 70 % of the staple food in sub-Saharan Africa.

Access to financial services can stabilize the poor's food consumption through the possibility of adjusting disposable income by borrowing or dis-saving. A direct food consumption stabilization occurs via dis-saving or borrowing to finance nutrition. Indirectly it occurs via debt-financed income raising investments. Access to adapted financial engineering services can be an efficient support instrument to complement conventional food security policies such as food price, income diversification, and food-for-work policies. They may be even more efficient as they can be designed in a flexible way and customized to particular market segments.

The example of the CCEI has shown that it is beneficial to establish a participatory process with the national elite when implementing rural banking outlets in their village of origin. Particularly the urban elite is more than willing to invest in the development of their home village as they often intend to settle there when retiring. From the standpoint of improved financial intermediation, this strategy has three advantages. First, the incorporation of the elite reduces the cost and risks of market expansion on the side of the financial intermediary, since the elite sponsors the institution. Second, the targeted clientele is motivated to cooperate and trusts the intention of the financial intermediation approach. Furthermore, it allows to design the services in a demand-adapted way.

## 8 The ethical dimension of financial intermediation<sup>12</sup>

This section tackles a most relevant topic in the fast moving business world, ethical behavior in financial intermediation. Ethical behavior should not only be applied for reasons of personal conscience but also for reasons of social welfare, to live together in peace and prosperity, and for economic efficiency. Ethics in the business of financial intermediation is a particular case since deregulation of markets and the upsurge of financial institutions and innovations have multiplied opportunities for profit, the morality of which is not always patent.

The objective of this chapter is to provide guidelines for the ethical analysis of financial intermediation. Ethical problems in a society are always complex: they have economic, political, human and sociological aspects. Nevertheless, each person, organization and society must exercise ethics according to their nature and their situation in life. The need to study ethics in business does not arise as an additional extra to financial and economic analysis, but at a more profound level which is manifested in three areas:

- (1) *The people.* Ethics is the science that teaches each person to reach his goal as a person (his perfection, development, etc.). Everyone who participates in the economy, from workers to managers and from owners to customers, have the right (and the duty) to behave ethically, because they have the right (and the duty) to provide the virtuous and skills (ethics) to achieve their own goals.
- (2) *The company.* As a human organization, the company has an aim of its own which may be different from - but not in opposition to - the goals of the people who take part in it. Its organization, its working rules, its hierarchy, its culture, etc., must be aimed, first of all, at achieving the corporate goal, which has also an ethical side to it. But what is more, the company's structure should at least, not prevent, and, as far as possible foster ethical conduct in the people in the company and its environment. The company does not exist to implant ethics in its staff but ethics can not be overlooked since the achievement of the company's goal is at stake.
- (3) *The system.* The whole of the social, political and economic system should be governed by ethical rules, so that the different societies and people - as well as companies - can harmoniously reach their goals while helping the population to reach economic prosperity.

Ethical conduct is important in financial intermediation because a country's financial system has a social function to fulfill. In brief, the social responsibility of a company, respectively a financial institution, is to produce and distribute goods and services to satisfy needs efficiently and with a vocation for self-continuity. The social function of a financial institution includes thus:

- (1) Offering savers (or divestors) a wide range of financial assets (including insurance) with different characteristics as regards maturity, liquidity, return, etc. where they can place their surplus liquidity.
- (2) Making financial resources available for investors (or non-savers) with different conditions as regards cost, maturity, guarantees, etc. to finance their operations.
- (3) Carrying out this intermediation efficiently, e.g. which could be indicated by a small spread between interest rates on assets and on liabilities.

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<sup>12</sup> This section draws strongly on various chapters of the book „The Ethical Dimension of Financial Institutions and Markets“, edited by Argandoña, 1995. Authors of the chapters concerned are Argandoña and Werhane.

Therefore, a financial institution should allow and encourage its members (customers and staff) to achieve their goals at the same time as it is realizing its corporate goal, the efficient (profitable) production and distribution of goods and services. This is a function that is common to all human organizations - and also to the companies supplying economic goods and services.

After arguing that ethics is necessary in a company, does the fact that we are referring specifically to financial institutions and markets make any substantial difference? No, but there are important nuances since the way of being ethical in the world of finance adapts to the peculiarities of its social function. Employees, from the executive manager to the counter-clerk, should exercise the same virtues and be guided by the same values as the employees of other companies, but in accordance with the specific features of their business vocation. That is why there are some ethical features specific to the financial system (list is not intended to be exhaustive and order does not indicate importance):

- ⊗ *Professional competence.* This is the first duty arising from the requirement of corporate efficiency, whereby profit is the common economic measure of it. Professional competence has numerous economic repercussions which are also ethical repercussions: foreseeing and anticipating changes in the market that may affect the financial business; introducing opportune innovations, fostering the growth and competitiveness of the institution, keeping costs down and so forth. It is worth pointing out that professional training should not only develop knowledge, aptitudes and skills but also moral attitudes, values and virtues.
- ⊗ *Service to the customer.* A purely economic approach to servicing customers considers the customer purely as means to make profit, thus, if profits so dictate, quality service will be abandoned. However, service as a value does not subordinate itself to profits. This has important long-term consequences with regard to the corporate culture generated in the financial institution and the credibility of the institution. Also, good service must recognize and respect people's dignity.
- ⊗ *Confidence.* The intermediation function of financial institutions implies a set of moral values which revolve around confidence. These include the confidentiality of information about customers, veracity and the fulfillment of commitments among other things.
- ⊗ *Justice.* Justice in financial intermediation can be described as giving each customer what he deserves and treating different customers equally good.
- ⊗ *Moral responsibility.* The financial phenomenon veils real activities. Thus, customers' responsibility projects itself onto the responsibility of financial institutions. That is why a financial intermediary should not grant loans for immoral or illicit operations.
- ⊗ *Prudence.* Prudent financial conduct is perhaps to a greater extent important in financial institutions than in other economic activities because financial institutions have to offer opportunities of placing funds with the appropriate risk which the customer cannot always estimate adequately for himself. This is why they must always guarantee their solvency, equity and liquidity.
- ⊗ *Legality.* Abiding by laws and regulations is also an ethical duty. This has to be observed for moral reasons and not just because of the coercive nature of the law. This point is important. If a financial institution obeys the law for fear of punishment then it is not dismissing the possibility of disobeying it on some occasion if it could obtain some advantage in this way. But if the law is respected because of an ethical

commitment, this alternative will disappear. Moreover, if the financial institution decides not to obey the law on some occasion, then this will be because it is applying some superior moral principle. This shows that legality and morality do not coincide. Not all that is legal is moral, nor is what is moral reduced to what is legal. It shows that ethics does not concern the Government or the central bank nor is it achieved through regulation although these may be necessary in an immoral society.

- ⊗ *Excellence*. Ethics is not a science of minimums but of optimums, as it is concerned with the achievement of the goals of persons and organizations. As regards staff training and developing the corporate culture, minimum ethics - observing the law and not committing a fraud - is insufficient because ethics aims at personal perfection.

These are of course not all the ethical contents of the financial business. All the human virtues that include strength, patience, constancy, sobriety, veracity, honesty, etc. must be exercised. Argumentation goes however, that ethics may not be profitable for an institution in the short-term. But in the long-term, if the system behaves according to moral rules, everyone will reap the advantage of this. Like in the „prisoner’s dilemma“, there is an optimum social equilibrium that is superior to the private equilibrium and which improves everyone’s condition. In the long-term, everybody stands to gain if everybody is ethical. For this reason, ethics is the equilibrium condition for the social optimum in a society.

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