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**TERM FINANCING IN AGRICULTURE:
A REVIEW OF RELEVANT EXPERIENCES**

VOLUME I: MAIN REPORT



**FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS**

**TECHNICAL COOPERATION DEPARTMENT
INVESTMENT CENTRE DIVISION**

FAO/WORLD BANK COOPERATIVE PROGRAMME

In cooperation with:

**FAO AGRICULTURE DEPARTMENT – AGRICULTURAL
MANAGEMENT, MARKETING AND FINANCE SERVICE**

TERM FINANCING IN AGRICULTURE: A REVIEW OF RELEVANT EXPERIENCES

VOLUME I: MAIN REPORT

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ABBREVIATIONS

ACCION	Americans for Community Co-operation in Other Nations
AFR	Agricultural Finance Revisited
AgDB	Agricultural Development Bank (Ghana)
ANED	<i>Asociación Ecuménica de Desarrollo</i>
B/C	Benefit/Cost Ratio
BAAC	Bank for Agriculture and Agricultural Cooperatives (Thailand)
BCEAO	<i>Banque Centrale des États de l'Afrique Occidentale</i>
BDS	Business Development Services
BNDA	<i>Banque Nationale de Développement Agricole (Mali)</i>
BRI	Bank Rakyat Indonesia
CDC	Commonwealth Development Corporation
CECAM	<i>Caisses d'Épargne et de Crédit Agricole Mutuelles (Madagascar)</i>
CERISE	<i>Centre Européen de Ressources sur les Initiatives Sociales et Économiques</i>
CIDRE	<i>Centro de Investigación Regional</i>
CIRAD	<i>Centre de Coopération Internationale en Recherche Agronomique pour le Développement</i>
CLA	<i>Caja Los Andes</i>
CMAC	<i>Caja Municipal de Ahorro y Crédito (Peru)</i>
CNCA	<i>Caisse Nationale de Crédit Agricole de Burkina Faso</i>
CV	<i>Caisse Villageoise</i>
DFI	Decentralised Financial Institution
DFS	Decentralised Financial System
EBS	Equity Building Society (Kenya)
F.I.	Financial Institution
FAO	Food and Agriculture Organisation of the United Nations
FECECAM	<i>Fédération des Caisses d'Épargne et de Crédit Agricole Mutuel du Bénin</i>
GTZ	<i>Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH,</i> German Development Assistance Agency
IADB	Inter-American Development Bank
IFC	International Finance Corporation
IRAM	<i>Institut de Recherche et d'Application des Méthodes de Développement</i> (French Microfinance Development Company)
IRR	Internal Rate of Return
JLG	Joint Liability Groups
KUD	<i>Kooperasi Unit Desa</i>
LBP	Land Bank of the Philippines
MCRB	Mulukanoor Cooperative Rural Bank and Marketing Society
MENA	Middle East/North African Region
MFI	Microfinance Institution
MIS	Management Information System
NES	Nucleus Estate Smallholder approach
NGO	Non-Governmental Organisation
NPV	Net Present Value
PASMEC	<i>Programme d'Appui aux Systèmes Mutualistes d'Épargne et de Crédit</i>
RBP	Rural Bank of Panabo, Philippines
ROSCA	Rotating Savings and Credit Associations

SACCO	Savings and Credit Cooperative Society
SHG	Self-Help Groups
SME	Small to Medium Size Enterprises
SSA	Sub-Saharan Africa
WB	World Bank
WUA	Water Users Association

INTRODUCTION

A. BACKGROUND

Globalisation brings about enormous challenges to smallholder agriculture. Farmers need to adjust to changing market conditions and opportunities by commercialisation of their existing agricultural activities or by diversifying into new enterprises. These strategies often require farmers to invest in farm-related assets, such as farm machinery, irrigation and post-harvest equipment, tree crops, transport, land or livestock. These investments need to be funded, sometimes with borrowed funds, involving amortisation over long time periods.

On the other hand, there has been a steady decline in funding for agriculture since the middle of the 1980s, mainly as a consequence of disappointment with the “old paradigm” of directed and subsidised credit and the general shift towards the “new paradigm” of rural financial institution building. This trend is also clearly reflected in the World Bank’s (WB) rural development portfolio. Again, the “Micro-finance Revolution” has largely bypassed agricultural activities and small farmers, especially in less densely populated areas.

A growing concern about the lack of appropriate funding sources and financing instruments for farmers, especially for financing longer term investments, has been shared widely by development finance institutions, governments, farmers and the development community. This prompted FAO and the World Bank to initiate research on the existing state of knowledge on financing agricultural term investments in developing countries, and to identify some innovative approaches as to how improvements can be made. The present report is the result of this work.

B. SCOPE

The report covers different financing instruments such as term loans, leasing and equity finance/venture capital. It looks mainly at farm level investments such as those mentioned above. However, larger-scale investments such as processing enterprises or small-scale irrigation schemes are covered to a limited extent, mainly in connection with group-owned enterprises or joint ventures. On the supply side, it covers different types of financial institutions operating broadly within the financial market approach. It also reviews some evidence on the role of non-financial institutions (suppliers, agro-business and projects) in financing farm level term investments. The main target groups are small farmers, with outreach towards poorer small farmers being a particular concern. The term ‘farmer’ will be used for reasons of simplicity, while recognising the diversity of income sources and livelihood strategies and the integration of farm and non-farm enterprises in many if not most farm households.

C. TARGET AUDIENCE

The main audience of this report is seen as institutions involved in designing policies and projects for financing agricultural term investments. This includes donors, government institutions and programme/project managers. Some chapters might also be of interest to financial institutions and entities supporting such institutions.

D. MAIN APPROACH, SCOPE AND MAJOR STEPS OF THE RESEARCH

Literature research and identification of case studies were done through library searches, scrutiny of web-based rural finance discussion lists and knowledge banks, contact with the regional networks of rural and agricultural finance associations (AFRACA, APRACA and NENARACA), with other donors and with rural finance specialists in different parts of the world. The literature review revealed that there is little documented evidence of successful examples of term finance to agriculture. This applies in particular to the small farm sector, and to certain regions such as Sub-Saharan Africa. Most of the recent rural finance literature only touches upon the topic within a critical analysis of the failures of the “old paradigm”, without pointing to new avenues for dealing with farmers’ needs for investment finance.

Given time and resource limitations and the need to start “from scratch”, a pragmatic approach has been adopted. No attempt has been made here to develop a comprehensive picture of term finance arrangements around the world. Instead, the approach has primarily been to identify a number of interesting case studies which illustrate how a variety of financial and non-financial institutions have tackled the provision of term finance for agriculture. Special attention is paid to the lender/borrower inter-relationship and to the financing methods and the techniques used to manage risks and cut down lending costs. In view of the scarcity of successful term finance arrangements, a few, simple selection criteria were used: the financing mechanisms should be financially viable and innovative, in the sense of not repeating the failures of the “old” directed credit paradigm. Moreover, examples should come from different parts of the world and cover a range of financial institutions and environments. Possible replicability of innovative approaches in Sub-Saharan Africa (SSA) was another important selection criterion.

Research started in December 2000 and an initial set of case studies was carried out in Bolivia, Ghana, India, Indonesia, the Philippines and Thailand. Apart from India, the case studies were implemented through field missions of FAO staff members, in collaboration with local consultants. The case studies in India were carried out by a national consultant. A first draft report, including summaries of the case studies, was prepared and discussed in Washington in September 2001. It was agreed to carry out additional research and case studies, with particular reference to a) Sub-Saharan Africa, b) financing of tree crops, and c) a stronger focus on positive action and outreach, even if this would require applying less orthodox/conventional approaches to term and investment finance.

Additional case studies were carried out in Bolivia, South Africa and Indonesia (on tree crops). The search for case studies on term finance in SSA yielded few results. Research was carried out in Kenya on the financing arrangements in the smallholder tea and coffee sectors, including production and post-production phases. Additional useful information was obtained during a workshop on the contribution of micro-finance to the financing of family farms in SSA, organised by the *Centre de Coopération Internationale en Recherche Agronomique pour le Développement* (CIRAD), in January 2002. During this workshop, interviews were held with representatives of financial institutions from a number of African countries on their experiences with agricultural term finance. Following this workshop, some unpublished literature was obtained on institutions such as *Fédération des Caisses d’Épargne et de Crédit Agricole Mutuel* (FECECAM) in Benin, and *Caisses d’Épargne et de Crédit Agricole Mutuelles* (CECAM) in Madagascar. Research on tree crops was mainly carried out in Indonesia during a TCI/ADB (Investment Centre Division/Agricultural Development Bank) assessment mission of reviewing smallholder tree crop development projects funded by WB, ADB and the Indonesian government.

It was complemented by an evaluation of literature and examples from Kenya and South Africa. These examples are not presented as complete case studies, but serve as additional evidence to support major findings. The information is presented in boxes in the text of the main report. A summary of all empirical material used in the study is given in Chapter 3.

The case studies include successful examples as to how innovative approaches have been developed locally and brought some success, even in a hostile environment. Problems concerning the transferability and replicability of approaches amongst countries and regions need to be acknowledged. Moreover, the narrow base of evidence under varying framework conditions limits the possibility to draw strong conclusions. Nevertheless, some important lessons emerged regarding the design of financing technologies and crucial elements of an enabling environment.

The case studies point to the crucial importance of well designed and targeted donor support to financial institutions, especially in the early phases of developing and pilot testing financial innovations. They also indicate the limitations of a purely financial market approach in terms of breadth, depth and speed of outreach, particularly in SSA, and outline some examples of “kick-starting” arrangements.

This research is only a first step into the area of rural investment finance. It should be followed by more specific studies to focus on certain instruments or explore their applicability in a particular country or sub-regional context.

E. HOW COULD THIS REPORT BE USED?

The report can be used as a sourcebook for planners, programme managers and financial institutions. Planners, programme managers and policy makers might be interested in Chapters 1, 2, 6, 8 and 9. Chapters 4 and 5, which are based on hands-on experience from different financial institutions, may be useful for those involved in the design of specific term finance products. This includes financial institutions and task managers in related projects and programmes.

Structure of the Report

The report is divided into two separate volumes. Volume I comprises the main report and Volume II contains summary reports on the case studies and fact sheets which outline the key features of each financial institution studied. Volume I draws heavily on the case studies and complementary information obtained during various field missions. It is structured as follows:

- **Chapter 1** is a conceptual framework, defining the most important terms and concepts used in this report, such as term finance, investment finance, term investments, alternative financing strategies, etc. It provides a general road map for the suitability of different financing instruments under certain environments.
- **Chapter 2** looks at the main determinants for the supply and demand of term finance from an analytical perspective: Which types of term investments warrant term finance and cannot be financed differently (e.g. through short-term loans)? Which types of farmers are able to use term finance profitably and repay their obligations? Which types of investments are likely to be financed by financial institutions, which would require specific financing arrangements? On the supply side, risks, transaction costs and lack of

information are highlighted as main constraints for term finance. A distinction is made between risks which can be addressed by farmers and financial institutions and those which are beyond their respective capacities.

- **Chapter 3** provides a broad overview of the structural trends of the supply of term finance following the shift from the “directed credit” towards the “financial markets” paradigm. The major providers of term finance and their importance for farmers are highlighted, with particular reference to SSA, followed by a brief presentation of the case study institutions.
- **Chapters 4 and 5** look at practical ways for effectively addressing risks and transaction costs inherent in term finance. Chapter 4 deals with term lending, discussing major elements of the financing technologies applied by various term lenders. Chapter 5 summarises some evidence on leasing and the scope and constraints for the applicability of this mechanism for financing farm equipment in developing countries. It briefly touches on equity finance for capitalising larger scale enterprises, a topic which is explored in more depth in Chapter 8. Finally, some evidence on the role of non-financial institutions is summarised briefly.
- **Chapter 6** discusses important issues which go beyond the level of financial institutions or other providers of term finance and have a crucial impact on the viability of term finance. This includes the macro-economic and policy environment, legal and regulatory issues with special reference to collateral and mobilisation of funding sources for term finance. It further briefly touches upon measures to address specific issues related to risks and absence of collateral, such as guarantee funds and insurance.
- **Chapter 7** discusses problems of financing long gestating crops. These are seen as an important smallholder investment opportunity which, however, is difficult to finance through the banking system. It looks at the specific financing issues and how these have been overcome by existing tree crop smallholders without government support. It then draws some lessons from tree crop development schemes and concludes with options and recommendations for donor and government support strategies for smallholder tree crop development.
- **Chapter 8** deals with a situation where potentially profitable investments are unlikely to be financed through the financial system. The chapter looks at some instruments to kick-start investments in more marginal areas which would lay the foundation for farmers’ diversification strategies and trigger the development of the financial system. It also discusses some options for financing joint ventures between farmers and outside investors, within and outside a land reform context.
- **Chapter 9** summarises the main findings and conclusions of the report and outlines recommendations for policy makers and donors.

1. CONCEPTUAL FRAMEWORK: DEFINITIONS, APPROACH AND SCOPE OF THE STUDY

A. THE PURPOSE: FINANCING TERM INVESTMENTS

1.1 Term investments are investments in productive assets which can be used over more than one production cycle, in most cases over several years. Some farm-related assets can be purchased and are ready for use, such as land, farm machinery and equipment. Other assets, such as dams and irrigation systems, have to be created through the combination of labour, inputs, and in some cases, specialised services. In the case of agriculture-related assets, the time required for creating the asset (gestation period) is often determined by biological processes (e.g. tree crops). Due to the gestation period, there is a time lag between initial expenditures and the time when the investment creates a positive cash-flow.

1.2 For financing term investments, borrowed funds may be required to complement the investor's equity. Ideally, funding should be structured according to the economic life and cash-flow of the investment, to avoid illiquidity. Term finance comprises several financial instruments such as term loans, leasing and equity finance. A further distinction can be made between medium-term (1–5 years) and long-term (above 5 years) finance. Which of these instruments is most appropriate for a specific purpose depends on a number of factors, which will be discussed in more detail in the following sections. They include size and cash-flow of the investment, socio-economic characteristics of the investor, financial market structure and the macro-economic environment. Especially in the case of larger investments with considerable capital requirements or a longer gestation period, external finance would be provided as term finance, to be repaid over several years.

I. Conventional Term Finance Concepts

1.3 Term finance (term loans and leasing) is provided for consumptive and productive purposes in mainstream banking. A further distinction has to be made between term loans to enterprises (mainly for productive purposes) and term loans to individuals (mainly for consumptive purposes). The basic difference is the loan appraisal method: in the case of consumption loans, the repayment capacity is assessed only on the basis of the existing cash-flow of the borrower; no specific investment appraisal is necessary. In the case of term loans for productive purposes (hereafter called investment loans), the repayment schedule is mainly based on the estimated cash-flow generated by the investment. The existing cash-flow of the enterprise serves – together with collateral – as an additional source of funds to repay the loan, should the investment fail to produce the projected cash-flow.

II. Problems of Using Conventional Term Finance for Small Farmers/Rural Enterprises

1.4 The investment loan approach works well for formal enterprises which produce regular financial statements and are able to provide suitable collateral,¹ but is less suitable for

¹ For these enterprises, term loans can be a relatively cheap source of funds (compared to equity) which complement the investor's equity and permit him to retain his management autonomy. Long-term resources

informal businesses such as those of small farmers. However, agricultural banks, donors and governments have in the past tried to apply these enterprise-based concepts of term finance within development projects and programmes for financing farm-related investments for small farmers. They have enjoyed little success. Typically, farm or investment models were calculated using standard assumptions centred on projected incremental cash-flows, whereas individual farm households' other income and expenditures were only marginally considered. Not surprisingly, this misguided approach has often been plagued by low loan repayment rates, due to a failure to properly address the following characteristics of farmers and other rural Small to Medium Enterprises (SMEs):

- fungibility of money between overlapping of enterprise and household cash-flows;
- lack of tangible collateral;
- informality: absence of financial statements, tax obligations and records.

1.5 Fungibility issues are a particular concern: numerous studies have shown that there is no strict separation between the cash-flow of the farm enterprise and the cash-flow of the household, or even of larger social units such as extended families. Money is fungible within a household or a family network and may be used for a variety of productive and consumptive purposes. All income and expenditures are sourced from one common "pot" (Dorward, *et al.*). Fungibility not only implies a risk in the sense that funds may be diverted towards consumptive purposes; it also entails an opportunity to channel other income sources into loan repayments.

III. Problems of Using Micro-Finance Approaches for Financing Investments

1.6 Micro-finance institutions have responded to problems of fungibility by basing the lending decision on the existing repayment capacity of the household without making any appraisal of proposed new investments or activities. Loans are thus not targeted to specific activities, but can be used for any purpose as long as the client is able to meet repayment obligations from existing income. Such an approach works well for smaller loan amounts and short maturities, but might need to be modified for financing of larger investments which considerably alter the farm household cash flow, and for more entrepreneurial farmers. The challenge is therefore to create term finance products for emerging farmers which, although they do not share the characteristics of formal sector enterprises, still have high growth potential and are not currently served by micro-finance products. Again, many rural MFIs have restrictive loan ceilings (e.g. BRAC, Grameen Bank, credit unions) that may cause up-scale borrowers to drop out. MFIs may need to reconsider this, and offer either higher loan ceilings for short-term, repeated loans or enter into term finance for up-scale, trusted clients.

can also be raised as equity finance on the capital market in various ways, depending on the legal structure of the enterprise. In the formal economy, financing decisions are also motivated by a desire to minimise tax payments.

B. ALTERNATIVE APPROACHES TO FINANCING TERM INVESTMENTS

1.7 Term loans or leasing are not appropriate financial instruments for very poor farmers with a low level of commercialisation (as will be further explored in the section 2.3). Moreover, term finance is only viable for both financier and investor if certain framework conditions are in place (see discussion in Chapters 3 and 6)². However, these conditions are often absent in developing countries. It is therefore important to highlight other financial instruments, which are used by farmers in developing countries to finance farm-related assets. These include:

- savings;
- short-term loans, complementing savings and/or as rolled-over loans;
- indirect approaches to investment finance through internal reallocation of household resources.

I. Savings as a Basis for Financing Investments

1.8 As stated above, term finance should complement rather than substitute for the investor's own resources. Farmers may need to regularly save a certain amount in order to accumulate an equity base which can be leveraged through external finance. Development agencies have in the past often tended to underestimate the ability of rural households to save, and the resulting (hidden) demand for convenient saving facilities. Better availability of safe savings facilities would increase the self-financing capacity of farmers, and thus reduce the need to borrow, with its inherent risks. Savings mobilisation, and particularly the creation of specific term savings or savings-cum-loan products, such as for housing finance, should therefore be an important part of a strategy to increase the volume of term investments. In order to build up sufficient equity for a term loan, term deposits are a principal entry point for clients as well as for rural MFIs. Only with term deposits will MFIs have own funds to allocated more funds for term loans because the fraction that can be used from short-term deposits for term loans is usually small.)

1.9 Matching grants (if properly designed) may be used to stimulate savings behaviour, increase the equity of resource poor farmers and speed up processes of technology adoption and investments.

II. Using Short-Term Loans to Finance Investments

1.10 In many cases farmers use short-term loans provided by rural micro-finance institutions or other lenders for financing investments in productive assets. Though most of the loans are used for non-farm activities (mainly trading and consumptive purposes, such as school and medical fees), some rural financial institutions like Caja Los Andes in Bolivia report that seasonal loans are also spent for purchasing land or livestock. These loans are taken after the farmer has accumulated funds over a longer period. Though this might be a suboptimal solution, it

² Macro-economic stability, especially low levels of inflation and interest rates are necessary to allow projections over longer periods and keep financing costs at acceptable levels. Mechanisms for managing systemic and co-variant risks of agricultural activities enhance the viability of term finance. Furthermore, an appropriate legal and institutional framework must be in place, which enables the registration of assets and the enforcement of contracts at low cost and within reasonable time frames.

may be the only viable option for smaller farmers and farmers in hostile environments (e.g. SSA) to enter into term finance. Again, this requires MFIs to provide term finance to their trusted clients.

1.11 A cross-country WB-study (Caprio, Demirgüç-Kunt, 1997) assessing the use of term loans in developing countries by industrial firms, found that enterprises often use repeated short-term loans to finance investments. This is only in part due to lack of sufficient term loans in the market. Entrepreneurs and financial institutions seem in some cases to prefer using short-term debt instruments which can be adjusted more flexibly to changing market conditions and enterprise cash-flows. Individual clients may get a credit line from a financial institution which allows them to roll-over short-term loans, thus avoiding transaction costs.

1.12 However, the ability to use short-term loans for financing investments depends on the cash-flow and size of the investment in relation to the cash-flow of the entrepreneur. As will be shown in the next chapter, there are certain types of agricultural investments which are difficult to finance with short-term loans.

III. Indirect Approaches to Investment Finance

1.13 There are also indirect ways through which rural banking services can increase rural households' ability to finance farm-related investments. Some of these indirect approaches are:

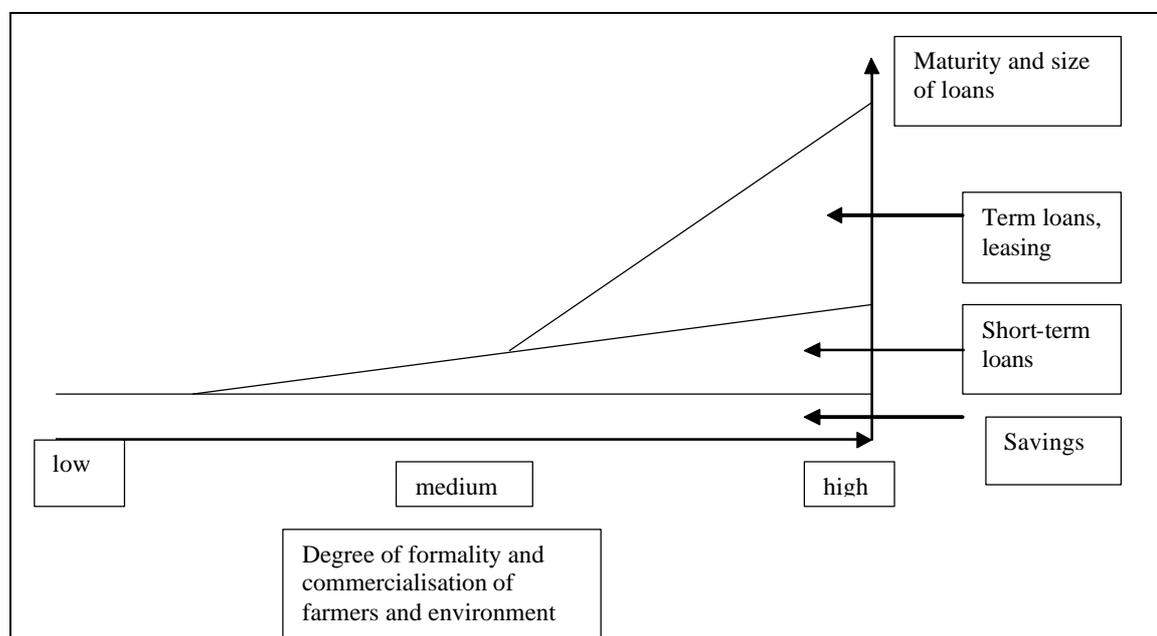
- reliable access to short-term loans (and possibly micro-insurance services) allows the household to invest a part of its own resources in productive assets which would otherwise have been kept as savings or in quasi-liquid form to cope with external shocks. This frees farmers' own funds, which can be used to diversify into new enterprises and avoid additional risks through borrowing (Zeller, et al., 1997);
- short-term loans can support farm diversification into less risky activities with a quick turnover, such as trading and small-scale food processing. The increased income and the more diversified cash-flow allow farmers to self finance investments in farming assets. Farmers may prefer self-financing in case of new activities or equipment, which they perceive as being particularly risky;
- money transfer functions performed by rural financial institutions increase the role of remittances as sources of funds for rural investments.

1.14 In these ways, locally-accessible rural financial institutions offering short-term finance and savings facilities increase the ability of rural households to effectively finance productive investments.

C. APPROACH CHOSEN IN THIS STUDY

I. Term Finance as a Subset of Investment Finance

1.15 The previous section shows that financial services and the availability of rural financial institutions can contribute in a number of ways to the financing of farm-related investments. There is a continuum of financing tools and strategies which can help farmers to

Figure 1: Continuum of investment financing tools according to characteristics of clients and environment

finance productive investments. Their respective appropriateness and feasibility depend on the type of investments, the characteristics of the investor and the economic and institutional environment (as will be discussed in greater depths in Chapters 2, 3 and 6). Term finance should be perceived as a subset of investment finance tools, and its availability could certainly help more experienced and entrepreneurial farmers to capitalize on profitable investment opportunities, and speed up the adoption of new technologies. However, for many small farmers in areas with weak financial institutions and a hostile environment, such in most of Sub-Saharan Africa, other financial services might be more important. Their availability may help such farmers to eventually “graduate” and become viable clients for term finance (Zeller, M., Sharma, M. 2000).

1.16 This study favours a gradual approach towards financing of term investments in agriculture. Term finance should not be provided from scratch or substitute for institutional development. If conditions are too hostile for its provision, as is the case in marginal areas with low infrastructure and unstable policy and macro-economic framework, efforts should be focussed first on developing appropriate savings and short-term lending facilities on a sustainable basis, and on the creation of an environment conducive to the progressive development of sound financial systems.

II. The Target Group for Term Finance: The “Neglected Middle Market”

1.17 There is an emerging group of small entrepreneurs in or closely linked to the agricultural sector – often former clients of Microfinance Institutions (MFIs) – who could make profitable investments in lumpy assets (e.g. machinery or equipment). However, due to their limited scale of operations and lack of security, they are not considered as viable clients for banks. Therefore, they are unable to access larger loans with longer maturities. For financial institutions, it is particularly difficult to service these farmers, who have to be treated as households and enterprises. Few financial institutions have been able to create the right mix of products for this

client category, which might be perceived as the “neglected middle” between micro–finance and conventional finance. They should be the prime target group to be reached by financial institutions in a sustainable way.

III. Scope and Limitations of the Financial Market Approach

1.18 Establishment and strengthening of rural financial institutions, which offer a variety of financial services, and enhancing their ability to provide term finance, is the most sustainable and least distorting strategy for helping a wide range of farmers to finance on–farm investments. Scarce public resources should mainly be invested in creating an enabling environment for term finance. Such a strategy would be based on the following pillars:

- ensuring a stable macro–economic environment and a conducive legal and institutional framework (collateral, registries, credit bureaux, etc.);
- upgrading the productive infrastructure (roads, communications, etc.);
- capacity building of financial institutions in areas of financing technology and risk management;
- increasing the availability of risk management tools for farmers and financial institutions (guarantee funds, insurance, hedging, discounting of loans, secondary markets, etc.);
- enhancing the availability of long–term funding sources for financial and non–financial institutions for on–lending.

1.19 However, such a strategy requires a long time horizon to bear fruit, especially under African conditions. Several limitations have to be acknowledged:

- slower pace of technology adoption: farmers might need a long time to build up sufficient equity to even partially self–finance investments;
- lumpy investments might not be accessible to farmers who could use them most profitably;
- long gestating investments may not be feasible for farmers with insufficient additional income sources, or might only be carried out on a “low input, low output” technology level, hampering competitiveness;
- farmers without tangible collateral, limited income sources and lack of experience might get less access to formal finance, constraining their possibilities for growth.

IV. The Case for a More Pro–Active Approach

1.20 In view of the particular concern for poverty reduction and the prevailing conditions in SSA for establishing term finance on a sustainable base, avenues towards a more pro–active approach to investment finance are explored in Chapter 8. These cases refer to situations where investments are profitable from the investor’s point of view, but not feasible from a banking perspective. This could be due to:

- high interest rates: high risk premiums, transaction costs or cost of funds lead to interest rates above the investment's IRR. This is particularly problematic for long gestating investments such as tree crops;
- absence of collateral and tools to manage systemic risk and external shocks;
- absence or poor development of financial markets: there might be rural areas with viable investment opportunities, but where financial institutions are either absent or too weak to handle investment finance.

1.21 In these cases, public intervention might be required to “kick-start” private investments.

2. DETERMINANTS OF TERM FINANCE DEMAND AND SUPPLY

2.1 It is frequently argued that in many rural areas in developing countries the supply of financial services to farmers, particularly term finance for investment purposes, does not match the demand. Such a concern has also motivated this study. However, there is a risk of overstating the effective demand for term finance, for this critically depends on the price at which term finance can be supplied sustainably. The following two sections will present the main determinants of the demand and supply of term finance. The demand side issues include³:

- Which types of term investments warrant term finance and cannot be financed differently (e.g. through short-term loans)?
- Which types of farmers are able to use term finance profitably and repay their obligations?
- Which types of investments are likely to be financed by financial institutions, and which would require specific financing arrangements?

2.2 The discussion on supply side issues focuses on risks and transaction costs. The reasons constraining the supply side will be discussed in Section B.

A. DETERMINANTS OF THE DEMAND FOR TERM FINANCE

2.3 Chapter One has already pointed to the difficulties of providing term finance for farmers and to the alternative ways in which farmers finance investments. In order to assess if the absence or limitations of term financing sources is a real constraint for farmers, a thorough analysis of the effective demand for different types of investment finance should be carried out in close collaboration with affected farmers and other stakeholders. The real demand is determined by the characteristics of farmers, their (profitable) investment opportunities and the relative price (interest rate, transaction costs) of term loans against other sources of funds.

2.4 The following section suggests a framework for such an analysis⁴.

I. By Type of Investment

2.5 The type and structure of finance required for different types of investments depends on their physical and economic characteristics. These include total capital requirements, divisibility or lumpiness of assets, economies of scale, cash-flow patterns and the specificity of use.

³ Though due to fungibility issues investment and farm/household cash-flow have to be analysed jointly for loan appraisal, this chapter, for analytical reasons, looks at each of them separately.

⁴ As stated in Chapter 1, term finance for informal enterprises, such as farms, should take into account both the cash-flow of the farmer household as well as the additional anticipated cash-flow generated by the investment.

Capital Requirements, Divisibility and Economies of Scale

2.6 Capital requirements include the amount needed to purchase an asset, or certain inputs including labour and engineering services to complete it, as well as incremental working capital. Large initial capital requirements, in relation to the annual cash-flow created by the investment, may require longer repayment periods, unless the investor has additional sources of funds on which to draw. This is especially the case if large lump sums are required or where economies of scale apply. Farm machinery items, like tractors, harvesters, means of transport, dairy equipment, or processing facilities may exist in different sizes but are not completely divisible. They require an initial lump sum payment of a certain amount that may only be recovered over a period of several years. If the loan is to be repaid out of the cash-flow produced by the investment, the repayment schedule has to be adapted to the economic life of the investment.

2.7 Moreover, most investments not only require investment capital for purchasing or creating an asset, but also additional working capital. In the case of larger investments, medium-term loans might be necessary to finance additional working capital requirements that are due to the investment.

2.8 Divisible investments can be started on a small scale and then gradually expanded, depending on their profitability and the financial position of the investor. To a certain extent they may be financed through savings and short-term loans, or self-financed out of the existing cash-flow. This applies, at least in principle, for investments in livestock, land, buildings and trees. However, certain economies of scale in production and marketing may apply in practice, and these may require certain minimum sizes for the investments to be economically viable⁵.

Cash-flow Patterns

2.9 The cash-flow of an investment is determined by its economic lifespan, the length of the gestation period, expenditures during the immaturity period and the impact of seasonality. Some typical patterns include:

- no gestation period, regular cash-flow (e.g. transport, multipurpose equipment);
- no gestation period, seasonal cash-flow (farm machinery);
- short gestation period, seasonal cash-flow (e.g. buildings, processing facilities, surface irrigation system);
- medium gestation period, regular cash-flow (livestock⁶);
- long gestation period, seasonal cash-flow (e.g. tree crops like coffee, fruit trees);
- long gestation period, regular cash-flow (tree crops like rubber, tea and palm oil).

⁵ For example, the planting of certain trees or raising of livestock may require fencing, which has economies of scale. Land may be only available in the market at sizes requiring larger capital outlays than the farmer can finance through a short-term loan. Therefore, in practice, the gradual approach to investing is not always feasible, or the investor has to accept lower profits due to diseconomies of scale.

⁶ Note that this only applies only to some kinds of livestock investments, such as dairy production. Others such as broilers, pig raising and cattle fattening have less frequent and more irregular cash-flows.

2.10 Investments of type (i) are less risky for a lender because they allow for repayments in frequent, small instalments. Depending on the total capital requirement, they can even be financed for small farmers/entrepreneurs through an adaptation of micro-finance techniques (repayments in small, but frequent instalments).

2.11 Investments of type (ii) and (iii) are more difficult to finance from a lender's point of view because repayments and thus contact with clients are less frequent, increasing moral hazard risk. In addition, seasonality can lead to liquidity management problems for the lender (see Chapter 4). Additional income sources may be required to allow for more frequent repayments. All these investments are ideally financed through medium-term loans with a duration of 3–7 years, depending on the total capital requirement.

2.12 Investments of type (v) and (vi) are highly risky and will only occasionally be financed by commercially-oriented financial institutions. They may require specific “kick-starter” arrangements (see Chapter 8).

Specific Use Versus Multi-Purpose Assets

2.13 Multipurpose equipment is likely to produce a more even cash-flow than single purpose equipment. A power tiller or a tractor can be used for different farm-related tasks as well as for transport services. Motors can often be used for multiple types of equipment, including irrigation pumps, mills, transport, etc. This facilitates a more regular repayment and shorter loan maturities, and implies lower financing risks.

2.14 Specialised equipment, e.g. harvesters, are highly capital intensive and require larger minimum sizes of operation. They can therefore only be used profitably by large farmers or by service providers. The latter may be able to “follow the harvest” through different agro-climatic zones and thus produce a more regular cash-flow.

2.15 Therefore, multi-purpose equipment is more likely to be financed by financial institutions than single purpose or specialised equipment, at least in a smallholder context.

Mobility of the Investment

2.16 The fixity or mobility of an investment plays a major role in regard to moral hazard-related issues. Three cases can be distinguished:

- immobile assets: land, buildings, irrigation canals;
- semi-immobile assets: pumps, small mills and other post-harvest facilities, tree crops (use of timber);
- mobile assets: cattle, certain types of machinery, etc.

2.17 Immobile assets are generally less risky for the lender because they cannot simply disappear (together with the borrower). They are not so easy to destroy and are therefore preferred collateral. Semi-immobile assets share many of these characteristics but need more supervision. Mobile assets require either additional collateral or a proper registration system and a legal framework which facilitates repossession.

Technology Levels and Management Requirements

2.18 Investments differ not only in terms of economic and financial parameters, but also in terms of skills and experience required to manage the investment. Farm machinery and equipment, including post-harvest and irrigation devices, can be categorised in three different technology levels:

- (i) ***Human-powered tools and equipment*** Human-powered equipment such as treadle pumps, hand tools, small mills, etc., are normally not capital intensive and can be used profitably at a small scale of operation. They are often produced locally and can be used by subsistence farmers with a low level of market integration. Informal financial arrangements (ROSCAS, moneylenders, reciprocal arrangements) are used by farmers, but the existence of rural or micro-finance institutions can help farmers to finance these investments through saving mobilisation and short-term loans. There is clearly no need for term loans.
- (ii) ***Animal-powered equipment.*** Animal-powered and motorised equipment items are more capital intensive and may require medium-term loans of 2–5 years. Despite their great impact on productivity for poorer farmers, they are only accessible to more progressive farmers. These should have at least one stable source of income (e.g. a cash crop with secured marketing outlet), or diversified income sources including farm and non-farm activities.
- (iii) ***Motorised equipment.*** Motorised equipment needs higher capital outlays, management capacity and the availability of after-sale services such as spare parts and repair shops. Farmers often start with hand- or animal-powered equipment and shift to motorised equipment only after having acquired significant experience and increasing their scale of operation. Farmers also engage in renting the equipment to others or eventually become service providers. Normally, medium-term loans are required for financing motorised equipment.

II. By Type of Investor

2.19 Investment behaviour of farmers and their financing strategies and requirements depend on several factors, such as main sources of income, socio-economic status and asset base, experience and skills, and commercial orientation.

Income Sources

2.20 Together with the shift from the old directed credit approach to the new financial markets paradigm, there has been a change in the perception of rural people as recipients of services and target populations for development policies and programmes⁷. The increasing

⁷ The concept of a *farmer* under the Green Revolution evolved into *farming systems* in the 1980s and finally into *livelihood systems* in the 1990s. More than just a name change, this reflects a shift of the underlying paradigms from agricultural development towards rural development and livelihoods/poverty reduction.

importance of non-farm activities to the livelihoods of rural people and the close interrelationship between farm and non-farm economic activities have been widely acknowledged. In view of the limited profitability of agriculture and in order to reduce and diversify risks and vulnerability through crop diversification, many farm households are engaged in a variety of economic activities, combining an array of crop and livestock enterprises with casual wage labour, petty trade, small-scale food processing and other home industries, transport, etc. However, many of the off-farm income sources in rural areas are seasonal as well, and correlate with crop and livestock income to some extent, as agriculture is the backbone of many rural economies. Remittances are also an important source of funds, *inter alia* for farm-related investments, that are delinked with location-specific agricultural and non-farm risk. Depending on the regional context, agriculture may represent a more or less important proportion of rural dwellers' incomes. However, for reasons of simplicity the word "farmer" will be used in this report to characterize rural male- and female-headed households investing in farm-related assets.

2.21 This diversity has important implications for the design of term finance products:

- it is not just commercially-oriented, full-time farmers who invest in agriculture and who are potential clients for financial institutions There are different types of rural investors depending more or less on agriculture for their family income⁸;
- accordingly, farmers can use to varying degrees non-farm income sources for loan repayment;
- there is a range of motivations for investment in farm assets;
- in turn, farmers also require finance for non-agricultural investments.

Motivation for Investments

2.22 Farmers make physical investments for many reasons. These include additional income, reducing labour requirements, in-kind savings as a social security substitute, smoothing consumption needs, improving food self-sufficiency or reducing vulnerability through income diversification (Zeller, Schrieder, von Braun, Heidhues, 1997). For the purpose of this study they can be categorized under three major objectives:

- to ensure physical survival and food security at the household level (e.g. water management, storage);
- to accumulate productive assets which could also protect against external shocks (savings or insurance substitutes), such as livestock or land, or provide an income for older people;
- to generate additional income and adapt farm production to changing market opportunities, either through intensification or diversification of agricultural enterprises.

⁸ Even urban households or people engaged mainly in non-farm activities may invest in agriculture, to diversify their income sources, produce food, and create assets as a store of wealth (cattle, land) or as a basis for old age security.

2.23 In view of these different motivations and types of investors, investing in farm-related assets can be part of a commercialisation strategy, as well as of a life cycle or livelihoods strategy, where farm assets serve as substitutes for credit, savings, insurance or pension services. Both types of investors may be viable clients for term loans as long as they have sufficient cash income to repay. However, financial institutions may have to use different loan appraisal techniques. For part-time farmers (e.g. urban dweller, micro-entrepreneur) not seeking increased monetary benefits from the farm investment, the appraisal should be mainly based on the existing income sources (consumption term loan). In the case of smallholder farmers investing in a productive asset mainly driven by the income-generating motive, the assessment should be based both on the existing income sources, cash-flow and repayment capacity and the incremental income resulting from the investment (investment term loan).

Box 1: Different Types of Farmer Clients According to Income Sources and Their Demand for Financial Services

The case studies identified the following types of farmer-investors earning varying amounts of cash income from agriculture:

- Subsistence-oriented farmers desiring to increase their cash income through the sale of surplus production on the market. These are clients for savings deposit services and, in some cases, for short-term loans; Through repeated loan cycles and increased savings deposits over time, they may establish their creditworthiness for smaller term loans.
- Part-time farmers with mainly non-agricultural income (e.g. trade, small-scale processing, casual wage labour, etc.), investing in farm assets to diversify their income or acquire assets which will appreciate over time. They use loans for non-agricultural activities and invest the proceeds in agriculture or repay loans invested into agriculture out of their non-agricultural income. These farmers are adequately served by the consumption term loans offered by MFIs (see Chapter 4);
- Civil servants (or demobilized military personnel) seeking new careers after retirement or retrenchment may need a variety of financial services, but would need to build reputation as clients;
- Emerging commercial farmers obtaining at least 50 percent of their income through selling farm produce in the market. These make productive investments to increase the profitability of existing farming activities or to diversify into new activities. These are likely to require investment-term loans.

Socio-Economic Status, Asset Base and Farmers' Financing Strategies

2.24 The socio-economic status and asset base of farmers are closely interlinked with their investment behaviour and preferred financing strategies. These have to be carefully assessed and taken into consideration in the formulation of any policy measures or design of financial products. Investing in productive assets implies risk-taking. Moreover resources are tied up for long periods.

- Poor people tend to be risk averse and risk aversion tends to decrease with rising levels of income, assets and skills.
- Poor people at the subsistence level may prefer investments in assets which can be sold quickly or consumed in case of external shocks. They may invest, for example, in small animals.
- With rising incomes, other types of investments may have a longer payback period but produce a regular cash-flow because they can be used for multiple purposes,

or because they enable income to be earned from the provision of services. Examples are draught animals, power tillers, tractors and other transport equipment. Trees are also a preferred investment, despite their long gestation period. Depending on the agronomic and market conditions, they are often much more profitable than seasonal crops. They constitute a long-term investment with benefits accruing over a long period of time. They may provide additional benefits, such as establishing a claim on the land where they are planted or the production of timber.

- Larger and more specialised investments such as motorised production and post-production equipment are normally only suitable for larger farmers with a sufficient degree of specialisation and scale of operation. Smaller farmers might access them as rental services provided by specialised entrepreneurs.

2.25 The interrelationships between risk aversion and socio-economic status can also be observed in the financial strategies adopted by farmers in the absence of donor or government interventions. Poor people make use of financial services essentially for purposes which protect their livelihoods – protecting their consumption level, protecting their savings and insuring both against decline (Zeller and Sharma, 2000; Zeller 1995).

2.26 Most rural investments are self-financed. If farmers invest in new crops or adopt a new technology, they normally start on a limited scale using their own resources, coming from retained earnings from farming and non-farming activities or remittances. Farmers tend, therefore, to restrict borrowing to a minimum, especially if the lender has sufficient means to enforce repayment. Another factor discouraging borrowing is high interest rates prevailing in rural areas, which results in prohibitively-high financial costs when larger amounts are borrowed over long periods of time.

2.27 Only if the activity succeeds, and the farmer has acquired some management skills, may he or she choose to expand it by using borrowed funds. To increase his income, he would first consider borrowing for working capital (fertiliser, seeds, etc.), for small investments which require small amounts of money and have short gestation and payback periods (e.g. chicken raising, treadle pumps). If these strategies lead to a sustainable increase in income, households can afford to borrow for larger investments.

2.28 There is, however, a trade-off between risk and profitability. For poor people, savings are a less risky source of funds for investments than loans. Self-financing alone may, however, lead to a very slow process of technology adoption, and have undesirable equity impacts. This is where carefully designed and targeted matching grants may have a valid role (see Chapter 8).

2.29 Loans increase risks but may allow households to escape poverty much faster, because they leverage the farmer's equity and enable him⁹ to make desired investments earlier than would otherwise be the case. Borrowing differs from self-finance (saving up) in that money can be spent now which will be earned in the future (saving down). Borrowing is particularly risky if larger amounts of money are to be repaid over longer periods, and if the investment will be the main source of repayment. In case of failure, the farmer may lose not only the resources he

⁹ This refers naturally to male and female borrowers alike. For reasons of simplicity, only the male form is used in this document.

invested (in cash and kind) but also additional assets he had to pledge. In case of informal financial arrangements, the reputation of the farmer in the community and his access to future loans are at stake.

2.30 This points to the importance of government and donor policies and investments aimed at reducing risk and uncertainties in order to enhance the demand for term finance. The next section shows that better tools for managing risks related to financing of farm-related investments would also contribute to expanding the financial frontier of term finance towards the “neglected middle market” of farmers.

B. FACTORS CONSTRAINING THE SUPPLY OF TERM FINANCE

2.31 Risks, transaction costs and lack of information are the main factors affecting the demand and especially the supply of term finance. Many of the specific underlying problems are interrelated and are general constraints for agricultural investments and the provision of finance to farmers.

I. Risk and Uncertainty

2.32 Both risk and uncertainty relate to the lack of knowledge about the future outcomes of parameters affecting the economic and financial viability of an investment. The difference between risk and uncertainty is that in case of risk, the probability of certain outcomes (e.g. certain price or yield levels) can be assessed based on past years’ statistical data, whereas uncertainty describes situations where any such data is completely unavailable. Risks can therefore be managed, uncertainties cannot. A further distinction can be made between the risks which affect an individual farmer/borrower (idiosyncratic risks) and those risks affecting a whole region or economic sector (systemic risks).

2.33 However, projections based on past data are always dangerous tools for assessing future outcomes and uncertainties increase the further into the future projections are made.

General Risk-Related Problems of Agricultural Finance

- **Risks related to the underlying economic activity**
 - Agricultural activities are prone to production risks and marketing/price risks.
 - Many of the factors affecting the yields or profitability of agricultural investments not only have an impact on individual producers but on entire regions (climatic risks) or economic sectors (price shocks). Other rural activities which are directly or indirectly linked with agricultural production are also affected. This co-variance of risk can have a severe impact on financial institutions with a large proportion of their loan portfolio invested in agriculture.
- **Risks related to rural clients**
 - Problems of asymmetric information between lender and borrower, resulting in moral hazard and a culture of non-repayment in many rural areas.

- Fungibility of money constrains loan supervision.
- Risk due to lack of tangible collateral, collateral enforcement problems and decline of the value of the collateral.
- **Risks of political intervention**
 - Due to the highly political nature of agriculture, interventions in rural financial markets are frequent. Loan waivers or forgiveness are particularly harmful for financial institutions, because they tend to affect future repayments, as well as present profitability and even solvency.

Specific Risk–Related Problems for Agricultural Term Finance

- **Longer time horizons increase uncertainty**
 - Longer time horizons increase the uncertainty regarding all the above–mentioned factors affecting the profitability of the investment and the repayment capacity of the borrower.
 - There may be sudden shifts in demand or price patterns, new pests or diseases may break out, macro–economic parameters such as exchange rates, interest rates or inflation rates may change or affect input and produce prices differently. Political insecurity also increases over longer time periods and finally, borrowers may suddenly change their preferences and behaviour.
- **Additional risks of term finance**
 - *Mismatched assets and liabilities.* Long–term assets, especially long–term loans with grace periods, pose specific challenges to the asset/liability management of a financial institution. Costs and availability of loanable funds change over time, whereas long–term loans have predetermined repayment schedules and usually involve fixed interest rates. This can affect the profitability and the liquidity of a financial institution (both interest rate risk and liquidity risk). If long–term funds are borrowed from abroad, currency devaluations can dramatically increase the liabilities of financial institutions (foreign exchange rate risk).
 - *Risk of technical failure:* In addition to the agricultural production risk, there is the risk of failure of the investment itself. Cattle may die, wells may fail; tree crops may be damaged during the immaturity period; equipment may break down. Any of these events will reduce the expected profitability of an investment and increase the risk of non–repayment of loans.

Classification of Risks

2.34 Some of these risks can (at least partly) be managed by financial institutions, others are beyond their control. The first category includes:

- mismatching of assets and liabilities;
- concentration of exposure in the agricultural–term loan portfolio;

- lending to clients with weak financial and management skills;
- moral hazard risks.

2.35 Risks that are largely beyond the control of institutions include:

- technical production failures, although in some cases the financial institution may be able to insist on proper maintenance and adequate levels of extension;
- changes in economic conditions;
- effect of natural disasters such as drought or flood;
- political interventions which create a poor “credit culture”.

2.36 The management of these risks results in higher transaction costs. This will be discussed in the following section.

II. Transaction Costs

General Transaction Costs for Lenders and Borrowers

2.37 High transaction costs are largely a result of the following:

- need to travel long distances to reach a dispersed rural clientele;
- poorly developed rural transport and communication infrastructure;
- little knowledge is available about heterogeneous farm households;
- high additional costs for borrowers: opportunity costs (e.g. working time), transport costs, bribes, fees, delays, excessive paperwork and collateral documentation, even though the nominal interest rates may be attractive.

Transaction Costs Related to Access to Information

2.38 Uncertainty can be reduced through additional information. Lenders must carefully screen and select borrowers to reduce moral hazard risks and ensure that the farmer has sufficient management skills. Risks related to the investment can be reduced through more sophisticated appraisal procedures, such as technical feasibility studies, projections of future price and demand trends and maintaining databases to assess the variability of key economic parameters. However, obtaining such information or managing adequate databases is costly and requires specific technical skills which are often not available at branch level.

2.39 Larger loan amounts often require an individually-tailored loan product, so that repayment schedules, grace periods, etc., can be adjusted to the specific cash-flow patterns of the investments. This limits the ability to use standardised loan products as a uniform cost-cutting tool for banks. In addition, the financial institution will often need to undertake expensive investments such as recruitment of specialised loan officers or opening of rural branches.

2.40 On the other hand, these costs should be offset to some extent by larger loan amounts, longer terms and economies of scale in lending. Re-lending the same amount of money several times would imply several loan appraisals. In addition, the resources used to finance short-term

loans might remain seasonally idle for a certain period of time, so total interest earnings on short-term loans would be lower (*ceteris paribus*). For this reason, interest rates for short-term loans tend to be higher than for medium and long-term loans.

III. Collateral-Related Problems

2.41 To a certain extent, risks- and information-related problems can be reduced by the use of collateral. Collateral refers to the assets pledged by borrowers until their loans are repaid. It serves two important functions. First, it serves as a screening device to reduce wilful defaults on loans. Borrowers who are willing to provide collateral for loans and especially large amounts relative to loan size, are signalling an intention to make good faith efforts to fulfil their loan contracts. Second, collateral reduces lending risks by providing lenders with an additional source for repayment of the loan in the form of an asset that can be liquidated.

2.42 Due to costs and risks involved in liquidating the collateral, lenders tend to require collateral valued at 1.5–2 times the loan amount. The effective costs for the borrower are even higher, if the high transaction costs of registration, etc., are taken into account. This has a regressive impact on income distribution, because loans tend to be limited to wealthier individuals who can provide the collateral required. This may lead to sub-optimal investment levels, because many profitable investments may not be undertaken.

2.43 Even if physical collateral such as registered land titles exists, lenders are often not willing to provide term finance, unless the borrower is able to mortgage urban properties (this is, for example, the case in Bolivia and in many African countries). In turn this is linked to problems of law and contract enforcement, which result in high transaction costs and the uncertainties involved in foreclosing and liquidating collateral. Chapters 4 and 6 will deal with collateral issues and Chapter 5 discusses the extent to which leasing can help to overcome collateral problems.

3. THE SUPPLY OF AGRICULTURAL TERM FINANCE WITH PARTICULAR REFERENCE TO SUB-SAHARIAN AFRICA

3.1 This chapter sets out to highlight the main changes and trends in the structure and supply of agricultural term finance, following structural adjustment. These changes reflect the shift of donors and governments from the “old paradigm” of directed and subsidised credit towards the “new paradigm” of rural financial market development. It further presents the main types and features of institutions (financial and non-financial) supplying term finance to farmers, which could be identified during the research. The chapter looks at trends. The work on which it is based was not intended to provide a comprehensive or detailed picture of the use of term finance in Sub-Saharan Africa.

3.2 As has been outlined in Chapter 1, banking institutions and other actors finance agricultural term investments in two ways:

- (i) directly, through the provision of term finance to farmers or farmer groups;
- (ii) indirectly, through the provision of short-term loans and savings products designed to enhance the self-finance capacity of farm households.

3.3 Only a few examples could be found of direct provision of term finance for agricultural investments. Especially in SSA, even the provision of seasonal finance for working capital purposes which is a precursor and often a prerequisite for term finance, is only available on a limited scale, and is confined to certain regions and types of farmers. However, as stated in the Conceptual Framework (Chapter 1), short-term loans and savings services have a positive impact on farmers’ abilities to finance investments.

3.4 Due to time and resource constraints, only a small number of institutions could be analysed as comprehensive case studies. The main focus has been on new or reformed financial institutions, the practices of which are broadly in line with the financial market development approach. This section on Africa draws heavily on literature and especially on the results on recent research carried out by others¹⁰.

A. THE CHANGING STRUCTURE OF THE SUPPLY OF TERM FINANCE

3.5 Agricultural finance, including term finance, was at the core of the “old paradigm”. It was a major tool to channel subsidised resources to target groups (e.g. small farmers), to speed up technology adoption and to reach quantitative output targets, such as the number of farmers or investments financed. Therefore, term loans were mainly perceived as an input in the production process and were used to support sub-sector policies such as mechanisation or smallholder tree

¹⁰ CIRAD/CERISE and IRAM conducted a three-year research exercise in different African countries and in South East Asia on the role of Micro-finance in the financing of family farms. The supply and demand of agricultural finance for family farms has been assessed, including medium-term credit and hire purchase. Case studies on different types of financial institutions were carried out with a particular focus on the new financial institutions and networks. The results were discussed during an international workshop in Dakar in January 2002, with participation from donors and financial institutions from different African countries.

crop development. The establishment of sustainable financial institutions was not a major concern. Term loans were provided by four main sources:

- agricultural development banks;
- government line departments (Departments of Irrigation, Mechanisation, Land Affairs, etc.);
- marketing boards;
- donor-funded projects.

3.6 The main performance criteria for term loans under the old paradigm was loan disbursement to achieve quantitative output targets (e.g. number of trees planted), not repayment rates. Therefore, little consideration was given to the financial sustainability of the lender or of the borrower. When financial institutions were involved, they acted mainly as channels for distributing government or donor resources.

3.7 The failure of these approaches in terms of financial sustainability, targeting efficiency, impacts on rural financial markets and credit culture, has widely been recognised¹¹. In conjunction with budgetary constraints and a general policy shift during structural adjustment, most agricultural development banks were either reformed or liquidated. Lending by government departments and projects has also declined dramatically since the late 1980s. Donors and governments have increasingly, but not uniformly, accepted the “new paradigm” of financial systems development.

Box 2: Key Features of the “New Paradigm”

- Policy reform to enable the deepening of rural financial markets
- Development of sustainable financial institutions providing a range of financial services (loans, savings, insurance, transfers) to different rural clients for agricultural and non-agricultural purposes
- Focus on financial intermediation rather than channelling of funds

3.8 As a consequence, support for agricultural development banks, especially in the form of credit lines, was drastically curtailed¹². Many banks were closed down (especially in Latin America), some have been restructured and are now operating like commercial banks (especially in Asia) but a significant number continue to provide finance to farmers along the “old paradigm”, mainly using domestic budgetary resources (especially in the MENA region). Despite a clear trend toward adoption of the new paradigm, however, there are still many projects, donors and government departments using “old style” term finance to meet sectoral objectives.

3.9 Since 1990, public funds have mainly been used to establish and strengthen micro-finance institutions. However, these new institutions emerged primarily in urban or peri-urban areas or in rural areas with high population densities. The lending products, especially of the Grameen-type institutions, are generally standardised and characterised by short maturities, limited amounts and high interest rates. These features make these products unsuited for many farm financing needs. However, some micro-finance institutions have managed to adapt their financial products and lending technologies to the requirements of agriculture (e.g., *Financiera*

¹¹ *Inter alia* see FAO/GTZ *Agricultural Finance Revisited: Why 1998* and Adams, D.W. (1995).

¹² See Giehler (1999).

Calpiá in El Salvador or the CMACs in Peru, several MFIs in Bolivia)¹³. These provide seasonal finance to farmers and, to a limited extent, medium-term finance for smaller farm-related investments. Several rural MFIs acknowledge the need for designing term finance products for their more capable clients, though the outreach of these products is still narrow. Their financing technologies and the main factors determining their outreach and sustainability will be discussed in Chapter 4.

3.10 Commercial banks have rarely been involved in agricultural-term finance, except for medium- and large-scale farmers with sufficient rural and urban collateral. Where they have been involved in financing smallholders, this has generally been through their participation in larger schemes, where the government provides most of the funds or bears most of the risk. The Land Reform Credit Facility in South Africa shows, however, that there is some scope for involving commercial banks in the financing of joint ventures where the rural poor participate as shareholders (see South Africa case study).

3.11 Prior to 1990, the Nucleus Estate Smallholder (NES) approach was used, mainly by donors and government, for developing smallholder plots with on-farm infrastructure (trees, irrigation, fencing). This approach was particularly, but not exclusively, used for settlement projects, often in remote areas. On-farm development costs were recovered from farmers through long-term loans, with repayments deducted from sales proceeds at factory level. If private companies or banks were involved, they were normally supported through special incentives such as guarantee schemes, co-financing and credit lines at concessionary rates. A number of these nucleus-outgrower schemes continue to operate today, but low commodity prices and increasing diversion of produce to third party buyers/processors makes their future uncertain¹⁴.

3.12 Though moderately successful, most governments and donors moved away from these sub-sectoral approaches such as NES schemes or tree crop development projects. Some international financing agencies like CDC (one of the original key promoters of the approach) changed their business profile and now operate on a fully-commercial basis. Smallholder development projects are incompatible with such an approach. Development banks like the WB shifted from sub-sectoral projects using top-down approaches towards broader rural development projects, based on bottom-up approaches like Community Driven Development. Experiences with NES will be discussed more in detail in Chapter 7, *The Special Case of Tree Crop Financing*.

3.13 Private companies are a source of finance in contract farming schemes. However, as shown by other research carried out by FAO, their role as financiers of farmers is mainly limited to the sale of seasonal inputs on credit, with repayments made through automatic deductions from the sales proceeds¹⁵. Term loans are only occasionally provided, especially if no donor or government is involved. However, important off-farm investments are often made by the buyer/investor, for example in the provision of transport and other mechanisation services to farmers. Through secured provision of inputs and marketing of outputs, the consequent management of certain key risks can trigger self-financing of investments of neighbouring smallholder farmers (see Chapter 5).

¹³ See Klein *et al.* (1999).

¹⁴ Such diversion is facilitated by an increasingly liberalised business environment.

¹⁵ See Eaton & Shepherd (2001).

B. SUPPLY OF AGRICULTURAL (TERM) FINANCE IN AFRICA

3.14 These general trends are also reflected in Sub-Saharan Africa where rural financial markets are still very much fragmented. Structural adjustment policies have dismantled most previous formal sources of finance, such as marketing boards and agricultural development banks. The resulting decline in supply of finance to the agricultural sector and especially to family farms, has not yet been compensated by other financial institutions. Commercial banks are characterised by a marked urban bias. Despite high levels of liquidity, they lack the infrastructure (rural branches), skilled staff experienced in agriculture and the appropriate financing technologies to engage to a significant scale in agricultural lending. Their funds are often invested in less risky loans, mainly in urban areas or in treasury bills. The few remaining agricultural banks, which have undergone severe restructuring, tend to follow the same lines. Their remaining rural portfolio is concentrated in the most profitable export sectors, where links with public or private monopolies in the marketing chain still exist (e.g. BNDA in Mali, Kenya Cooperative Bank, CNCA-Burkina Faso).

3.15 MFIs in West Africa comprise mainly mutualist types of institutions such as credit unions, savings and credit associations and village banks. The so-called Decentralised Financial Systems (DFS) showed a strong growth rate over the last 15 years. Due to their basic characteristics (savings-first approach, often rural based), these institutions have a higher potential for serving the demand for financial services of family farms than MFIs in other parts of the world¹⁶.

3.16 Despite these positive features, the limitation of the Decentralised Financial Institutions (DFIs) for financing agricultural activities, especially those of a longer term nature and with higher capital requirements, are quite evident. The limited amount and the short-term nature of the resource base which can be mobilised locally, confines their loan portfolio mainly to short-term loans. This resource limitation is aggravated by limited-asset liability management skills of DFIs, coupled with the BCEAO regulations which severely restrict the use of short-term liabilities for term lending. Furthermore, the staff of most institutions lack the skills and knowledge to appraise more complex agricultural investment projects. Finally, the use of collateral substitutes such as joint liability mechanisms and pledging of household goods does not provide enough security against default in the case of larger loans.

3.17 The main importance of the DFS is therefore the indirect financing of smaller farm-related investments. This area of lending helps stabilise the farm household cash-flow, through financing diversification into highly profitable short-term activities. The proceeds of these can be reinvested in agricultural assets (livestock, land, irrigation and farm equipment). Some of the larger and more progressive mutualist networks (FECECAM, CECAM) have been able to provide medium-term loans to emerging commercial farmers, as will be discussed below.

3.18 The development of the DFS has been very uneven amongst different countries of the region. Mali and Benin experienced a strong development of DFIs with a comparatively high penetration rate in rural areas, whereas in other areas, for example in Niger, these institutions remained weak. Table 1 shows some quantitative evidence on the importance of DFS financing for agriculture in different West African countries.

¹⁶ For example in Latin America, where MFIs are often urban based, and dependent on external (donor) funds.

Table 1: Estimates of Volume of Financing of Agriculture by Selected West African MFIs in 1997			
Country	Volume of DFS credit (billion FCFA)	Estimate of volume of agricultural credit (billion FCFA)	Agric.% of overall DFS credit
Mali	9,5	4,7 – 5	49
Benin	14,5	5,5 – 5,7	36
Niger	4,5	1,3	29
Burkina Faso	9,7	3	27
Cote d'Ivoire	6,1	1,2	20
Senegal	16	2,5 – 2,8	19
Togo	7,8	0,78	10
Total	66,3	19–20	27

Source: Wampfler, 2000, based on a comparison of PASMEDC database with direct information obtained by MFIs within the framework of CIRAD research programmes and missions devoted to the financing of agriculture.

3.19 As in the case of agricultural development banks, the agricultural loan portfolios of DFIs are still concentrated in the major commercial agricultural sectors such as cotton, coffee and cocoa (though with a larger outreach to smallholders). MFIs with a large agricultural portfolio like FECECAM in Benin or Kafo Jiginew in Mali are strongly linked to these sub-sectors, which increases their vulnerability to price or yield fluctuations or to policy changes. In Kenya, financing of tea, coffee and dairy smallholders is provided in-kind by the marketing/processing cooperatives and companies. In addition, numerous Savings and Credit Cooperatives (SACCOS) and other savings-based financial institutions which have emerged during the last 10–15 years, are also tied closely to one of these sectors.

3.20 The linking of credit and marketing and especially the possibility of recovering credit through deductions at processing or export level has encouraged some term-lending to farmers. In countries like Mali and Benin, animal traction has been financed on a significant scale. In Kenya, SACCOS and other rural financial institutions offer multi-purpose medium-term loans to tea, coffee and dairy farmers, who are able to provide additional real-estate collateral. Even without medium-term loan products, reliable access to short-term loans and savings facilities, in combination with assured input and produce marketing facilities, appear to allow farmers to invest in assets as long as the investments are profitable. In Kenya, large numbers of smallholders were able to gradually self-finance the establishment and expansion of high quality tea and coffee plantations, without any access to term loans.

3.21 By ending the monopoly on the purchasing of certain kinds of produce, liberalisation is dismantling the former credit security mechanism based on the commodity chain (*filière*). Therefore, the trend towards reduced availability of credit, especially for investment purposes such as the establishment and renovation of tree crops, has remained unchanged, despite the development of the DFS. In areas where input and produce marketing functions have not been taken over by the private sector in an efficient way, the self-financing capacity of farmers has been further reduced.

3.22 Linkages between DFIs and commercial or agricultural banks provide scope to overcome some constraints of both types of institutions and to increase the quality and quantity of rural finance. Such partnerships allow DFIs to deposit their surplus funds, get access to refinance facilities and, in some cases, to technical support. Commercial banks might be interested in

improving the loan appraisal skills or operational procedures of DFIs, which reduces default risks and helps to meet reporting requirements. Commercial banks could use such linkages to expand their markets in rural areas, diversify their credit portfolios or get access to donor funds. However, to date, cases of this are still rare. The most important one is BNDA in Mali, which established different linkage arrangements with village banks. No examples could be found of partnerships which significantly increased the supply of term finance.

3.23 The limited supply of term finance in Africa is mainly a result of hostile environmental factors, operating on both the demand and supply sides. Some key points are:

- poor infrastructure and agricultural support services inhibit market access and therefore the commercialisation of agriculture;
- institutional weaknesses prevent effective contract enforcement. There is an absence of tangible collateral, especially real estate. Legal and institutional difficulties inhibit the registering of moveable assets and their repossession in case of default;
- there is relatively little irrigation infrastructure and existing systems are often in a poor state. In general there is over-reliance on rainfed agriculture, especially in (semi-) arid countries;
- low-population densities increase the transaction costs for marketing, provision of support services, particularly for loan appraisal and borrower supervision.

3.24 An additional problem is the lack of effective competition amongst commercial banks and the resulting inefficiencies. In addition their business model results in comfortable clustering around the import/export sectors of African economies.

C. A GLANCE AT THE CASE STUDY INSTITUTIONS

3.25 More detailed versions of the case studies can be found in Volume II. The purpose of this section is to give a brief overview on their main features, as they relate to the different financing instruments: term lending, leasing and equity finance.

3.26 Ten financial institutions and term finance arrangements have been analysed as comprehensive case studies. As mentioned in the introduction, there was a scarcity of successful examples. Those that were chosen were selected on the basis of some simple criteria. The selection of the first set of case studies had a stronger focus on financial institutions which are financially sustainable and which have developed viable and/or innovative approaches that are in line with the “new paradigm”. Examples were identified from Asia and Latin America primarily, with a view to the replicability of their approaches in Africa. Following consultations with the WB, the second selection of case studies was guided more by the following objectives: i) Identifying methods to increase outreach towards poorer farmers, including innovative approaches for the incorporation of grants in investment financing; ii) Finding examples for term finance from Africa; iii) Examining approaches for financing tree crops, looking particularly at the experiences in Asia.

I. Financial Institutions at the Retail Level

Equity Finance

3.27 ***Rural Bank of Panabo (RBP)***, which operates in Southern Mindanao in the Philippines, is a small financial institution: it offers a wide range of products including salary and agricultural production loans, and equity finance for small- and medium-scale agro-industries. As a regulated bank, it is entitled to mobilise funds through deposits and to refinance agricultural loans through the Land Bank of the Philippines.

3.28 In 1986, it introduced the “corporative” concept of equity-financed joint ventures in agro-processing. The key objective was to find a means by which small farmers could become owners of a rice mill, while avoiding the capital and management shortcomings of cooperatives. Through operation of a rice mill farmers would be able to obtain production and investment loans and repay them in kind by delivering *palay* (paddy) direct to the mill. As they are owners of the mill, farmers’ commitment to the facility is strengthened by the receipt of better selling prices and sharing in the dividends. RBP established the rice mill. The bank together with its shareholders took an initial share of 55 percent. Only the bank paid up in full at the start, to provide the initial investment capital. The farmers paid their shares over a four-year period and increased their ownership from the proceeds of their paddy sales, and at the end of this period became the majority shareholders. The company was called the Panabo Agro-Industrial Corporation or PAICOR. As shareholders, farmers were eligible for loans from RBP through PAICOR, primarily for crop inputs but also for medium-term investments. A key to the success of the “corporative” concept was the financial control of RBP over PAICOR and the quality of management provided during the start-up period. The bank reduced its shareholding over time and PAICOR was turned into a cooperative in 1992 with farmers holding 58 percent of the shares. RBP has created a specific foundation with a purpose of replicating the corporative model, using the RBPs resources and a special venture capital facility, created by Land Bank of the Philippines.

Term Loans

3.29 ***Bank for Agriculture and Agricultural Cooperatives (BAAC), Thailand***, is one of the few examples of a successfully reformed agricultural development bank which has achieved huge outreach while maintaining financial viability. After having experienced poor results with lending to small farmers through co-operatives, BAAC developed an individual lending technology, based on joint-liability groups. Currently, around 5 million farmers (88 percent of all farm households) are borrower clients and 7.6 million have savings accounts (1998). In 1999, 3.5 million farmers were members of 233,000 joint liability groups (JLBs). These are serviced by a dense and highly decentralized network of 586 branches and 882 field offices with a combined total of 13,082 staff.

3.30 Initially, BAAC provided mainly short-term loans, due to inadequate financial resources for term lending and a predominant loan demand for seasonal crop loans. Term lending was started in 1975. The growth of the latter has been facilitated by the availability of long-term international loan funds. More than 50 percent of the outstanding loan amounts of BAAC are classified as term lending. Although term loans are not the most profitable financial products of BAAC (which is reflected in the below average repayment rate), they are given a high priority by the institution. Being a development bank BAAC regards term loans as the most important tool

for modernisation and development of agriculture. The lower profitability of term loans has been compensated by high returns from other activities. Thus there is a degree of cross subsidisation.

3.31 ***Caja Los Andes (CLA), Bolivia***, started as a financial NGO called ProCredito in 1992. In 1995 it was the first micro-finance institution to receive a licence from the Superintendent of Banks to operate as a private financial fund. Since then its loan portfolio has grown vigorously, and it has a good portfolio quality and operational efficiency. CLA is often quoted as a benchmark for other Bolivian micro-finance institutions.

3.32 The products offered by CLA include loans to urban and rural micro-entrepreneurs, gold-based consumer loans, savings accounts, time deposits and housing loans. The total outstanding loan portfolio at the end of 2000 was US\$46m. Some 41,000 borrowers had loans, with an average loan size of US\$1,087. Competition in the urban micro-finance markets, and especially the advent of consumer finance companies, prompted CLA to diversify into rural areas; these accounted for 18 percent of the total loan portfolio in 2000. It developed a specific cash-flow based lending technology, tailored to the requirements of farm households. It has developed a “consumption-term loan” product, up to a maximum period of five years and amount of US\$20,000. Approval is dependent on the farmer being able to service the loan from his existing cash-flow. During the recent economic crisis, CLA’s rural portfolio showed better quality than its urban portfolio, mainly based on a lower degree of competition and better credit discipline in rural areas.

3.33 ***Agrocapital, Bolivia***, was established in 1992 by USAID as a financial NGO to provide working and investment capital to small- and medium-sized farmers and non-farm enterprises in rural areas in Bolivia. It was intended to fill the gap in rural loans, which has emerged as a consequence of the closure of BAB and the urban bias of other financial institutions. To achieve this aim it has two main strengths. First is a strong equity base which reduces the mismatch between assets and liabilities. Second is the recruitment of specialised loan officers with an agricultural background. The institution is seeking to be supervised by the Superintendency of Banks in order to broaden access to funds.

3.34 It provides short- and medium-term loans to individual farmers which are classified as commercial loans and micro loans. Commercial loans can be up to a maximum value of US\$300,000, although they range mainly from US\$5,000 to US\$50,000, with the average loan size being US\$10,000. The maximum loan duration is five years. Commercial loans must be secured by real-estate collateral.

3.35 Micro-loans require less sophisticated loan appraisal and no real-estate collateral. The maximum loan size is US\$10,000 and the repayment period is up to two years. Loans less than US\$5,000 can be secured with personal guarantees and by pledging non-registered assets. Specially trained loan officers have been recruited to supervise micro-loan products.

3.36 Some 63 percent of the outstanding loan amount has a maturity structure of between two and five years, which underlines Agrocapital’s continuing focus on provision of term loans for investments. Approximately, two-thirds of total outstanding loans are secured by real-estate mortgage and one-third by personal guarantees (pledging of land and other rural assets). Although micro-loans can be used to finance small investments, most term loans are classified as commercial. The loans are used mainly for investments in milk and vegetable production, irrigation, farm machinery, trucks and agro-processing.

3.37 **The BASIX group in India** consists of a non-bank financial institution and a local area bank which provide loans and a not-for-profit institution which provides technical assistance to rural clients. BASIX combines aspects of traditional banking and micro-finance technology in its operations. It broke bank orthodoxy by introducing cash-flow based instead of collateral-based lending. It also broke with MFI orthodoxy by not dealing exclusively with the poor. BASIX lends for agriculture, including term loans and decided that to be sustainable funding had to come increasingly from commercial sources. Agricultural-term loans are provided for irrigation pumps and wells, as well as for other farm and non-farm related investments, including housing.

3.38 Agricultural-term loans are extended directly to individual borrowers, the majority of whom own between 0.5–2 hectares of land. Although lending through equipment suppliers has been attempted, it has not yielded positive results. The BASIX Customer Service Agent (CSA) is recruited locally and has an intimate knowledge of the area and farmers. A term loan will typically only be given following several cycles of short-term lending. Collateral is sought only on loans which exceed US\$1,087.

3.39 **Mulukanoor Co-operative Rural Bank and Marketing Society (MCRB) in India** was established in 1956 as a multipurpose cooperative. MCRB has now almost 6,000 members, 115 employees, a loan portfolio of R80m (US\$1.73m) and a turnover of R370m (US\$8.04m). MCRB operates in 14 villages in Andhra Pradesh (AP). Half the village households here are engaged in farming and are therefore *eligible* to seek membership; some 75 percent have opted to become members.

3.40 Approximately 45 percent of its loan portfolio consists of credit for medium- or long-term investments. The cooperative's lending risks are minimised by the provision of integrated and interlinked input supply, credit and marketing services. In addition, borrower loyalty is ensured by sourcing lending from member deposits. MCRB lends only to its 6,000 members who own land and reside in one of the 14 villages covered by MCRB. The client base ranges from small farmers owning less than two hectares (more than 75 percent of the total) to large farmers cultivating more than 10 hectares of land. The majority of term loans for pre- and post-harvest equipment and for plantations such as citrus and mango are extended to the larger farmer members. Small farmers borrow mainly for cattle, poultry, sheep and other allied activities. Well and well repair loans are distributed across the broad spectrum of members.

3.41 Over the 30 years of its existence MCRB has accumulated a large amount of fixed resources, through member shares. This is encouraged through attractive savings rates of 15 percent, whereas the interest rates on loans only amount to 16 percent. This small margin of intermediation is possible through cross-subsidisation from marketing activities.

3.42 **Land Reform Credit Facility (LRCF) in South Africa** is a wholesale, revolving credit facility, which provides long-term loans with grace periods to registered banks for on-lending to land reform projects and Equity Share Schemes. It was established in early 1999, initially being capitalised to the extent of R63m (US\$6.3m) from matching grants made by the DLA and the European Union. The operating criteria and procedures of the LRCF were explicitly designed to overcome the obstacles to commercial lending to land reform projects. Specifically, the Facility aimed to lower the high risk profile associated with land reform enterprises for banks and commercial investors, and simultaneously to provide incentives to farmers and landowners to enter risk-sharing partnerships with landless workers and communities neighbouring high value land assets.

3.43 A key feature of the institutional design of the LRCF is its built-in system of incentives, checks and balances: The main incentives offered are long repayment period including a grace period of up to 5 years and a slight interest rate subsidy of 2 – 3 per cent below the three-month (wholesale) Bankers' Acceptance (BA) rate). These features of LRCF provide more flexibility to the retail lender to adapt the repayment schedule of the loan to the cash flow of the ESS, without leading to prohibitive total financing costs. Most ESS reach their maximum profitability only after some years, due to initial learning costs, gestation periods of agricultural investments, etc. LRCF doesn't provide any loan guarantee mechanism, so that the commercial bank as retail lender carries the full credit risk. This ensures careful appraisal and limits the use of grace periods to a reasonable extent. Commercial banks are free to set the on-lending rates, but are obliged to pass the repayment terms (deferment period and loan term) on to the end-borrower.

3.44 **Land Bank of South Africa (LB)** is a state owned agricultural development bank which has traditionally provided long-term mortgage loans and medium term loans for farm related investments to white commercial farmers, either directly or through agricultural co-operatives. Since 1997, LB has been given the mandate to expand lending to the so called Previously Disadvantaged Individuals (PDIs): mostly black small scale farmers on communal lands and land reform beneficiaries which had been excluded from formal financial services during the apartheid system. Since then, PDIs can access different loans products including medium-term loans for equipment purchases and special mortgage loans for land purchases. In addition, a collateral-free micro-finance programme, called "Step Up", has been introduced with standardised loan appraisal procedures.

3.45 The Bank has introduced different client risk categories and loan terms and conditions vary according to the track record, collateral and other characteristics of the clients. However, LB first used downscaled versions of their traditional lending products for PDIs. Political pressure to increase disbursements coupled with a poor understanding of the effective demand of the new clientele and a limited number of retail outlets (especially in the former homeland areas) led to poor repayment rates. In 2001, LB undertook a comprehensive market analysis and revisited its lending policies and products accordingly. Since then, emphasis is placed on i) a more careful appraisal of clients income sources and asset base, ii) the availability of complementary services such as access to markets, technology, extension, e.g. through fostering contract farming arrangements and partnerships with producer organisations iii) training and capacity building at the client level

3.46 **Umthombo Agricultural Finance in South African** has been established by the *South African Sugar Association (SASA)* in 1973 under the name of Financial Aid Fund (FAF) to provide loans to small-scale farmers within the sugar growing areas who would not qualify for loans elsewhere. Financing smallholder sugar cane planting on communal land allowed the mills to expand their raw material supply beyond the borders of freehold land which was already completely covered by estate production¹⁷. Sugar cane is a highly popular cash crop amongst black smallholder farmers, because it combines a secured marketing outlet with readily available support services, including extension, land preparation, supply of fertiliser and pesticides. Currently, 15% of total cane output is produced by smallholder farmers. In KwaZulu Natal, the average cane area per farmer is 2 ha.

¹⁷ In KwaZulu Natal, around one third of the land is under communal tenure, governed by chiefs.

3.47 FAF offers different loan products, including sugar cane establishment loans with a maximum duration of eight years. Loan repayment is carried out by automatic deductions from sales proceeds and no further collateral is required. Over the years, FAF developed into one of the biggest private–sector financed agricultural production credit scheme for small–scale farmers in South Africa. In 2001, FAF underwent a restructuring to enhance its independence from SASA and the name was changed into Umthombo Agricultural Finance.

Leasing

3.48 *ANED (Asociación Nacional Ecu mica de Desarrollo), Bolivia*, is a non–regulated financial institution founded by 11 NGOs working with small farmers in different regions of Bolivia to provide complementary financial services. As such, it has access to concessional funds and enjoys a high degree of flexibility in developing innovative financial products for its target clientele. ANED now has 24 branches in eight of the nine regions in the country. The total loan portfolio at the end of 2000 was US\$7.4m. Slightly more than half of the outstanding amount (including the leasing portfolio) has terms between one and five years. Around 75 percent of the loan portfolio is for agricultural, livestock and agri–business activities. Over 90 percent of the portfolio is located in rural areas.

3.49 After long experience with group–based standardised micro–loans, ANED realised the limits of this technology for meeting the needs of its more advanced clients. It first tried to adapt its group lending technology for financing term investments for farmers, but lack of group cohesion and weak collateral led to high default rates. In response to this predicament, ANED introduced term loans and leasing products to individual farmers. Due to the absence of suitable collateral, term loans are limited to three years and a maximum amount of US\$3,000, while leasing contracts can be up to US\$40,000 for seven years. The use of leasing to finance farm machinery and irrigation pumps overcomes typical collateral constraints. Close collaboration with equipment suppliers facilitates technical training and after sales services.

II. Other Term Lending Experiences

3.50 Due to time and resource constraints, no comprehensive case study could be prepared on the experiences briefly described below. The information presented is based on documents provided by the concerned institutions and/or on interviews with their staff.

(i) *Centro de Investigaci n de Desarrollo Regional (CIDRE), Bolivia:*

CIDRE is a NGO which started agricultural term finance in 1995. It has adopted quite a different approach to the other Bolivian MFIs. Larger scale investments were deemed necessary to overcome major constraints related to production and marketing of agricultural products. CIDRE provides term loans to established groups of farmers for small–scale pump irrigation systems or milk cooling facilities. This type of group lending for productive assets serves as an entry point for individual lending for working and investment capital purposes.

CIDRE has benefited from its prior work as a regional socio–economic research centre. Thus it was able to acquire an intimate knowledge of the specific situation and constraints in different sub–regions, and established

good-working relations with formal and informal local authorities. It has also benefited from accessing long-term donor funds on concessionary terms. It has been able to pass on the benefit of these favourable terms to its borrowers. CIDRE provides technical assistance and closely supervises investments (e.g. construction of irrigation schemes) and borrowers.

Other examples from SSA have not been analysed as full case studies, due to time and resource constraints, because the experience to date is too limited, or because the available information was insufficient to warrant a full case study.

(ii) *BNDA Mali:*

BNDA was founded in the middle 1980s as a government-owned agricultural development bank. After severe repayment problems in the late 1980s, it underwent some restructuring and is now cited as one of the few examples of a successfully reformed agricultural bank. Since then, BNDA has been refocusing its activities on more profitable areas of rural lending and on viable farmers. Supported by bi- and multilateral-development banks, it established partnerships with village banks which on-lend their funds to rural households, normally on a short-term basis. It provides now around 90 percent of the refinance funds for village banks.

In the *Office du Niger* region, BNDA offers term loans to farmer groups (*groupements*) for financing the establishment of rice mills. In the cotton growing areas, it provides term loans to individual farmers for the purchase of animal traction equipment. In the Timbuktu area, irrigation pumps have been financed. BNDA has also implemented the credit component of several projects funded by the Malian government and by international donors.

(iii) *Kenya Cooperative Bank (KCB):*

The Kenya Cooperative Bank, established in 1965, is currently the fifth largest bank in Kenya. Owned by 57,000 shareholders, it mainly provides savings and loan facilities to co-operatives through its 30 branches. The cooperative clients comprise Savings and Credit Cooperatives (SACCOS) as well as processing and marketing cooperatives in the coffee, tea and dairy sub-sectors. Under the Smallholder Coffee Improvement Project (SCVIP I and II), KCB provided term loans to coops for the construction or rehabilitation of coffee factories. However, no term loans were provided for individual farmers. Kenya Cooperative Bank has been severely affected by the current crisis in the coffee sector (low prices) and the crisis in the national cooperative movement. The recovery of its huge outstanding portfolio with coffee marketing cooperatives and smallholder farmers is uncertain. The new Coffee Act further liberalises export marketing and challenges the main repayment mechanism, deduction at source made by the Kenya Coffee Board.

(iv) *Equity Building Society (Kenya):*

The Equity Building Society was established for the purposes of housing finance, but has diversified into a range of banking products, including micro-finance. It showed a tremendous growth over the last years and is now owned

by 2005 shareholders. It has 105,000 depositors and 18,000 borrowers. Its main portfolio is concentrated in the highly populated and fertile mountainous area in the central highlands. It offers a range of loan and savings products for productive and consumptive purposes, including the so-called “development loans”. These loans have a maturity period of up to six years, loan amounts range between US\$2,000–12,000 and are mainly provided to the better-off farmers with non-farm income sources. Real-estate collateral is required and the farmer borrower has to sign an irrevocable instruction to deduct loan repayments from the proceeds of one major cash crop (tea, coffee or milk), marketed through a single channel marketing system. EBS has recently introduced a term savings product.

(v) ***FECECAM Benin:***

FECECAM was one of the most notable examples of a decentralised financial institution with an impressive growth of members and branches all over the country. Operating mainly in the cotton growing areas, it provided medium-term loans for animal traction equipment and motor pumps, mainly funded, at first, from the network’s own resources. These loans were refinanced by IFAD and the African Development Bank. In the late 1990s, a new product for investment finance was designed which combined a period of savings for farm equipment with a leasing option. Unfortunately, since 1999, the whole FECECAM system has been severely affected by a crisis which led to a suspension of term lending activities. The availability of substantial outside resources, on easy terms, led to a weakening of the borrower approval and supervision procedures, which had been carefully developed over time. Deterioration of the loan portfolio was the inevitable result, precipitating the current crisis.

(vi) ***CECAM (Madagascar):***

the *Caisses d’Épargne et de Crédit Agricoles Mutuelles*, is a federation of savings and credit co-operatives. In the early 1990s, with support from the French NGO, FERT, CECAM developed a leasing product for its members. Animals and animal-draft equipment, rural transport and post-harvest equipment are the main items financed. Prior to applying for a lease, the farmer has to become a member of the CECAM and build up a track record through short-term loans. In addition, he has to buy a share of at least 5 percent of the loan or lease amount requested. Furthermore, the applications have to be endorsed by local CECAM groups. These groups of 4–9 members are also responsible for supervising borrowers and leasees. The farmer can select the asset himself, but CECAM verifies its value and may conduct veterinary examinations in the case of animals. The farmer has to make a down-payment of 25 percent of the value of the leased item.

CECAM has provided 25,000 leases since 1993, for a total value of FMG20b. Leasing accounts for around 20 percent of the total outstanding portfolio. It has benefited from considerable donor inputs through technical assistance and long-term refinance on concessionary terms.

(vii) *Crédit Rural de Guinée (CRG):*

Crédit Rural de Guinée has been established with support from *Agence française de développement* and IRAM in 1989. It comprises now more than 90 local branches and more than 100,000 members. It provides a medium-term loan facility for the purchase of power tillers and post-harvest equipment. However, most loans are used for non-agricultural purposes such as refrigerators. Some agricultural-term loans are provided in close collaboration with NGOs providing non-financial support services. CRG views the expansion of agricultural term loans as too risky.

4. BUILDING A TERM LOAN PORTFOLIO

4.1 This chapter aims at exploring mechanisms and approaches that lenders can use to provide term loans to small farmers for on-farm investments. Based on the case studies, it illustrates some steps which are necessary to build a term loan portfolio and control the risks and costs of agricultural term lending. Apart from bankers and other financiers, it may also be of interest to project staff, planners and donors concerned in enhancing the supply of term loans in rural areas.

A. BASIC PRINCIPLES

4.2 If a lender wants to engage in agricultural term finance, three basic principles should be considered:

I. Importance of Assessing the Effective Demand for Term Loans

4.3 As pointed out in the Conceptual Framework, term finance is not only costly and risky for lenders, but also for borrowers. A thorough market study should be carried out to determine if there are profitable farm-related investment opportunities and bankable farmer/investors able to repay term loans at cost-covering interest rates. If term lending products are developed which are based solely on simple assumptions about the credit demand of farmers, there is a real danger of simply pushing farmers into considerable debt and risking the sustainability of financial institutions. Savings and short-term loans should always be kept in mind as alternative instruments which can help farmers to accumulate assets in those situations where term loans are unfeasible. If repayment is unlikely and the investment is deemed necessary from a social or environmental point of view, financing mechanisms other than loans should be considered (see Chapter 8).

II. Adopting a Gradual Approach

4.4 Agricultural term lending is a sophisticated and risky activity and may require major changes in a financial institution's lending technologies, operations and staff profile. Typical rural micro-lenders focusing on non-farm activities need to familiarise themselves with agriculture and learn to handle larger loans. Commercial banks need to learn to deal with agriculture and with farm households, not just large enterprises. New entrants in this business should therefore adopt a gradual and phased approach. It is important to understand the farm economy, build links with local institutions and authorities and develop a viable financing technology for short-term loans and a stable pool of clients first, before entering into term finance. Ideally, term finance should first be provided for smaller assets not involving gestation periods, assets which will produce an immediate cash-flow. Terms and amount may then be gradually expanded.

III. Investment in Lending Technology

4.5 In view of the above, successful term lending requires considerable initial investments (set up costs) by the financial institution. These may include market research, product development and testing, improved MIS, training of existing or recruitment of new staff, and possibly opening of new branches. Donor and government support might be critical at this stage.

Box 3: The Importance of Market Research – The Land Bank of South Africa

In 1997, the Land Bank of South Africa, formerly the main supplier of finance for white farmers, was given the mandate to provide financial services to the huge majority of black small farmers who historically had been excluded from formal financial markets. Because of substantial political pressure, the Land Bank started immediately by using its mainstream loan products, including term loans, for the new clients. All black farmers were considered as a homogenous group and put into one risk category. Consequently, the bank experienced huge losses due to poor portfolio quality.

In response to this negative experience, the Land Bank has recently carried out market research based on earlier consumer surveys and other pre-existing literature. This led to the identification of six major categories of resource poor farmers with different resource endowments, income sources, degrees of commercialisation and access to financial services. None of these clients would be able to provide land as collateral, although some could offer other forms of security. Four of them have agriculture as part of their core activities, either on a part-time or full-time basis. They differ in their degree of commercialisation and in the importance of non-farm income sources. The other two groups are referred to as agricultural entrepreneurs, i.e., they undertake secondary (post-harvest) agriculture-related activities. Agribusiness entrepreneurs are involved in small-scale processing industries ranging from household level to small commercial enterprises.

Based on this analysis, the Land Bank was able to identify the needs and potential of different segments of the black population. It is now developing appropriate lending products for each market segment and identifying the need for specific non-financial support services.

B. UNDERSTANDING THE POTENTIAL MARKET

4.6 Set out below is a checklist of the main elements of a market analysis.

I. Potential Demand by Type of Investment

- What are the main commercial farming activities and their respective investment needs?
- What is the size of the market for agricultural products? How much incremental production can be sold?
- Which technologies are currently used by the farmers and what is the scope for improvements?
- What is the structure of supply of farm assets (importers, dealers, local manufacturers) and after-sale services (spare parts, repair shops)?

Box 4: ANED, a Marketing Lesson

ANED (Bolivia) started financing small irrigation pumps for vegetable farmers in the Altiplano of Bolivia. The first leases were highly successful and created a huge demand for the product. However, after some years, ANED started to experience default problems. The reasons were not related to moral hazard, but rather to declining vegetable prices in a limited market. Due to the short duration of the leases (2 years), ANED was able to react quickly and stop the disbursements of new leases for the purpose of irrigated vegetable production.

II. Potential Demand by Type of Farmer

4.7 As discussed in Chapter 2, farmers' effective demand for term loans is a function of their:

- asset base (land, cattle, equipment, etc.);
- size and structure of household (labour endowments, consumption units);
- sources and level of cash income: types of farm activities, non-farm income, remittances, degree of diversification;
- degree of commercialisation of farming activities;
- experiences with agricultural activities and technologies.

4.8 Demand for asset finance is shaped by the life cycle of the farm household. Young households tend not only to have different investment and credit demands, but also a different profile as clients in terms of track record, range of experiences, existing assets, labour force, etc., than households in their mid-life or nearing retirement age.

III. Existing Sources of Funds and Farmers' Financing Strategies

Any external finance should complement rather than substitute farmers' existing sources of funds or financing strategies, such as:

- **Short-term cash management:** Monitoring of incomes and family budgets permit tracing the farm household's principal receipts and expenditures during the year. Such an analysis would provide an understanding of the amount and timing of cash receipts and outflows, their main sources and destinations, and the resulting cash-flow pattern during the year. It helps to understand the cash requirements and to adapt loan products, especially regarding their maturity and repayment schedule.
- **Accumulation paths:** how do farmers currently finance investments in productive assets? Which sources of external finance (formal and informal) exist and what role do they play in farmers' financing strategies?
- What are the **strengths and weaknesses of existing sources of finance** for different types of farmers and investments?

4.9 Such an analysis is important in understanding the type and structure of financial services which would enhance asset accumulation by different types of farm households and for different activities, and how their sustainability and outreach could be improved.

IV. Environment for Term Investments and Term Loans

4.10 The following factors largely define the environment in which term lending must operate:

- levels of inflation and interest rates: if these are too high or if economic conditions are unstable, term loans should not be considered;
- local institutions and authorities, which might be used to screen clients and supervise loans and enforce repayment;
- credit culture – as indicated by past borrowing performance within the community;
- marketing outlets and infrastructure (roads, communications);
- availability of different forms of collateral, as well as conditions and costs for registration and foreclosure.

Box 5: CIDRE, Doing the Necessary Homework

CIDRE, a Bolivian NGO, first engaged in a number of studies on socio-economic and cultural conditions, the main productive sectors and market conditions. This research helped to identify constraints and potentials. It led to the formulation of a strategy for progress, including loans and non-financial support services. During the study, CIDRE was able to build relationships and mutual confidence with formal and informal local authorities and farmer groups. This investment in creating a knowledge base and a relationship of trust is considered essential by CIDRE for successful term lending.

4.11 Depending on the situation and the existing financial infrastructure, different avenues might be pursued:

- establishment of new financial institutions;
- upgrading of existing financial institutions;
- designing of specific term finance products;
- improved access to sources of funds.

C. DESIGNING PRODUCTS AND METHODS

4.12 This section looks at ways the risks and transactions costs involved in term lending can be managed. It draws on the experiences of the case study institutions.

I. Choosing the Right Environment

Selection of Regions

4.13 All case study institutions are mainly operating in regions with high agricultural potential. Moreover, the following criteria are important for the selection of regions in which to conduct term finance:

- ***existence of basic rural infrastructure:*** especially irrigation and farm-to-market roads;
- ***proximity to market outlets:*** such as city, rural markets and processing enterprises; or the existence of a single channel marketing outlet which allows credit recovery through deduction at source;
- ***high population density;***

- a *good loan repayment culture* amongst the rural population;
- *low degree of competition from other financial institutions*, especially by those practising subsidized interest rates. This permits charging cost-covering interest rates and facilitates transparency in information on the debt situation of the borrower. The existence of credit bureaux can help overcome the growing problem of competition.

4.14 The degree of competition is particularly important; in areas most appropriate for term finance, typically peri-urban or rural areas with good infrastructure, high population density and close proximity to markets, there is often competition between different lenders, whereas other regions are not served at all. This applies for example to the Cochabamba region in Bolivia or the central highlands of Kenya. In these cases, borrowers often take loans simultaneously from several financial institutions. All too often this leads to over-indebtedness and poor portfolio quality. In turn this creates incentives for financial institutions to move into areas with less competition. In these areas, the repayment culture tends to be better, because farmers have fewer alternative sources of finance and are interested in maintaining creditworthiness with the lender. BAAC's success as an agricultural (term) lender is partly attributable to its monopolistic position as sole supplier of term loans in the countryside.

4.15 Investments in basic infrastructure are likely to have spill-over effects on the creation of viable financial institutions. One case study institution (CIDRE) financed investments in productive infrastructure for farmer groups in a semi-arid region before getting involved in financing working capital and investment loans for individual farmers.

Building Up a Credit Culture

4.16 The attitude towards loan repayment often varies considerably between villages and regions. Lenders tend to avoid working in locations where other financial institutions have experienced problems with repayment. This is a particular problem where projects or agricultural banks have in the past provided credit under the old paradigm approach, without enforcing repayment. As the Indian case study notes "... rural people were making a distinction between 'Sala', referring to loans from informal sources, and 'Loans', as disbursed by formal financial institutions. A 'Loan' was not to be repaid but a 'Sala' was." In West Africa, there is a distinction between *argent chaud* (client deposits) and *argent froid*, the latter being from formal sources, governments or donors.

4.17 Many rural lenders have had to start gradually to rebuild a credit culture. Accordingly, microfinance techniques such as increasing loan sizes based on repayment performance are used. The mobilisation of savings is an alternative way to build additional ties between borrowers and lenders. A borrower tends to have a different perception of a financial institution in which he has entrusted his money.

II. Choosing a Lending Modality

- 4.18 There are four basic lending modalities:
- *Model 1*: Loans to individual farmers.

- *Model 2*: Loans to individual farmers who also happen to be members of groups.
- *Model 3*: Loans to farmer groups/enterprises for financing group-owned assets.
- *Model 4*: Loans to groups for on-lending to individual farmers.

4.19 Most case study institutions provide loans directly to farmers (Model 1), often using groups as a mechanism for screening, supervision and joint liability (Model 2). Two institutions have experiences with lending to groups for group owned assets (Model 3). Though often used for seasonal financing, only one example of on-lending of term loans by a farmer group to individual farmers could be found (Model 4)¹⁸. This is due to the fact that appraising and administering term loans is too complicated to be carried out by farmer groups or cooperatives. There might even be sequencing between model 1 and 3, as the example of CIDRE shows (see Box 6).

4.20 The approaches using group methodologies will be discussed before turning to the lending technologies for serving individual borrowers.

Lending to Groups for Group Owned Assets

4.21 There is a wide range of farmer groups engaged in economic activities, with varying degrees of formality, ranging from informal self-help groups to formalised group enterprises such as cooperatives. Often groups are used to organise support services (marketing, input supply), or to manage rural infrastructure such as water supply or irrigation. The advantage of groups is that through cost sharing they facilitate access to lumpy assets such as storage, processing, transport or irrigation facilities.

4.22 Experiences with lending to groups for group-owned assets amongst the case study institutions are mixed: CIDRE sees financing of group-owned assets as the only feasible way of financing larger assets for small farmers. ANED did not succeed with financing tractors through term loans to groups and developed leasing to individuals as an alternative financing technology.

Box 6: CIDRE, Group Borrowing – Division of Responsibilities

In the case of lumpy goods such as irrigation pumps, farmers acquire variable amounts of “shares” according to the amount of water they use. Individual repayment obligations are based on the respective shares and are collected through water fees.

4.23 Possible reasons for the differing experiences of ANED and CIDRE include:

(i) ***Type of investment financed:***

- CIDRE: In case of pump irrigation systems, enforcement of payments in the form of water fees is easier, since the supply of water can be used as a mechanism to sanction default. Milk cooling facilities are vital for farmers to achieve quality and better prices and access to the facility can be used to enforce repayment.

¹⁸ In Indonesia, long-term loans for tree crop development are provided to village cooperatives which on-lend them to individual farmers, with a guarantee provided by a processing enterprise. This model will be discussed further in Chapter 7.

ANED: In the case of farm machinery like tractors, establishing schedules for their use amongst group member for time bound activities (e.g. land preparation, spraying, harvesting) as well as for assuring adequate maintenance, has proved to be quite difficult. In general, there are more cases of successful collective action in developing countries for building, managing and rehabilitating irrigation systems than for group ownership and operation of farm machinery.

(ii) ***Existence of collateral:***

- CIDRE used a real estate mortgage of one or several members of the group to secure the loan, whereas ANED relied on joint liability mechanisms. A special case of lending for group-owned assets is lending to cooperatives.

4.24 Coops have been a classic vehicle for rural development in many developing countries and are still used. For example, the Kenya Cooperative Bank provides term loans to cooperatives for establishing coffee factories and milk processing plants. The Land Bank of the Philippines also provides agricultural lending to cooperatives. In both cases, coops are also used for on-lending funds to individual borrowers.

4.25 However, experiences with term finance to cooperatives have often been poor. The reasons for failure or success of cooperatives are many, including management and governance issues, lack of equity and suitable collateral. A discussion of these problems goes beyond the scope of this study. However, some general observations can be made, which impact on the chances for success of cooperatives and other types of group enterprises in financing term investments:

- ***Mode of creation:*** Coops which have emerged in a bottom-up way as genuine self help mechanisms are more likely to succeed. Existing groups which have been formed around a common purpose (e.g. water management, marketing) tend to be more stable than groups formed solely for the purpose of getting a loan. In turn, problems are endemic if coops have been created for the purpose of service provision from governments. Group enterprises should be able to establish their own criteria and procedures to select (and expel) members.
- ***Characteristics of groups:*** Groups with homogeneous members, involved in a limited number of well-defined purposes, are often more successful than heterogeneous groups involved in different types of economic activities. Groups need a minimum size to reap economies of scale. However, if the group becomes too big, cohesion and the sense of ownership are weakened, and accountability of management is more difficult to achieve.

Box 7: Problems of Group Cohesion with Respect to Lending in Cooperatives

In some countries, membership in a cooperative is compulsory in order to obtain certain support services provided by the government and to market produce. Smallholder coffee farmers in Kenya, for example, have to be member of a cooperative in order to be allowed to plant and market coffee and receive inputs and loans. In Indonesia, many government credit programmes are channelled through village cooperatives (KUDs). In both cases, the cooperatives cannot select their members or disapprove new membership applications. Screening and self-selection, which are important mechanisms for the success of group lending and joint liability approaches, cannot be applied in such cases.

4.26 The following principles should be considered for term lending for group-owned assets:

- Providing finance to farmer groups/enterprises which already exist and that are already providing services to their members, is usually more successful than to groups of newly-formed “beneficiaries”.
- Access to term loans should be performance-based and provided gradually: a group should first establish a track record and operate on sound business principles. A rating system of formal groups or cooperatives might be considered (see Box 8).
- Group enterprises should be strengthened in terms of business development skills, including financial planning, accounting and investment appraisal.
- Groups should be formalised if larger loans are involved. They should be able to provide collateral and complement the loan with their own equity.

4.27 The possibility of creating joint ventures involving farmer groups is discussed in Chapter 8.

Box 8: The LBP's Cooperative Rating System

The Land Bank of the Philippines (LBP) is a wholesale lender which refinances rural banks and other retail financial intermediaries. A second important activity is lending to agricultural cooperatives, many of which have been created under the Land Reform Programme. After problems of low repayment rates, LBP has introduced a rating system for cooperatives, combined with technical assistance and business development services (BDS). Only sound cooperatives (i.e., those with high ratings) are eligible for term loans. The loan amount is a maximum of 6 times the paid in capital of the cooperative. Access to loans is first granted on a short-term basis. Longer term loans are provided on the basis of the coop's repayment performance. The other (non-borrowing) coops are supported through training in coop management and BDS.

Lending to Individual Farmers as Members of Groups

4.28 Financial institutions often prefer to lend to individual farmers to avoid additional risks which might be caused by governance problems. However, these farmers are often members of existing formal or informal groups. There are two ways in which the lending can be done:

- (i) The financial institution lends to the group and the group on-lends to the individual borrower;
- (ii) The financial institution lends directly to the individual group member, using the group for screening, supervision and joint liability.

4.29 The first approach is used in micro-finance programmes aimed at linking Self-Help Groups (SHGs) with formal financial institutions and is mostly confined to small loans. Contract farming schemes also often use coops for administering loan accounts. Unfortunately, some of these schemes tend to repeat the failed old top-down approach of creating coops and are consequently prone to the same type of problems mentioned above.

4.30 The second approach has the following benefits:

- **Screening and selection of individual borrowers:** The leader of the group and institutions that provide non-financial support services to the group will have specific knowledge of the character and past loan performance of individual farmers. The effectiveness of this mechanism can be increased if the leader or members act as personal guarantors for borrowing members (CIDRE, ANED, RBP, BAAC).
- **Availability of additional support services:** If groups serve a specific purpose (e.g. water user groups, dairy producers' groups, etc.) the members will have access to essential agricultural support services such as technical assistance, identified market outlets or irrigation water supply. These services play a crucial role in reducing agricultural production and marketing risks.
- **Use of peer pressure** for monitoring and enforcing repayment (see para. 4.41)

Box 9: The RBP's Farmer Irrigator Groups

The Rural Bank of Panabo in the Philippines uses Farmer Irrigator Groups as a screening mechanism for farmers who wish to apply for loans. Part of the loan default risk is covered by a group guarantee fund. ANED has been working with groups of dairy farmers which were formed and their members trained by a dairy development project. Groups or chairmen have to endorse applications of individual borrowers and their own "reputation capital" with the financial institution is a collateral substitute.

III. Selection of Individual Borrowers

4.31 The following are the most important selection criteria applied by financial institutions when assessing prospective individual borrowers' term loan applications: Experience; reputation and creditworthiness; collateral or suitable collateral substitute; and, level, and diversification of income sources

- **Experience.** The ability of farmers to manage the activity or equipment is an important factor related to technical and economic risks. Most lenders do not provide start-up finance, but only support expansion or renewal of existing activities, thus ensuring that the client has the necessary experience. If someone has experience from working as an employee on another farm or plantation, start-up finance may be acceptable. For farm machinery such as tractors, potential borrowers should have previous experience as tractor operators. For smaller equipment, such as power tillers or irrigation pumps, prior working experience requirements are less stringent. Thorough training is a suitable substitute.
- **Reputation and creditworthiness.** Information on the prospective borrower's character and past credit performance is important for assessing the entrepreneurial capability and credit behaviour of a potential borrower. The information can be collected from:
 - **Contacts with the borrower:** frequent contact between the lender and the borrower is also important to create a relationship of mutual trust.

- *Borrower track records*: these are available from credit bureaux or through informal exchange of information between financial institutions. Local authorities, group leaders or development organizations working in the same area are also important sources of information. Proven borrowers who have a long-standing relationship with a financial institution are often approached to obtain or validate information on prospective new borrowers with whom they may be acquainted.
- *Graduation of clients*: graduation from small to larger loans is a basic practice used by micro-finance institutions. It can also be employed in agricultural term lending. The approach restricts access to term finance to clients who have built up a sound track record with short-term loans (BAAC, BASIX, RBP). This helps to create a lender/borrower relationship which improves the lender's ability to screen potential borrowers for term loans. Borrowers with good loan repayments can gradually receive larger loan amounts for longer terms. This possibility, in turn, creates incentives to repay loans (see section IV on collateral).

Some financial institutions (Agrocapital, ANED, CLA) lend successfully, however, without this graduation requirement. If they are convinced of a potential borrower's ability to repay a larger loan over a longer term, they check his track record with other institutions. Such an approach is based on the supposition that there are creditworthy farmers out there with adequate entrepreneurial and management skills, but who lack the financial means to undertake viable investment opportunities. However, in these cases, collateral requirements are stricter.

Box 10: Limitations of Asset Acquisition through MFI Financing

Mama Sera, a client of YOSEFO, a Tanzanian MFI, runs a hair salon. *“Prior to joining YOSEFO, I was already running my salon. I joined YOSEFO because I had heard that they were assisting small business people like me with working capital financing. I wanted my business to grow, and I needed to purchase an additional hair dryer and steamer. I could not purchase these items right away, so I began borrowing from YOSEFO to try to raise money to purchase the items. With my first two loans of TSh50,000 (US\$61) and TSh100,000 (US\$122) respectively, I bought hair care products. I repaid each of these loans within a four-month period. I then borrowed a third loan of TSh200,000 (US\$245), which I split in two: I put one half in the bank and used the remainder to purchase more stock [hair care products]. It took me another four months to pay off this loan. Once I had repaid this loan, I got a fourth loan of TSh300,000 (US\$368). To this loan, I added the TSh100,000 (US\$122) I had in the bank and used the TSh400,000 (US\$491) to purchase the dryer and steamer I needed for my salon. While I am grateful for the loan facility I have with YOSEFO, it took me one year [and four loans] to purchase the assets I needed for my salon.”*

Source: Mutesasira, et al. 2001

- **Level and diversification of income sources.** Farmers with a variety of farm and non-farm activities are generally preferred as recipients of term loans, mainly for the following reasons:
 - in case of lower than anticipated profitability of the investment activity, other income sources can be used for loan repayment;

- other income sources can be taken into account when fixing the repayment schedule. This allows more frequent repayments and reduces the need for a grace period.

4.32 Many financial institutions provide term loans only if the existing income is sufficient to repay the loan without taking into account any projected incremental income (see section VI on appraisal). This restricts term loans to larger farmers or farmers with considerable off-farm income.

IV. Collateral Availability

Importance of Collateral for Term Lending

4.33 Loan collateral is more important for rural-term lending than for short-term working capital loans, for two reasons. First, there is greater uncertainty about borrowers' ability to repay due to the longer-term nature of the projects being financed and the probability that some unexpected event will occur during that time. Unlike with seasonal loans, the lender does not have the opportunity to regularly re-evaluate the borrower's repayment capacity and commitment and adjust loan terms and conditions accordingly. Secondly, loan sizes are initially larger or become larger as interest is capitalized during initial grace periods. Therefore, failures to repay result in larger loan losses for lenders.

Principles of Conventional Collateral

- 4.34 To be commercially useful, a mechanism for securing loans must meet six tests¹⁹:
- creating an enforceable security interest must be inexpensive;
 - enforcing that security interest must be equally inexpensive;
 - the security must produce real commercial value for the lender when enforced;
 - the value must be easy to assess and should not be subject to unpredictable depreciation;
 - the lender must be able to determine before the loan is made, with certainty and at low cost, whether any other lender has existing claims on the security;
 - the lender must be protected from claims of third parties, including secured and unsecured creditors, the trustee in bankruptcy, and some purchasers of the security.

4.35 Lenders evaluate collateral in terms of its marketability, ease of liquidation and the transaction costs involved in doing so. The psychological value of collateral in encouraging good loan repayment may be as important or even more important than the eventual liquidated value.

Conventional Loan Collateral

4.36 Because of the assumed high risks of agricultural term loans and the limited capacity of most lenders to manage these risks properly, a real-estate mortgage is usually required, at least

¹⁹ Taken from Fleisig, Aguilar, and de la Pena, 1994, p. 16.

for larger loans. However, many problems can complicate its use in securing loans. For example, many countries have poor quality land records so it is difficult to verify ownership and existing claims. Land titles are often not granted in land reform schemes until the beneficiaries have paid all their obligations. The new rural land reform law in the Philippines in the 1980s, for example, created great uncertainty about when specific properties would be affected and what conditions would regulate the transfer of mortgaged land, so for a time, lenders accepted only urban land as collateral. Peru and Bolivia gave security of tenure to recipients by granting titles recorded in special agrarian reform registries. But since these titles were not recorded in the normal real-estate registries, as required for registering land for a mortgage, they had little collateral value. Some public registries are expensive to use and not open to the public. High filing fees, long delays in registration, and constraints on obtaining access to the information add to lender transaction costs²⁰.

4.37 A rural lender who wants to expand agricultural-term finance can use other forms of collateral. The best alternative to real-estate collateral is the use of chattel mortgages on movable assets (including the financed asset) if original ownership title documents can be deposited with the lender. Moveable property usually has less economic value as collateral than immobile assets in developing countries. Moreover, it has to be registered in order to avoid the possibility of the asset being pledged to several different lenders. Leasing is also an effective response to some collateral problems; it will be discussed in Chapter 5.

Collateral Substitutes

4.38 Collateral substitutes are used effectively by micro- and informal lenders to circumvent some of the problems and limitations of physical collateral. By adopting some features of micro-finance collateral substitutes, lenders may be able to expand certain types of term lending. Unlike collateral, collateral substitutes have little or no market value and contribute to enforcing loan contracts without the use of judicial proceedings. The key features of several examples are described next.

4.39 **Access to future loans:** access to future loans as an incentive for loan repayment is an important tool, which is often implicit in other collateral substitutes such as joint liability groups, delegated agents or personal guarantors. Many MFIs use probation/graduation of clients as the principal collateral substitute. The borrower offers nothing other than a promise to repay but the promise is credible because the borrower establishes reputation capital with the lender through repeated transactions²¹. The successful use of this collateral substitute requires that clients *desire* future access to additional loans and/or improved terms and conditions, and there is limited competition so borrowers have few options to default and switch to other sources that promise better terms and conditions. Lenders may accept this type of collateral substitute as long as loan sizes are reasonably small.

4.40 In the case of term loans, other forms of collateral are often required. However, access to future loans can be used as an additional incentive for smaller term loans, especially if the client needs reliable access to other types of loans for working capital, emergency or

²⁰ See Yaron, Benjamin, Piprek (1997).

²¹ The lender starts the probationary relationship by extending the first small loan. Borrowers that perform well are given incentives for subsequent loans such as progressively larger loan sizes, more flexible repayment schedules, lower interest rates and fees, simpler procedures and longer terms.

consumptive purposes. Access to future loans is therefore a more effective collateral substitute, in circumstances where financial institutions have multiple ties with their clients.

4.41 **Joint Liability Groups (JLGs).** The most popular collateral substitute used by microfinance institutions (MFIs) is some form of solidarity group lending. Group members are co-liable for the existing loans of fellow group members and/or the failure of one member to repay a current loan results in all group members being denied access to future loans. Several instances have been observed when group solidarity breaks down over time, and for term finance this is an important issue. When a certain number of members default, the paying members will weigh the utility of maintaining the group (access to future loans) against the need to repay several loans of peers in addition to their own commitments.

4.42 This points to the difficulties of securing term loans through JLGs. Repaying a term loan of a defaulting group member is costly, and single defaults may threaten group stability. Similarly, a group might only be able or willing to guarantee a limited number of term loans and the total amount which can be guaranteed by the group may leave some members unsatisfied – again threatening group solidarity over time. BAAC uses JLGs up to a maximum loan amount of B100,000 (approximately US\$2,000), irrespective of the term. These groups have already been established and maintained over a long period for short-term loans.

4.43 Generally, the role of JLGs for term lending is more to help the F.I. to screen clients and provide additional pressure for repayment, complementing other forms of collateral. Moreover, both access to future loans and JLG work most effectively in a scenario of limited competition or at least some form of co-operation between lenders to enforce the threat of denying access to new loans. BAAC is the only provider of loans for most farmers in Thailand and has by far the best conditions. Therefore, maintaining a good relationship with BAAC is extremely important for most Thai Farmers. If competition for market share is keen among lenders, and there is incomplete sharing of information among lenders about defaulting clients, borrowers may be able to default with one microfinance institution and borrow from another, as occurred in Bolivia in the late 1990s. ANED experienced serious problems with group lending for investment finance due to the inability to control the liabilities of farmers with other financial institutions (and from informal sources) in a context of growing competition.

4.44 **Group guarantee funds.** The Grameen Bank and other MFIs (e.g. Rural Bank of Panabo) complement their group lending technology by creating group guarantee funds. A small fee (premium) is added to each member's loan and deposited into the fund. The money can be used in emergencies to cover the loan instalments of group members who experience temporary difficulties of certain defined types (drought, pest infestation, etc.) in making timely loan payments. The fund reduces the need for group members to use their own resources to make these payments, but raises the effective interest rate on their loans.

4.45 **Third party personal guarantees.** Under this arrangement, a third party (co-signer) rather than a group takes responsibility to ensure the repayment of the loan principal and interest in the event the borrower defaults. This can be an effective guarantee provided that the third party has sufficient income and/or assets that can be liquidated to pay any shortfall left by the defaulting borrower. It is also expected that third parties will respond without the lender undertaking legal proceedings to collect, because they want to maintain their own creditworthiness. For example, the BAAC accepts personal guarantors for smaller loans up to max US\$1,000.

4.46 **Delegated agents.** Another collateral substitute involves tapping the knowledge and social position of local village agents. This approach has already been mentioned in connection with the use of the group leader for screening of group members as individual clients, as applied by CIDRE. NGOs in Bangladesh and banks in Indonesia have used variants of this mechanism. In Uganda local councils certify the creditworthiness of borrowers for livestock loans from the Ugandan Commercial Bank. Such “agents” collect repayments and apply social sanctions to defaulting borrowers. This arrangement is effective as long as the agent has a strong and long-term interest to maintain a relationship and his own creditworthiness with the lender. Again, access to future loans and multiple ties between financial institution and agent are important preconditions. In the case of term loans, delegated agents might complement rather than substitute for other forms of collateral.

4.47 **Pledging personal assets with high use value.** Some MFIs using individual lending technologies have adopted some techniques of questionable legality in accepting as collateral substitutes items that are not readily marketable, but which constitute effective incentives because they are highly valued by clients who do not want to lose them. For example, borrowers may be required to deposit with the lender land reform titles, tools and equipment used in production, or TV sets and other consumer durables. Borrowers may be required to sign documents authorizing lenders to seize this property in the event of loan default. Foreclosure is normally costly and time-consuming or may even be impossible. In a real sense it is the threat of action, rather than the action itself, that is useful in maintaining credit discipline. The effectiveness of this mechanism depends to a certain extent on the ignorance of the borrowers. A further disadvantage of using non-registered assets is that the borrower might pledge them to more than one lender. The pledging of non-registered rural assets is used by some financial institutions (CLA and Agrocapital, up to US\$7,500).

4.48 **Linking credit with savings.** Some lenders require potential borrowers to first save before applying for a loan in order to demonstrate their intention to develop a long-term banking relationship. When the amount saved reaches a specified level, the lender will consider granting a loan, sometimes as a multiple of the amount saved. Some credit unions set loan sizes as a function of the amount of share capital the borrower owns (e.g. MRCB, CECAM). In this way, lenders limit the size of potential loan loss because the borrowers are essentially borrowing some of their accumulated savings or capital. Though forced savings might be effective in helping to control moral hazard risks, they increase the effective interest rate and are therefore expensive for the borrower.

4.49 **Interlinked contracts.** The use of agricultural produce as collateral appears to be limited to seasonal loans, mostly in the form of cash advances and in-kind supply of inputs (e.g. contract farming arrangements). This is most effective in environments with a single-channel marketing outlet. In cases where these arrangements are in place, additional collateral is generally required for granting term-loans (see Chapter 5).

Conclusion Regarding Collateral Substitutes

4.50 Collateral substitutes help lender and borrowers to overcome some of the problems related to the availability and effectiveness of conventional collateral in rural areas. They permit, to a certain degree, the substitution of physical capital with “reputation” or “social” capital. Such a strategy is most viable within a strategy of graduation of clients into larger loans with longer

maturities, and in a context of limited competition. Access to future loans from the same lender is the main incentive for repayment and the lender must be able to effectively deny further access in case of default. These features limit the applicability of collateral substitutes for term loans: they cannot be used for first time borrowers and they are only effective if the clients also rely on having reliable access to short-term loans. Finally, lenders in most countries are only permitted to have a certain maximum amount of unsecured loans in their portfolio (see Chapter 6).

V. Selection of Bankable Investments

4.51 Whether or not an investment can be financed depends in the first instance on the existing cash-flow of the client. However, as outlined in Chapter 2, the characteristics of the asset itself, such as capital requirements, cash-flow, and the underlying physical characteristics like gestation period, divisibility and mobility also apply.

4.52 From a lender's point of view, some additional factors have to be taken into account to assess the risk of technical failure. The case studies show that financial institutions only finance technologies which have proven to be technically feasible and economically viable in a certain region and for a certain type of farmer. A related factor is the availability of non-financial support services. These include the availability of spare parts and other after-sale services, but also the general availability of technical and managerial skills in a given region. Financing farm equipment such as pumps, power tillers or small mills is much less risky if there is a "machine culture" established in a region and a number of reasonably convenient repair shops exist. In the case of tree crops, the required services include the availability of quality planting material, fertiliser and herbicides, as well as extension services and post-harvest facilities such as farm-gate produce pick-up, pulpers, grading and packing facilities and marketing outlets. These support services are most likely to be provided in a sustainable way by private sector operators.

4.53 Other important factors relate to the financial institution itself and its capacity for providing term loans. These include:

- access to long-term funding sources and asset/liability management skills;
- size: larger institutions, which are more diversified across sectors, clients and regions, can provide more and larger term loans;
- appraisal skills: degree of specific expertise to carry out agricultural investment appraisal.

VI. Loan Appraisal

4.54 The main purpose of term loan appraisal is to assess the loan repayment capacity of the borrower and to determine whether he or she can bear the financial costs of the investment. The main elements of loan appraisal are:

- analysis of the borrower's existing farm-household cash-flow;
- technical and economic feasibility study of the investment, including a risk analysis;

- estimate of the incremental cash–flow to be generated by the investment;
- assessment of the assets and liabilities of the borrower.

4.55 The loan appraisal methodologies used by financial institutions vary considerably – examples follow.

Consumption or Multi–Purpose Term Loans

4.56 Some institutions, like Caja Los Andes (Bolivia) and Equity Building Society (Kenya), use a limited loan appraisal based on the existing cash–flow of the farm household and the additional costs (principal and interest) of the investment. No appraisal of the investment and accordingly no projection of incremental cash–flow is carried out. This approach takes into account the fungibility of money and allows for the risks that could lead to a sudden increase in household expenditure (e.g. illness of a family member). It is basically a term–consumption loan which can be used for any purpose, as long as the borrower is able to meet the repayment obligations out of existing income.

4.57 The advantages for the lender are lower costs for loan appraisal and for supervision of borrowers. This is a reasonable approach for financial institutions which are gradually diversifying into agricultural term–lending, but have not yet developed the skills and collected the information that is necessary to appraise more complex investment proposals. The method might also be adequate for small–scale farmers, if the requested term loan is either relatively short or small in loan size in comparison with the repayment capacity. This conservative approach is prudent especially for first time term borrowers and permit them to make lumpy investments immediately without having to save up over several years. However, financing of more costly investments would be limited to a small segment of progressive farmers with a high level of existing income, even if the investment itself would be of low risk and considerably increase the net earnings of the farm household.

Investment Term Loans

4.58 Generally, however, investment credit should allow farmers to base the credit repayment at least partly on the expected incremental income generated by the investment. In this case, term loans enhance the possibilities of farmers with limited self–finance capacity to carry out lumpy or long–gestating investments. This constitutes a major qualitative difference with consumption term loans. Such an approach might be easier to apply for investments which would normally result in higher cash income in the short term, such as purchase of livestock or irrigation pumps.

4.59 Most lenders base their loan appraisal both on the existing and the incremental cash–flow. The appraisal of investments, including the projection of incremental cash–flow, is more risky and requires specific skills of loan officers, credit committees and branch managers. Investments in staff training and improvement of appraisal and approval procedures are necessary. It is important to base the estimated incremental cash–flow on conservative assumptions. More experienced institutions use more comprehensive loan appraisal and base loan repayment to a larger extent on the incremental cash–flow, as the loan amounts increase.

4.60 It is important to maintain the “gearing ratio” of farmers at sustainable levels. Most case study institutions demand that farmers contribute 25–30 percent of the investment costs. Equity participation also shows commitment of the farmer and reduces moral hazard risks. Specific targeted–term savings products might be developed for farmers who are not able to provide sufficient equity. A savings plan can also be linked to access to lower interest rates for a loan, reflecting the lower risk (savings–cum–loan products). In this way, the borrower gets used to making periodic payments and the lender has the opportunity to monitor the farmer’s ability to make such payments.

4.61 Most case study institutions appraise term loans on a case–by–case basis. As this implies considerable cost, the degree of sophistication of individual loan appraisals has to be carefully balanced with the benefits in terms of better risk assessment. A common way to achieve this is to use simple appraisal methods for small loans and more comprehensive appraisal methods as the loan amount increases²².

4.62 Standardised farm or enterprise models as tools for loan appraisal should only be used as guidelines. The higher costs of a tailor–made loan appraisal and adjustment of the repayment schedule to the individual farm household cash–flow often pays off through better performance of the borrower. Amongst the case study institutions, only MCRB uses standardised appraisal techniques for specific types of investment – a practice widely used by most former agricultural development banks. These schemes have been developed based on extensive knowledge of local production and marketing conditions accumulated over several decades.

4.63 The assessment of assets and liabilities is a difficult exercise in rural areas and is plagued by moral hazard problems. In some cases, the level of indebtedness with other financial institutions can be assessed through credit bureaux or informal information exchange. This is risky, however, especially in situations where competition is increasing and new institutions enter the market. In addition, farmers are normally indebted to informal lenders such as traders, and this information is difficult to gather. Lack of formalised ownership titles and registries for real–estate or mobile assets further increases uncertainty for the lender. Measures described above, such as using joint liability groups, delegated agents or guarantors can compensate to a certain extent and might be used for smaller term loans to proven borrowers. However, for larger term loans and loans to first–time borrowers, a mortgage remains an absolute requirement.

VII. Interest Rates

The Level of Interest Rates

4.64 The interest rate charged should cover all costs, including costs of funds, administrative costs and a provision for loan losses. Experience in micro–finance demonstrates that:

- farmers are ready to pay cost–covering market interest rates, if they have profitable investment opportunities and consider the lender efficient;

²² For example, BAAC uses a simple cash–flow analysis for small term–loans below B500,000 (around US\$12,000). For loans between B500,000 and B1m (US\$12,000 to US\$24,000) a more comprehensive cash–flow analysis is carried out accompanied by a feasibility study. For larger term–loans above B1m (above US\$24,000) additional indicators are calculated (NPV, IRR and B/C) and a sensitivity analysis is also carried out.

- the calculation of interest rates should be made transparent to the farmers, and not include high hidden costs.

4.65 However, the interest rate impacts directly on the financial costs of term loans and therefore the viability of many investments. There is a fundamental difference between micro-finance and term finance with regard to interest rates.

4.66 Micro-finance institutions often charge interest rates of 2 to 3 percent per month or even more (especially if compulsory savings and other requirements are taken into account). These rates are mainly a product of high transaction costs and risks in rural financial intermediation. Loan administration costs are fixed, irrespective of the loan size and have a high impact on the cost of providing small and micro loans. In addition, visiting scattered clients in rural areas with poor road networks adds substantial costs. On the other hand, many small-scale rural economic activities like petty trading or home industries produce attractive profits, with a quick turnover of funds. They require small loan amounts and generate a steady cash-flow, which allows repayment in frequent and small instalments. Accordingly they can sustain high-interest rates and still be profitable. The fundamental principle of micro-finance programmes, i.e., that small borrowers value reliable and convenient access to loans higher than low-interest rates, is undoubtedly true for these kinds of activities and clients.

4.67 By contrast, few agricultural activities display these features. Due to their seasonal nature and gestation periods, they require larger loan amounts to be repaid over longer time periods. Therefore, high interest rates have a big impact on the profitability of farm enterprises, especially if longer term investments such as tree crops are concerned. This argument has been used in the past to justify the provision of such loans on subsidised terms.

4.68 Even without subsidies, there might be some scope to offer term loans at lower interest rates than is the case for short-term loans. There are economies of scale in appraising and administering larger amounts and only one appraisal is required for a considerable period of time. Though the appraisal might be more sophisticated, it is certainly less costly to appraise and administer one term loan than of a huge number of micro-loans. The higher risks (real or perceived) can only partly be internalised by increasing the interest rate, because of problems related to adverse selection²³. Interest rates that are very high may undermine the profitability of term investments; attract high-risk clients and thereby increase the credit risk.

4.69 Larger and well-managed institutions with a developmental orientation (e.g. BAAC, Land Bank of Philippines), cross-subsidise interest rates for term loans from other, more profitable activities.

The Structure of Interest Rates

4.70 The financial viability of an investment can be assessed more easily if the financial costs can be calculated based on a fixed interest rate for the term loan. The use of fixed interest rates transfers the risk of changing conditions in the financial market to the financial institution, unless the latter can count on long-term funds at fixed interest rates.

²³ If lenders raise the interest rate to cover their costs, this may rule out less risky projects with lower profits leaving the lender with a portfolio of high risk high profit projects (ref. Stiglitz).

4.71 Indeed, although variable rates for term loans are becoming more common in the developed world, none of the case study institutions offered variable interest rates²⁴. This may change in the future. As clients become more sophisticated in financial business dealings they may seek to negotiate variable borrowing rates, possibly within certain upper and lower limits²⁵.

VIII. Structuring Loan Repayments

4.72 The borrower's capacity to repay term loans depends on the extent to which the schedule of loan repayments is adjusted to the cash-flow of the farm household and the cash-flow generated by the investments. Other important variables for structuring the repayment are the amount of capital required in relation to the annual net income and the length of the gestation period.

4.73 Most lenders limit the loan repayments to a maximum of 30 percent of the farmer's annual income. Borrowers often prefer longer maturities and grace periods, even though this may lead to higher overall lending costs, since such arrangements fit in more easily with their cash-flows. For lenders, however, long maturities create higher risks, especially in terms of moral hazard of the borrower, asset/liability management and generally increased uncertainty.

4.74 Concerning the frequency of instalments, a compromise has to be found between the requirements of the lender and the seasonality of agriculture-related activities. Micro-finance institutions have shown that frequent payments in small instalments are a strong tool for maintaining contact with the borrowers and controlling moral hazard risks. Such an approach might be applicable for certain types of investments such as dairy cows, tea, or farm machinery and transport equipment, which create a steady cash-flow, or if farmers have additional counter cyclical sources of income, which can be used for loan repayments. However, farm households which depend to a large degree on seasonable income require more flexible treatment. Finally, the high transactions costs for borrowers must be considered, especially in rural areas when repayments at the financial institution itself involve travelling long distances.

4.75 Most of the case study institutions show a high degree of flexibility in adjusting the frequency and amounts of repayment instalments to the particular requirements of the individual borrower. Several offer the option to vary the amounts and periods of the payment instalments according to the cash-flow throughout the year. Repayment can be made every 2, 3, 4 or 6 months. Different instalments may apply in cases where there are a main and a second harvest, or certain periods with increased household expenditures such as payment of school fees. Generally, the borrower has the option to prepay instalments, thereby reducing his total financial costs. Thus, the ability to adapt the structure of repayments to the cash-flow conditions of individual borrowers is a key factor for successful term lending to small farmers.

4.76 A particular problem is the financing of agricultural-term investments with long gestation periods. This is a feature of larger investments requiring a considerable reorganisation of the farm, and long-gestating crops such as rubber or coconuts. Long-term loans with a grace period normally require a stable funding source (e.g. equity) or access to specific long-term refinance facilities. The feasibility of long-term loans with a grace period also depends on the

²⁴ Their ability to offer fixed rates was facilitated by their access to long-term fund at fixed rates, mostly from donors.

²⁵ The increased asset/liability management task for the lender is obvious.

investment being highly profitable. If possible, the grace period should be limited to the principal, whereas the borrower should make interest payments from the beginning. This ensures a minimum level of contact between lender and borrower, thus reducing moral hazard risks. It also considerably reduces the total financing cost, compared with the alternative, i.e. capitalisation of interest during immaturity.

4.77 Only two of the case study institutions (BAAC and MCRB) are able to offer long-term loans (above five years) and grace periods of several years, e.g. for tree crop development. Both are specialised in agricultural lending and have several decades of experience and a long-established client base. In addition they have built up a significant and stable funding base, in the form of member shares and forced deposits in case of MRCB, and bonds, equity, international long-term loans and savings in case of BAAC.

IX. Loan Monitoring and Borrower Supervision

4.78 The larger the size and the longer the term of the loan, the more important are frequent contacts with and supervision of the borrower to control the risk of loan arrears. Supervision should ensure that the disbursed loan is used for the purpose stated in the loan contract. This is particularly important if repayment is based on the projected cash-flow generated by the investment. It is also an important tool to enable loan officers to determine if any eventual failure of the investment is attributable to external factors and outside the control of the borrower (e.g. due to climatic factors or natural disasters), or to mismanagement and diversion of loan funds. Contact with the borrower should be frequent. A visit just prior to harvest to estimate probable yields is of particular importance.

4.79 Needless to say, frequent supervision is costly and time-consuming, especially in sparsely populated rural areas. Different measures have been developed by the case study financial institutions to reduce these costs:

- disbursement in kind, should be encouraged to minimise the risks of diversion of funds. Even experienced borrowers might be tempted by the sudden availability of a large amount in cash, or might come under heavy pressure from friends and relatives. After the loan applicant has identified a particular asset (e.g. a tractor or pump) the loan should be disbursed directly to the supplier. In the case of tree crop development, seedlings and fertilizers can be provided in-kind, leaving only a cash component for requirements of seasonal hiring of labour. Disbursements are made in several instalments as the project investment progresses.
- efficient planning of travel schedules of loan officers by combining loan appraisal with loan supervision and other tasks in the same region;
- social collateral, such as joint liability groups and personal guarantors, exerts strong peer pressure for repayment and transfers part of the supervision to the group;
- down-payments: relevant down-payments increase the stake of the borrower in the financial success of the investment;

- frequent repayment instalments of at least interest ensure regular contact between the lender and borrower;
- collaboration with equipment suppliers: in the case of farm machinery and irrigation pumps, special arrangements with equipment suppliers can provide training, technical assistance and maintenance and repair services. The financial institutions can be informed in time, should problems affecting repayments arise;
- partial interest rate rebates for timely repayments and charging of penalty rates in cases of default are common tools to influence the repayment behaviour of borrowers.

4.80 Loan follow-up should be based on accurate and timely monitoring of loan accounts. This requires the existence of good records and preferably a banking software system which produces automatic reports of loan due dates and past due loans and provides management with regular and updated information. If the measures listed above are in place, borrower supervision through field visits might be reduced to problem accounts to save costs (e.g. Caja Los Andes). Frequent loan monitoring is a pre-requisite for portfolio management, taking into account the performance of specific types of loans according to loan purpose, terms or classes of borrowers. Apart from BAAC, none of the case study institutions have banking software which permits specific monitoring and analysis of agricultural term loans.

X. Dealing with Loan Default

4.81 Most of the case study institutions apply a zero-tolerance policy for loan overdues and arrears. This implies stringent loan recovery, even though the reasons for default or late payments may lie outside the responsibility of the borrower. At first sight this policy seems reasonable in the light of the “culture of non-repayment” which is prevalent in many rural areas. Any loan rescheduling may provide the wrong signals to borrowers, further undermining the repayment culture. Lenders must show their ability and willingness to enforce loan repayment in case of default. As the case studies from India and Bolivia show, this is particularly important for new institutions which diversify into agricultural finance.

4.82 However, the high exposure of agriculture to external risks which are beyond the responsibility of the borrower calls for a more differentiated treatment of loan arrears. Defaults due to droughts, floods and other natural calamities, as well as unexpected price fluctuations, may justify loan rescheduling. A blind application of a zero tolerance policy might not only be inappropriate, but also costly for the lender, because of the transaction costs and delays involved in executing security interests. Successful lenders deal more flexibly with such short-term defaults if the loan officer is convinced of the borrower’s willingness to repay as soon as possible²⁶.

4.83 However, in some cases such as in Bolivia, the regulatory framework for classification of past-due loans is not adapted to these specific conditions in rural areas. In this

²⁶ The key is to distinguish cases of wilful default from those outside the control of the borrower. This requires frequent contact with the borrowers as well as specific local knowledge on the part of the loan officers. An important indicator of the borrower’s willingness to repay is if the latter approaches the financial institution before the payment falls due, asking for rescheduling.

case, flexibility implies high costs for the regulated financial institutions due to the specific requirements of loan-loss provisioning (see Chapter 6)

4.84 Among the case study institutions BAAC has the most borrower-friendly policy of treating loan defaults. If the reasons for default fall outside the control of the borrower, payment of the due amount is postponed. Moreover, loans are only completely written off after ten years. During the past decade, this policy has resulted in a nearly complete recovery of BAAC's past-due loans up until 1997. This is because borrowers have had to repay earlier loans in order to apply for new ones. This was also possible because of the effectiveness of joint liability groups in controlling moral hazard risks, the long-established relationship between borrowers and loan officers and the position of BAAC as the sole formal lender providing larger amounts to farmers on terms which were geared to their needs.

4.85 It is important for banks to be seen as serious concerning the possibility of foreclosure. However, within the context of a generally strict policy of loan recovery, most case study institutions consider collateral foreclosure as a last resort. Apart from the legal and institutional difficulties in foreclosing on collateral, there is a preference rather for establishing a longstanding and positive relationship with the client. There is much reliance on the borrower's interest in maintaining his good reputation, both in the community and with the financial institution. Different measures are used to enforce this type of borrower behaviour, such as joint liability groups, personal guarantors, co-signing of contracts, etc. Moral pressure is exerted by publishing the names of defaulting borrowers, or announcing their names on the local radio network.

4.86 Some financial institutions try to reduce the borrower level risk by encouraging diversification and offering different financial services, including savings (RBP and MCRB). The importance of complementary measures to reduce external risks through ancillary actions, such as investments in irrigation and other infrastructure or in supporting the establishment of insurance schemes, for encouraging term-lending has to be highlighted. This would contribute to improving the ability of financial institutions to appraise term-loans and deal adequately with defaults.

D. ISSUES RELATED TO THE MANAGEMENT OF FINANCIAL INSTITUTIONS

I. Decentralised Decision-Making and Staff Incentives

4.87 Decentralisation of loan approval decisions speeds up approval procedures and makes a financial institution more responsive to client needs. This is particularly important for seasonal activities like agriculture, where loan performance depends partly on the timely disbursement of the requested loan. However, this has to be balanced with the specific risks of larger and longer term loans, the implications for managing the overall loan portfolio and managing liquidity risks. As a compromise, loan ceilings are often established for the different decision levels in the institution.

4.88 Decentralisation of loan authority can be combined with the use of staff remuneration incentive systems. BAAC in Thailand uses an incentive scheme based on the annual performance (number and size of disbursed loans and loan portfolio quality) at branch level. Caja Los Andes in Bolivia has extended such a system to individual loan officers whose salaries depend partly on

loan performance. This provides them with incentives for carefully screening borrowers and loan applications, and strict loan follow-up and recovery.

II. Portfolio Risk Management

4.89 The previous section dealt with measures to manage risks associated with individual borrowers. However, as outlined in the Conceptual Framework, there are a number of so-called “industry risks” which affect the whole agricultural sector or certain sub-sectors. These co-variant risks include prices for inputs or agricultural produce, or the incidence of certain pests and diseases which affect all producers simultaneously.

4.90 Co-variant risks can also affect different economic sectors simultaneously in a certain region, e.g. weather related hazards such as floods, droughts. Moreover, due to the close relationship between agricultural and non-agricultural activities, agriculture-related risks impact the whole rural economy in varying degrees.

4.91 Portfolio risk is the degree of default risk associated with a bank’s total loan portfolio, composed of a mix of loans to different sectors. Apart from striving towards an optimum portfolio structure in terms of risk-versus-return relationship for the individual loans, a bank management must pay attention to the industry mix in its portfolio. There is a trade-off between risk and profitability. Financial institutions which only seek to minimise portfolio risks and are only engaged in low risk – low return activities, will only make low profits and may only be able to survive in a non-competitive environment. It is therefore necessary to engage to a certain degree in higher risk activities. The overall risk can be balanced through reducing co-variant risks. This can be done through diversification of the loan portfolio across economic sectors, regions and client categories. A more sophisticated analysis would use statistical data and methods on different industry risks and their co-variances. Management would establish certain maximum ratios. A weakness of former agricultural development banks was the excessive concentration of their portfolios on agriculture.

4.92 The possibilities to manage portfolio risks vary between different financial institutions. Diversification might be easier for larger financial institutions which can build branches in urban and rural areas and diversify both their assets as well as their liabilities. This highlights the potential for reforming agricultural development banks, which have a nationwide coverage. Some of them even engage in commercial banking and investment banking and can use the returns to cross-subsidise their agricultural lending.

For smaller institutions, there might be a trade-off between specialisation and diversification. As highlighted above, agricultural-term finance requires considerable initial investment in matters such as staff training and development of a lending technology. These investments need a certain minimum volume of lending to break even. Access to re-finance facilities from Central Bank, capital market or apex institutions can compensate for limited size, if they allow lenders to access funds in case of major external shocks affecting their agricultural loan portfolio. The building of federations or networks with central liquidity facilities could help smaller rural financial institutions to cope with co-variant risks.

5. ALTERNATIVE METHODS FOR TERM FINANCE

5.1 This chapter looks at alternative ways to finance farm related term investments, based on literature and case study examples. It includes leasing, equity finance and interlinked transactions. In the last-named case it discusses the role of non-financial institutions in the provision of term finance.

A. LEASING

I. Basic Principle of Leasing

5.2 A lease is a transaction in which an owner of a productive asset (the lessor) allows another party (the lessee) to use an asset for a predefined period of time against a rent (lease payment). The lease payment is calculated so as to cover all costs incurred by the lessor, including depreciation, interest on capital invested, insurance, administrative costs and profit margin. During the lease period, the lessee is responsible for all operational costs including the maintenance and repairs of the asset. Both mobile assets (e.g. farm machinery, animals such as draught and dairy cattle) and immobile assets (e.g. land, buildings) can be leased.

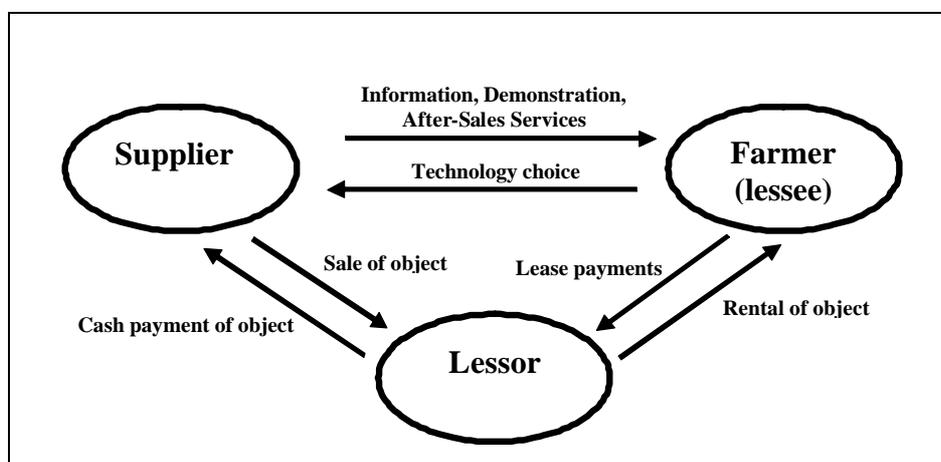
5.3 The key feature of leasing is the separation of the legal ownership of the asset from its economic use. The leased asset is assumed to generate the main source of income for the lease payment. It serves at the same time as security for the contract, eliminating or reducing the need for collateral.

II. Main Types of Leasing

Financial or Full Payment Lease

5.4 The lessor buys an asset chosen by the lessee and hands it over to the latter for use, while retaining the ownership title. At the end of the agreed lease period the lessee has the option of purchasing the asset at the residual value stated in the lease contract.

Figure 2: Illustration of how a financial lease works



Source: Based on Dupleich, 2000.

5.5 Alternatively, the lessee can return the asset to the lessor and, perhaps, typically, eventually engage in a new lease contract for another asset. At least in principle, though, no additional collateral is required, although normally the lessee has to make a considerable down-payment or deposit at the beginning of the contract.

Box 11: ANED Financial Lease for Farm Equipment

ANED, a micro-finance NGO in Bolivia, introduced financial leases in 1997 for financing farm equipment, mainly tractors and irrigation pumps. The equipment selected by the farmers is then bought by ANED and handed over to the farmer (lessee) for an agreed period. The lease contract is registered, and specifies the main conditions, such as the lease period, residual value, purchase option and the amount and frequency of lease payments. The lease period normally amounts to two thirds of the asset's economic life (to protect against the risks of accelerated depreciation), during which time the lessee meets all operational and maintenance costs and makes regular lease payments. Following the lease period, the lessee can opt to purchase the item at its residual value (normally 1–5 percent of the purchase price).

Hire–Purchase

5.6 This is a different modality of lease. The difference is that the lessee assumes increasing ownership of the asset with each payment made. The down-payment is regarded as the first instalment towards asset purchase. At the end of the lease period, the ownership of the asset is automatically transferred to the lessee (Mutesasira, *et al.*, 2001).

Operational Lease

5.7 An operational lease does not involve transferring an asset's ownership. Normally, the asset is rented for a period much shorter than its useful life (typically, for one production period), to a lessee. It is therefore more a type of rental, rather than an asset financing mechanism.

5.8 An operational lease is less attractive for both lessee and lessor. Farmers and micro-entrepreneurs generally have a high preference for owning an asset which provides more flexibility and control over the business and constitutes in-kind savings, which can eventually be sold or pledged. The incentives to properly maintain the asset are lower than in the case of a financial lease (Mutesasira, *et al.*). Therefore, the provision of hiring services might be more viable than operational leasing.

Leaseback or Retro-Leasing

5.9 A further modality is Leaseback or Retro Leasing, a type of pawning (see Box 12 below). This modality can be used for working and investment capital finance. Key advantages are the potential to circumvent deficiencies in the legal and institutional framework regarding conventional collateral. However, it requires the lessee to possess ownership title to the asset and for the financial institutions to have sufficient long-term funds.

5.10 The rest of this chapter will deal with the financial lease, which is the most widely-used leasing modality for farmers.

Box 12: Retro-Leasing

ANED also offers this product, which enables the client to liquefy a specific asset (e.g. land or equipment) by selling it to ANED for an amount agreed on in the leaseback contract. The client can then use this money to make productive investments. The leaseback contract specifies leasing rates and the date when a client has the option to buy back the item, thereby determining the term of the arrangement. This leasing method is still very much at an experimental stage, but could be used to finance working capital as well as larger assets such as farm buildings or tree crops. However, the scope for this mechanism has been reduced by the need for a registered title, and the lack of sufficient funds to finance large-scale purchase of farmers' rural assets. In Bolivia, leaseback constitutes an alternative to conventional mortgaging, since legal restrictions on the sale of small land plots do not apply, thereby allowing even small farmers to access lease finance for investments. The financial institution benefits from increased security and reduced transaction costs, should foreclosure become necessary.

III. The Main Advantage of Leasing

5.11 The main advantage of leasing compared to medium-term lending is the elimination or reduction of collateral requirements, because the leased equipment itself stands as security. As the lessor remains the legal owner of the asset, repossession is easier, since it does not normally require legal action. This avoids lengthy and costly court procedures. In addition, it saves transaction costs for both lessor and lessee related to creating and performing security interest through registration of assets, etc. Obtaining a lease tends to be less cumbersome and faster than obtaining a loan.

Box 13: Collateral Foreclosure Problems

In Bolivia, the legal procedures to foreclose on collateral take an average 269 days, though according to the law they should be completed within 8 days. If the client refuses the order, the average increases to 670 days (Fleissig, 1994, cit. in Dupleich, 2000). This clearly affects the practical utility of collateral and, as a consequence, lenders restrict collateral-based lending.

In the case of leasing, repossession can be done immediately through the police. If the lessee sells the asset to a third party, this is regarded a criminal act and the lessee runs the risk of prosecution and jail.

5.12 In addition, the lessor has greater control over the disbursement of funds, avoiding the risk of diversion. The possibility of becoming owner of an asset also provides a strong incentive for the lessee to make timely payments. Finally, there might be tax advantages, e.g. related to the fiscal depreciation of the asset. However, as will be discussed below, not all these theoretical advantages materialise under developing country conditions. The relative advantages of leasing depend on the legal and tax environment of leasing compared with term loans, as well as on the maturity of the financial institutions involved.

IV. Providers of Leasing Services

5.13 Depending on the legal and regulatory environment, leasing can be provided by banks, non-bank financial institutions such as leasing companies, and other financial institutions. It can also be used by equipment providers as an alternative to supplier credit. Often, banks or equipment suppliers create subsidiary companies specialised in leasing. Different institutions have particular strengths and weaknesses in the provision of leasing to farmers and rural micro entrepreneurs:

- (i) *Non-deposit-taking MFIs (NGOs)* can build on an existing pool of clients, are close to the target market and might include some innovative micro-finance features in their leasing technology (e.g. the use of joint liability groups). Unlike leasing companies, they can also offer complementary working capital loans. They may also have easier access to concessionary funds, which are important for the viability of leasing, especially in its experimental stage. On the negative side is their lack of skills for managing a lease portfolio and appraising agricultural investments. Their funding sources are often narrow, characterised by a high dependency on donor funds.
- (ii) *Deposit-taking institutions* such as banks or mutuals can design savings-cum-lease products, enabling farmers to save the required down payment. Mutuals like CECAM can combine the advantages of MFIs and deposit taking institutions. However, the scope for using deposits for financing a lease portfolio is limited, and requires considerable asset/liability management skills.
- (iii) *Commercial banks and leasing companies* have better access to a broader range of funding sources, although at commercial rates. Leasing companies, in particular, have specialised technical and financial appraisal skills and an efficient MIS. Their main constraints are their unfamiliarity with the farm sector, and a lack of skill in economically managing moral hazard risks and transaction costs.

V. Leasing Experience in Developing Countries

5.14 As opposed to Europe or North America, leasing is not yet fully developed as a financial instrument for financing equipment in the small farm and SME sector in developing countries, despite its potential advantages. In most developing countries, leasing is only available for medium and large enterprises in the formal sector. Many of the reasons for this are the same ones similarly limiting medium-term lending: a) high risks and transaction costs in dealing with small clients, especially in a rural context; b) limited access to long-term funding sources at a reasonable cost; and c) lack of awareness of the technology and specific skills to adapt it to the requirements of the target market.

5.15 Since the 1990s, some micro-finance institutions have started to develop leasing products for small and micro enterprises. Most of these institutions target urban and non-agricultural clients. These examples include Orient Leasing (Pakistan), Grameen Leasing (Bangladesh), Selfina (Tanzania) and Supreme Furnishers (Uganda and Tanzania).

5.16 Only three examples of institutions could be identified which have developed leasing products for agriculture. These are ANED (case study), CECAM and the HIPPO Foundation/GIE Hari Goumo (see Box 15). CECAM is a mutualist network in Madagascar, which introduced leasing in 1993 to finance small farm machinery and animals (see Box 15 or the case study). The fact that leasing has not been explored more widely by financial institutions in developing countries for financing farm equipment might in part be due to problems which will be discussed below.

Box 14: Operational Lease of Irrigation Pumps in Mali – Lessons Learned

Leasing of irrigation equipment is not well-developed in Africa. In fact, the only African irrigation leasing programme of which the author of this document is aware is a pilot programme operated by the *Groupement d'Intérêt Économique* Hari Goumo in Timbuktu, Mali. This programme was started with the help of the Belgian NGO “*Îles de Paix*”. A number of European motor pumps costing approximately US\$6,700 each were brought in, with donors subsidizing 50% of the cost, the balance becoming loans to be repaid by the GIE Hari Goumo. The latter, in turn, rented out the pumps at the rate of about US\$670 per season. *Îles de Paix* had proposed to rent the pumps by the hour, but those renting them quickly objected, preferring a flat fee for the season. The pilot project eventually failed, for the following reasons:

- The European motor pumps were not economical in the African environment. They were too expensive to ever be profitable. One of GIE Hari Goumo’s partners, the HIPPO Foundation of the Netherlands, has shown, that essentially identical pumps can be purchased from India or China for as little as a third of the cost of European pumps. If these were to be used, the use of power pumps might well become a profitable venture. Part of the problem here was that pumps rated to last 10 years in Europe will be lucky to last half that long in Africa, but the rent was based on a ten year life.
- Lessees tended to over-use their pumps, which caused them to break down very quickly. The lessor had no system to monitor the proper or improper use of rented equipment.
- Similarly, farmers did not properly maintain their power pumps, and used cheap, dirty oil.
- Lessees were expected to pay half the rent in advance, and half at harvest, but most failed to pay the last half at the end of the season.
- When, as they often did, pumps broke down, backup loaned pumps were not available for farmers to use while their own pump was being repaired. This alone caused many rice farms to fail utterly.

The members of the GIE Hari Goumo have recognized all these errors and problems, and are seeking funding for a second attempt, this time including a number of measures to overcome difficulties encountered in the initial efforts at motorized irrigation. Measures which the GIE Hari Goumo proposes to make leasing of motor pumps more of a viable approach include the following:

- Creation of one or more private structures (NGOs or for-profit companies) specialized in the rental of a variety of power pumps, so that the user obtains a pump appropriate for the size of his/her farm.
- Assistance (material, financial and technical) by lending institutions and NGOs to create the necessary support structures, including training and parts/service.
- Standardize on a single brand of power pump, with a range of sizes within this model.
- Standardisation of lease rates among all lessees of power pumps, with insistence on advance lease payments.

Although the Timbuktu area has a considerable history of using power pumps, going way back to colonial times, this case study shows many of the difficulties and scope for improvement before leasing of this type of equipment can be recommended for widespread adoption in Africa.

Source: Arby, D., pp. 8–11.

Features of leasing markets in selected developing countries

- **In Uganda and Tanzania**

- Leasing companies are concentrating on small and medium enterprises having assets in excess of US\$2,500.
- More than half of the assets in the transport sector and the education, information and communications technology sectors (e.g. Internet cafés in Dar-es-Salaam), are leased.

- Leasing companies are reluctant to finance agricultural equipment because of poor maintenance and cheap labour. Nevertheless, some leasing of spraying equipment, hand tools, tractors, trucks, power generators, etc., does occur.
 - Some leases are also taken out for food processing in the Micro (< US\$2,500) and Small US\$2,500 – US\$50,000) enterprise sectors. Juice bars, juicing machines, fridges/coolers, honey harvesting gear, canning and bottling equipment (e.g., for milk), etc. (Mutesasira, *et al.*, 2001).
- **In Bolivia**
 - A leasing company is a subsidiary of a bank (BISA Leasing).
 - Three commercial banks are occasionally involved in leasing. One MFI (ANED) offers leasing (BISA, 2001).

VI. Basic Issues of the Financing Technology: How to Make Leasing Successful

5.17 Due to the absence of collateral and an appraisal which is mainly based on the cash-flow created by the leased assets, careful assessment of lessee and assets are crucial for successful leasing. Moreover, the need for supervision and monitoring is higher than in case of loans. This section summarised issues and approaches used by the case studies.

Selection of Clients

5.18 The most important selection criteria are the *experience of the client* and his or her *skills in handling the asset*.

Most clients of CECAM already had some equipment or animals and use the lease to upgrade their equipment or increase their number of animals.

ANED's clients for tractor leases have prior work experience as tractor operators. Some of them have been trained by a dairy development project funded by the Danish government. The farmers who leased irrigation pumps have received technical training by NGOs promoting the use of the equipment in the region.

5.19 The *credit history of the client* is also an important criterion.

Some of the lessees of ANED and CECAM were already clients for micro-lending products. In the case of CECAM, the farmer must have been a member of the network for at least 2 months, and must have made the required equity contributions (partie sociale).

5.20 A further criterion is the ability to make a down-payment or deposit.

In the case of ANED, the down payment amounts to 25% of the purchase price of the equipment, to counter the high depreciation of the asset during the first year.

CECAM requires 20% down payment for new equipment, 25% for animals and 40% for used assets, to cover for the higher risks of technical breakdown. In case of animals and used vehicles, additional collateral is required amounting to 50% or 150% of the purchase value respectively.

Lessees in Uganda and Tanzania usually require a deposit instead of a down payment, amounting to 25–30% of the asset value. This amount has to be deposited in a blocked account and is repaid after the lessee has completed his payment obligations. In many cases, additional collateral and guarantees are also required.

5.21 In some cases, farmer groups are used for selecting and supervising clients.

CECAM involved farmer groups in the selection process. The groups have to verify the integrity of the applicant, and the accuracy of the data provided in his application. They also assess the suitability of the equipment chosen by the applicant and supervise its use. In some cases, joint liability is used. This helps to reduce transaction costs and risks. As the network became more confident in the use of leasing, this requirement was relaxed. Individual farmers can now obtain leases without requiring group guarantees.

Selection of Equipment

5.22 The selection of the asset is crucial for success, because it constitutes the main source of payment and the only security of the transaction (if no additional collateral is requested). Lessors prefer to lease equipment which:

- generates a regular income flow;
- can easily be sold on the second-hand market;
- has multiple uses, rather than a single use;
- has a clear title of ownership for ease of repossession and liquidation (Mutesasira, *et al.*, 2001).

5.23 ANED has financed farm machinery and tools, mainly tractors and motorised irrigation pumps, as well as solar energy panels. CECAM has financed draft animals and equipment (ploughs, harrows), small mills and presses, small motorised equipment and dairy cows.

5.24 **New versus used equipment:** Most lessors prefer new and more expensive equipment, which still has a warranty and is less prone to technical failure. However, this translates into high financial costs for the lessee both in term of lease payments and the initial down-payment required. Farmers and micro entrepreneurs often prefer used equipment, which is much cheaper but still useful. However, from the lessor's point of view, it is difficult to assess the quality and thus the expected useful life and real value of an older asset. In addition, in rural markets, there are often no titles proving ownership. If the lease cannot be registered, the risk for the lessor increases. Some lessors (e.g. in East Africa and Bolivia) finance used assets, but require some type of additional guarantee.

5.25 **Farmers choose the leased assets:** Another important issue is which party should select the leased asset. According to Micro-Save Africa's study on leasing markets in East Africa (Mutesasira, *et al.*, 2001), lessors always leave the selection of the asset to the client. They argue that this saves transaction costs and ensures that clients are happy with equipment. Otherwise it is feared that the client could blame the lessor if the investment fails.

ANED makes a pre-selection of the equipment through contracts with one major importer (guarantees support services, quality and warranty). The farmer can choose

between two different makes of irrigation pumps and between two different models from each supplier.

CECAM lets the farmer choose. This increases the incentive for payments and the farmer cannot blame CECAM in case of failure. However, the credit officer or the joint liability group has to assess the asset before the lease is endorsed. In the case of leased animals, a veterinarian might also be consulted.

5.26 **Importance of supply chain development:** However, there may be circumstance where the farmer is not aware of the best available choice. This might be due to lack of market information and the unavailability of equipment in rural areas. Another issue concerns the suitability of equipment for smaller producers. Thus, in Bolivia, according to ANED, most farm machinery/equipment which is readily available is mainly suitable for larger farmers who constitute the main effective demand. The lessor should be in a position to appraise the suitability of different models on behalf of its clientele. In addition, the lessor might be in a position to negotiate better conditions including prices, training and after sales services if he can order equipment in bulk.

5.27 These issues highlight the importance of developing an efficient and competitive supply chain for farm assets, both when these are intended for leasing and for medium-term financed investments in general. An efficient and competitive structure of importers, manufacturers, wholesale and retail dealers and repair shops facilitates the choice of the right equipment for particular types of users and uses, and guarantees the availability of spare parts and technical backstopping. It thereby significantly reduces the risks of technical failure. Developing medium-term finance products such as leasing should therefore be accompanied by a comprehensive strategy for mechanisation or irrigation development based on a private sector-driven supply chain. Donors can play an important role in supporting and facilitating such financial and non-financial support services.

Lease Appraisal

5.28 The lease appraisal requires considerable skill, especially for larger and more sophisticated equipment. The loan officer needs technical knowledge about the equipment, as well as a general background in farm economy and related financial flows.

5.29 The appraisal should be based on the incremental income created through the introduction of the equipment in the farming system, but also take into account the existing farm household income. It should also cover incremental working capital requirements. A tractor, for example, requires on average between 100 and 150 percent of its purchase value for repairs and spare parts during its economic life.

Structuring Lease Payments

5.30 All institutions engaged in leasing for farmers and micro-enterprises try to adapt the lease payment schedule as close as possible to the farm household cash-flow. This flexibility includes:

- varying amounts during the year in order to reflect the seasonality of farm household cash-flow;

- higher payments in early years when repairs costs are low, but depreciation of the equipment is high;
- grace period: maximum of six months provided.

5.31 The institutions that use tailor-made lease payment schedules find that this has a very positive impact on the ability of lessees to make regular lease payments.

5.32 **Terms and conditions:** Lease terms are shorter than the economic life of the leased assets. This provides a cushion for the lessor against accelerated depreciation due to inappropriate handling, and provides additional incentives for the lessee to make timely payments, so that the time for the possibility of full ownership is hastened. Lease terms are normally for 3 to 5 years, depending on the asset. Smaller items such as pumps may require shorter terms, such as 2 years, as in the case of ANED. The lease rate is 16 percent of the asset value, per annum. The lessee is not allowed to return the asset before the end of the period agreed in the contract. In the case of CECAM: the term is 3 years, and the leasing rate 30 percent.

Monitoring and Supervision

5.33 As in the case of term lending, a good Management Information System is important to be able to monitor the outstanding lease portfolio and identify problem accounts. Monitoring and follow-up are critical in the leasing industry. This involves frequent visits to the lessee to control the state of the equipment and assure its proper handling and maintenance.

ANED and the East African leasing companies do this through frequent visits by loan officers. CECAM's strategy is to utilise structures of proximity such as members of the local credit committees or joint liability groups for supervision. The latter also exert pressure for timely payment.

Dealing with Default

5.34 Immediate action is important to maintain credibility amongst lessees and to discourage default. If a lease payment is overdue, the loan officer calls or visits the client to examine the reason. If the cause is not within the control of the lessee, a plan for making the outstanding payment is established. Should the client not meet this plan, repossession is initiated.

Neither ANED nor CECAM have had massive problems with default, so far. It has however, been considered necessary to repossess items in some cases, when equipment was not maintained properly, or where it had been sold.

VII. Problems of Leasing

5.35 The main problems encountered in the case studies, both from the lessors' and lessees' perspectives, are summarised in the following table.

Table 2: Leasing Problems Encountered in the Case Studies

<i>From the lessor's perspective</i>	<i>From the lessee's perspective</i>
<ul style="list-style-type: none"> • Moral hazard risk, especially related to the leased asset • High transaction costs in dealing with small clients • Lack of long-term funding sources • Difficulties in selling repossessed assets • Practical problems of repossession, particularly lack of sensitisation of local authorities on legal issues • Inappropriate tax environment 	<ul style="list-style-type: none"> • High down-payment requirements and, in some cases, collateral requirements • Rigorous selection criteria regarding skills and previous experience • Reluctance of lessors to lease low cost technology or used assets • Higher payments (compared to term loans) due to shorter lease periods

Moral Hazard

5.36 For the lessor, the main problem is moral hazard risks, such as the inappropriate handling, damage, loss or sale of the asset by the lessee. These risks can in part be handled through a careful screening and selection of lessee, coupled with close supervision. However, this leads to higher transaction costs which increase the lease rate and therefore makes leasing more costly to the lessee. The use of informal mechanisms such as joint liability groups might be one measure which can be used by RFIs to reduce these costs, especially in the case of smaller leases.

Down-payments, deposits and collateral requirements

5.37 A second important issue, especially for potential lessees, is the sizeable down-payments or compulsory deposits required. For the lessor, they are effective tools for controlling moral hazard, substituting collateral and protecting against the high depreciation of new equipment during the first year. In such circumstances, if the lessee makes his payments on time, the lessor received payments ahead of the projected “normal” depreciation of the asset. Though this measure might be necessary, it constitutes a considerable burden on the lessee, and constrains smaller farmers from seeking and obtaining a lease. This applies even more to the practice in Africa of lessors of demanding additional collateral or guarantors. The particular features and advantages of leasing versus conventional lending are thus reduced. Down payments and compulsory deposits reduce the liquid funds a farmer might need for working capital purposes. However, compared to a term loan borrower, a lessee might still have some collateral for accessing working capital finance.

Box 15: Down-payment and Collateral Requirements – Necessary for the Lessor but a Major Hurdle for the Lessee

In developed countries, one of the main advantages of leasing is that the required down payment is very small (typically less than 5% of the value of the asset). However, evidence of leasing in developing countries shows that large down-payments or deposits are required (20–30%). Leasing companies in East Africa require a deposit of about 30 percent of the value to be refunded after the lessee has completed his lease obligations. This is, however below the requirements of commercial suppliers demanding up to 40% down payment, as in Bolivia. Most leasing companies in East Africa require additional securities such as guarantors and collateral. This is different in the case of ANED, which doesn't require any additional collateral. However, farmers who are unable to make the down-payment may provide collateral instead. CECAM requires the lessee to be guaranteed by members of his/her TLG. Additional collateral is required for some types of leases.

Absence of Suitable Insurance Products

5.38 The availability of insurance against theft or breakdown of the equipment would considerably reduce supervision costs. However any insurer would face moral hazard problems, leading to high premiums. These range between 3–8 percent of the value of the asset in Uganda and Tanzania (Mutesasira, 2001). ANED considers the premiums in Bolivia too high in relation to the real moral hazard problems experienced so far.

5.39 A related issue, which also applies to loans, is a life insurance coverage combined with a lease. Such a practice is used by Orient Leasing in Pakistan, where average leases amount to US\$10,000. This not only reduce risks for the lessor/ lender, but prevents the family being unduly burdened in the event of the client's death.

Problems Related to Repossession

5.40 In some cases repossession has been hampered by ignorance of the relevant law on the part of local authorities, especially courts and police. In other cases, the clients have denied the lessor access to their property, in order to avoid repossession. These issues can be overcome through awareness-raising campaigns about the concept and procedures of leasing, and through appropriate design of lease contracts with regard to repossession.

Tax Environment

5.41 In some countries, the tax laws and regulations discriminate against leasing, effectively increasing its cost. In other cases, tax depreciation benefits cannot be realised by the lessees in the rural or micro-enterprise sector due to informality or low profits. Tax benefits with leases are bound to assist the better-off in the community.

Need for Sensitisation

5.42 There is a clear need to organise better information availability, together with capacity building to mainstream the concept of leasing, not only amongst local farmers and equipment suppliers, but also with local authorities. Lessors have to invest considerable time and resources in explaining to farmers and other potential clients the concept of leasing and the rights and obligations of lessors and lessees

Access to Long-Term Funding Sources

5.43 This is a critical issue for lessors, both for initiating a leasing programme and for scaling it up. The example of ANED in Bolivia and also CECAM in Madagascar indicate the importance of the availability of long-term, cheap resources. The examples and the arguments above show that considerable resources have to be invested in building local capacity, among all actors, to make leasing and hire-purchase work. This justifies an element of subsidy in the resources made available to lessors that have demonstrated their capacity to operate effectively, that are in a position to expand their operations and where liquidity is the only real constraint.

VIII. Performance of Rural Lessors so Far

5.44 Despite the limited experience so far, in the case of ANED, at least, the results in terms of regularity of lease payments is encouraging. Outreach, though impressive in terms of numbers of leases in the case of CECAM, is restricted to a minority of more progressive and better-off clients. The reasons for this have already been discussed above, namely that the selection criteria, down-payment, deposit and collateral requirements limit the depth of outreach towards poorer clients. Breadth of outreach is limited by the lack of sufficient profitable investment opportunities related to the limited capacity of output markets to absorb incremental production.

Box 16: Outreach and Sustainability Indicators from ANED and CECAM

Outreach: CECAM has provided 25,000 leases since 1993, for a total value of FMG20b and FMG5.8b in 2001 (approx. US\$1m). Leasing accounted for around 20% of the total outstanding portfolio. However, only a minority of all borrowers which constitute only 4% of all members have been found to be eligible. ANED has a smaller outreach than CECAM, partly due to the type of equipment (tractors), but also partly due to the relative newness of the programme. There are also indications that the markets for irrigation pumps and tractors in the areas where ANED operates are already satisfied (see case study for details).

Sustainability: ANED and CECAM have achieved lease payment rates above 90%, which is satisfactory in view of the experiences of many term lenders. In the case of CECAM, the payment rate for leasing is even above the average repayment rate of their lending products. However, as mentioned above, both institutions benefited from long-term concessionary loans from donors and, in the case of CECAM, on-going technical assistance to develop the product and train their staff. The relatively high lease payment indicates high transaction costs in appraisal and supervision, and possible operational inefficiencies.

IX. Conclusions

5.45 Leasing is not an easy panacea for the lack of medium-term agricultural asset financing. Though some examples show that leasing can contribute to expand the financial frontier of formal investment finance towards small farmers, it still remains restricted to the “elite”, or better-off farmers with sufficient equity and management experience. Few examples of leasing in developing countries could be identified, especially regarding small farmers and micro entrepreneurs.

5.46 The potential for leasing for financing farm equipment has not yet been fully exploited. It is likely to have the biggest impact in countries where collateral issues are the main constraint for expanding term lending. Leasing, however, needs an enabling legal and institutional environment. The following section suggests some measures aimed at mainstreaming leasing for financing farm assets in developing countries.

X. Measures to Increase Sustainability and Outreach of Leasing

5.47 What can be done to increase outreach? Naturally some of the proposed measures also apply for financing equipment through medium-term loans.

Options for Lessors

- **Partnerships with projects/NGOs:** NGOs and projects can play an important role in making appropriate technology locally available and in training farmers to choose the right equipment and manage it properly. Simple low-tech technology (e.g. treadle pumps) can serve as a stepping stone for small and inexperienced farmers. More progressive farmers could be trained to use animal powered or motorised equipment. NGO's/projects could also train farmers in farm management skills, whereas lessors could provide financial management training. Moreover, savings-based financial institutions, could offer different savings and loan products, helping farmers to gradually save up the required down-payment to become eligible for a lease.
- **Partnerships with equipment suppliers/dealers:** Through partnerships, lessors could negotiate better conditions, especially price discounts due to bulk purchases. They could also seek to arrange warranties, training, and after sales service (repairs, availability of spare parts). Suppliers often have frequent contact with clients due to promotional activities. However, care must be taken to avoid a supply-driven approach. An important cushion would be to share the default risks between lessor and supplier. In this case, suppliers would have an incentive to participate in screening of clients, provide effective training and combine after-sales services with supervision.
- **Strategic alliances between MFIs and leasing companies:** Such a linking strategy would seek to combine the strengths of formal leasing companies with those of MFIs. The former possess specific knowledge and appraisal technique, MIS for portfolio management and better access to funding sources. The latter would contribute local presence, experiences and techniques in dealing with small and informal clients, and thus potential to broaden markets. MFIs may also collect leasing rates on behalf of leasing company as they have on-going contact with their clientele in other financial transactions. Moreover, they can provide additional working capital, if needed. The key, again, is to combine these strengths into suitable arrangements to share risks, costs and profits, and to design contracts providing the right mix of incentives, checks and balances.
- **Innovative savings products:** Designing innovative savings-cum-lease products could help more farmers to accumulate the necessary funds to make the down-payment. For example, CECAM has developed such a product, where an applicant has to make regular deposits (monthly) over a period of at least one year. This serves as a screening device and the farmer thus becomes used to making frequent payments. After having completed his savings plan, and if his application is approved, he gets a lease at a rate of 24 percent, instead of the usual 30.

Options for Donors/Governments

- Create a favourable enabling legal environment.
- Raise awareness and do information campaigns: training of local courts, local authorities, RFIs and other stakeholders.

- Use tax benefits to promote leasing: Many farmers and micro entrepreneurs do not maintain accounts; even if they would, their taxable amount would be so small that any deduction would only result in marginal benefits; if depreciation benefits were given to the lessor, these might be at least partially passed on to the clients in terms of lower interest rates (assuming competitive markets).
- Provide long-term funding sources at concessionary terms, once there is a credible demand for developing a leasing product; financial institutions should put some of their own funds at risk, as well; these measures should be accompanied by technical assistance.
- Supply chain development: market and product information systems, tax benefits for imports, testing of equipment under different local and regional conditions, development of appropriate low-tech technologies sourced and manufactured locally.

B. EQUITY FINANCE AND VENTURE CAPITAL

I. Definition

5.48 Equity finance means provision of external capital to an existing enterprise for investment purposes. As opposed to loans, the investor does not receive a fixed return (such as interest payments), but has a residual claim on the company profits. In case of liquidation, equity, like sub-ordinated loans, can only be recovered after all liabilities related to loans have been serviced. Equity or quasi equity (sub-ordinated loans) create stability for the company and can leverage additional loan finance. Venture capital means the use equity finance for capitalising extremely risky investments such as start-ups, which would not be able to attract traditional bank finance and cannot provide sufficient collateral (see Box 17).

Box 17: Venture Capital Funds (VC)

These are funds created to buy minority shares in SMEs in dynamic sectors with a high growth potential. The purpose is to provide equity for necessary investment which helps the enterprise to grow or develop/introduce a new technology. The investor has at least one seat in the BOD. It provides technical and management assistance (BDS, accounting, taxes, etc.). Once the growth objectives are achieved the venture capital fund gradually divests from the enterprise (exit strategy). Depending on the type of enterprise and the environment, this can be through the selling of shares through the stock exchange, to the majority shareholders/co owners or to third parties. The investor expects a sizeable valuation of the share as return to his capital and management inputs. Expected returns are frequently above 20 percent to compensate for the high risks involved in the business.

5.49 Equity finance/VC can be used to capitalise F.I.s (see Chapter 6) as well as SMEs in developing countries or agro-business companies and plantations. Equity investors in agriculture/agro-business cannot expect rates of return comparable to other sectors. Moreover, in view of the considerable transaction costs involved, equity finance is normally confined to medium to large enterprises, typically plantation agriculture, livestock breeding and fattening, or agro-processing. These transaction costs relate to screening and evaluation of investment opportunities, development of feasibility studies, business plans, exit strategies, and in monitoring and supervision of the management.

II. Advantages and Disadvantages of Venture Capital

5.50 Some principal advantages and disadvantages of venture capital approaches will be discussed. These have to be taken into account when considering the use of adaptations of VCF to finance agricultural term investments.

Table 3: Strengths and Weaknesses of Venture Capital	
Advantages of venture capital	
For the VCF	For the company
<ul style="list-style-type: none"> • High returns (above 20% in Bolivia) • Possibility to diversify portfolio in various sectors • Control of investment through participation in management 	<ul style="list-style-type: none"> • Less risky than bank loans (no collateral, no fixed financial obligations, dividends depending on profits) • Better asset liability structure and possibility to access additional bank finance • Administrative and management support • Improvement of existing or access to new information systems and management procedures
Disadvantages of venture capital	
For the VCF	For the company
<ul style="list-style-type: none"> • High risk, exit not certain • Investment manager needs to familiarise himself completely with management and production of the enterprise, which is extremely time consuming. The number of projects to be managed by one person is limited • Informal character of SMEs and poor management and accounting procedures constrain the analysis of the enterprise and the investment potentials and risks 	<ul style="list-style-type: none"> • The owner loses his management autonomy • New administrative and management methods may imply significant changes, which might require training needs or recruitment of additional staff • External control required by the VCF, might increase the internal bureaucracy • Covenants in the contract may restrict management decisions within an agreed strategy, reducing flexibility to adjust to changing situations

III. Main Providers of Equity Finance

5.51 Providers of venture capital include international development finance institutions like the *International Finance Cooperation* (IFC), *Commonwealth Development Corporation* (CDC) and *Deutsche Entwicklungsgesellschaft* (DEG). CDC has been over many decades one of the major provider of equity finance, combined with loan finance, in developing countries. Its investments comprised mainly plantations and agro-business companies, including public and private shareholders. In some cases, farmers participated as shareholders, e.g. in the Mumias Sugar Plantation in Kenya and in tea factories managed by *Kenya Tea Development Authority* (KTDA). The Kenyan tea sub-sector is an notable example of equity finance operations: KTDA has gradually built-up 45 tea factories processing tea from smallholders. Most of these factories were co-financed by CDC through equity finance and by the World Bank through loan finance. Divestment followed, and, during the reforms in the smallholder tea sub-sector in the 1990s, smallholders gradually bought out KTDA and CDC. All tea factories and KTDA are now 100% owned by tea farmers. Plans exist to register on the Nairobi Stock Exchange and allow farmers to sell their shares to outsiders. CDC's equity finance has been an important catalyst for this development.

5.52 During the 1990s, CDC itself has changed its vision and business orientation from a development bank engaged in equity finance towards a fully fledged venture capitalists, specialised in emerging markets. As a consequence, CDC has divested nearly completely from its agricultural and agro-business portfolio. However, in view of the renewed interest in a semi-commercial approach towards equity finance, some lessons from CDC's experiences will be drawn (see Box 18 below).

Box 18: The Commonwealth Development Corporation's Approach – Major Lessons Learned

Before a major internal re-orientation in the mid 1990s, CDC provided loan and equity finance in plantation agriculture and agro-business and participated in management through expatriate staff. CDC has mainstreamed the Nucleus Estate Outgrower approach, which combines a core plantation and processing facility (nucleus) with a smallholder plantation. In some but not all cases the smallholder area was developed by the nucleus (land clearing, irrigation and drainage, planting of trees, etc.) and the plot eventually transferred through long-term loans or leases to the farmers. This approach proved only viable for crop like sugar cane or oil palm, where a direct link between production and processing exists because of product characteristics (see Chapter 7), so loans can be recovered fairly easy through automatic deductions at factory level.

By adopting a semi-commercial approach, CDC's investments, in most cases, created profitable enterprises, often in remote areas, which contributed considerably to local economic development. CDC management expected the recovery of the capital invested, but only a modest profit margin, in order to maximise outreach and developmental impact. The use of state of the art technology and expatriate management ensured soundness of management and operations. The income of the participating farmers and neighbouring communities benefited in most cases considerably from the investments.

However, the uniform application of technologies and management operations over estate and smallholder areas was not always the best approach. The use of capital intensive technologies and expatriate management resulted in high costs, placing a heavy financial burden on farmers and on the nucleus estate. Farmers, with some training, might have been able to establish plantations or works at much lower costs. Moreover, there are certain trade-offs between the interest of the nucleus, which has to assure stable raw material supply, and the smallholders, which are often interested in income diversification and growing food crops to reduce risks and vulnerability. Finally, by nature, outgrower schemes constitute an unequal partnership. It is difficult to realize the full benefits of participatory ownership and control in a situation in which the weaker parties, i.e. the smallholders, are locked-in through loan financed long-term investments on their farms.

5.53 Most international equity investors have followed this trend, concentrating their portfolio in large companies, mainly outside the agricultural sector. This also applies to national government-owned companies such as the Industrial Development Corporation in South Africa. Oil palm plantations are amongst the few crops with sufficient profitability and economies of scale to attract equity investors. One notable exception to this trend is DEG, which has started to invest in a number of agro-business ventures in various developing countries since the mid-1990s. However, compared with the former CDC-approach, DEG is much more commercially oriented. It reduces its investments to the processing enterprise plus in some cases a plantation, without being directly involved in financing smallholder development. Investments include processing enterprises for oil palm (Indonesia, PNG, Honduras), rubber (Ivory Coast), banana (Ecuador), manioc (Venezuela), canning of beans (Cameroon), and others. According to DEG, the existence of a central processing and marketing outlet triggers autonomous planting of crops, including tree crops, by smallholders, without requiring direct financing through long-term loans.

IV. Renewed Interest in Equity Finance

5.54 There is a renewed interest in using equity finance and venture capital approaches for the financing of SMEs within and outside the agricultural sector. Examples include:

- ACCESS programme of Land Bank Philippines.
- Equity Share Schemes in South Africa.
- PNM²⁷ (Indonesia).
- New Farmers Development (South Africa).
- PROCREDITO (Bolivia).

5.55 Due to the comparatively small size of the enterprises and the high transaction and learning costs, the investors cannot achieve commercial returns above 20 percent. They are, however, expected to divest their capital including a small profit. They could be described as developmentally oriented venture capitalists.

5.56 Some of these funds and programmes have been created for capitalising joint ventures between farmers/workers and commercial investors. The equity investor buys shares on behalf of a target group and then gradually divests by selling the shares to this group (warehousing of shares). In some cases, additional matching grants are available for capitalising shares of farmers/workers. The experience of most of these approaches is too limited to allow meaningful conclusions. However, some examples are discussed in Chapter 8.

C. INTERLINKING CREDIT WITH MARKETING AND THE ROLE OF NON-FINANCIAL INSTITUTIONS AS PROVIDERS OF TERM LOANS

I. Principles

5.57 Non-financial institutions which might be able and interested in providing term finance include equipment suppliers, processors and traders (all of which have business interests in the investments), and projects. In theory, these actors might have comparative advantages compared to financial institutions with regard to reducing risks and transaction costs:

- **Equipment suppliers** might have a strong presence in rural areas and be in contact with farmers in order to sell their products. This allows them to supervise clients more frequently at comparatively low cost, whilst helping to ensure the productivity of the investments through the supply of parts and service.
- **Traders and processors** may be able to deduct loan repayments from the sales proceeds through interlinked transactions. This arrangement reduces transaction costs for loan recovery and default risk, and helps reduce marketing risks.
- **Projects** often provide additional non-financial support services such as training, extension or input supply, which reduce credit risks.

²⁷ *Permodalan Nasional Madani* (National Social Finance Agency).

II. Empirical Evidence

5.58 Very little empirical evidence could be found outside of interlinked transactions (see below). This makes it hard to draw firm conclusions on the potential of equipment suppliers and traders/processors to be significant providers of term finance. Equipment suppliers are either not involved in financing transactions at all, or they only agree to short-term deferred payments. In the few cases where suppliers accept deferred payments over longer period, requirements for collateral and down-payments tend to be at least as restrictive as those applied by financial institutions.

5.59 Traders and agro-business companies also mainly limit their financing activities to in-kind provision of seasonal inputs. Some agro-business companies provide services such as land preparation or transport to farmers, which require capital intensive investments in assets. These companies have better access to term finance, can reap economies of scale and ensure appropriate handling and maintenance of the equipment.

5.60 Some of the reasons for the reluctance to offer term loans or leasing are related to high risks, Assessment of the repayment capacity of farmers, loan administration and collection of payments are new activities for non-financial institutions and few possess the necessary skills, especially if they have to deal with smaller clients. They generally face similar constraints to financial institutions regarding risks and transaction costs of lending to farmers.

5.61 Most of the examples for provision of term finance by such suppliers which could be identified, are not very successful. These examples include:

- A big agro-business firm provided coffee pulpers on credit to groups of small-scale farmers in the Philippines. Poor selection of farmers and inadequate loan design led to high default rates, and the company stopped the programme.
- Equipment dealers in Bolivia were selling farm machinery to medium and large-scale commercial farmers on a deferred payment basis up to a maximum of 5 years. This was possible because they could access a credit line originating from Brazil, which was aimed at supporting exporters of Brazilian farm machinery. After experiencing high default rates, FONDESIF, the apex institution for non-regulated financial institutions, bought the portfolio at risk and sold it to financial institutions including AGROCAPITAL.
- Ghana Oil Palm Development Company (GOPDC) provided term loans to outgrower farmers for the establishment of oil palm plantations. However, a number of small palm oil mills have sprung up around the periphery of their concession. These offer the same buying price or slightly more than GOPDC, and pay immediately in cash. This, and a perceived lack of transparency in loan administration (calculation of deductions) encourages loan default through outside marketing

5.62 A positive example for term lending to small farmers is Umthombo (formerly Financial Aid Fund) of the South African Sugar Association (SASA), as described in the following Box 19:

Box 19: Financial Aid Fund (South Africa) – Evolution of a Financial Services Provider

The Financial Aid Fund (FAF) was established in 1974 by the South African Sugar Association (SASA). The main purpose was to allow mills to expand sugar cane production into areas farmed by black farmers under communal land tenure arrangements. FAF provided a variety of loan products, including a sugar cane establishment loan with terms of up to 8 years. Disbursement was mainly in kind to contractors, and repayment was done through deductions at source by the mills. The monopsony position of the mills and product characteristics of sugarcane (bulkiness and perishability) allowed FAF to provide collateral-free term loans to otherwise unbankable black smallholders on communal land. Mutual benefits: Secure cash income for farmers, mills could expand area of operation on communal land.

In 2000, SASA recognised some of the flaws of the earlier approach, related to its supply driven nature, such as the bias towards loans. Consequently, FAF was restructured and renamed into Umthombo, a Zulu word for fountain. The main features of the restructuring are increased independence of loan appraisals and administration from the sugar mills (increased transparency), and the opening of decentralised offices in growing areas. Umthombo now operates more like a financial institution than a commodity-financing fund. Evidence of this evolution includes the fact that it now offers new financial products, including savings deposit facilities.

III. Main Constraints

5.63 The main weaknesses of non-financial institutions with regard to term lending are poor selection of farmers, high cost of setting up and managing a loan administration and monitoring system, and lack of transparency of account management. In addition, agro-business companies have a narrow perception of farmers as suppliers of a specific raw material, not as complex household/business entities. Farmers are often encouraged to produce as much of the cash crop as possible and are not allowed to use inputs supplied on credit for any other purpose. For some farmers this will result in over-specialisation. Whereas this might be profitable for both parties if prices are high, it can leave farmers vulnerable to price shocks or to losses from pests and diseases attacking the main crop. If they do not have alternative farm or non-farm activities to meet subsistence and immediate cash needs, they are much more likely to default on loans for the main activity.

IV. Interlinked Transactions

5.64 Interlinking credit with marketing is a powerful tool to substitute for conventional loan collateral, especially in scarcely populated areas, as it saves transaction costs in loan collection. It has been widely used for financing inputs by traders, marketing boards, cooperatives and contract farming schemes (see Chapter 4). Its particular importance in Africa, where other forms of collateral are unavailable, has already been emphasized in Chapter 3. However, only in exceptional cases can it completely substitute for conventional collateral in term lending (see Box 19). Moreover, to be effective, it requires a complete monopsony over the output, which has largely disappeared for most crops, with structural adjustment. Even in the case of perishable crops such as palm oil, competition and freeloading are likely to emerge (see Ghana GOPDC example above).

5.65 Further weaknesses of interlinked transactions are related to a tendency towards laxness in loan appraisal procedures, combined with the danger of over-indebtedness, if lenders are too sure about repayments through automatic deductions at source. A negative example is the Kenyan coffee sector. Moreover, default is always possible in agriculture, even in monopsony situations, e.g. through diversion of inputs or produce, or through crop failures. If in-kind

provision of inputs is the only source of credit, farmers tend to divert inputs, and sell them in order to meet other consumptive and productive financial needs.

Role of Projects and Government Departments

5.66 Direct lending by projects should generally be discouraged. Projects do not possess the necessary skills for carefully selecting viable farmers, administering loans and enforcing repayment. This is partly due to the fact that they are viewed by farmers as temporary, reducing the incentive to repayment. This is particularly true if projects only provide term loans for investments and do not provide additional short-term financial services to farmers. Project Management Units (PMUs) should therefore generally have a facilitating rather than an executing role.

5.67 Projects may have a role in areas where no financial institutions exist or their capacity is too weak. Resources should mainly be used to build-up or strengthen financial institutions, as outlined above, and to provide training to farmers, farmer organisations and private sector (e.g. equipment dealers). Direct interventions at the farmer level might only be justified, if term investments are viewed as essential for triggering regional development and the establishment of rural financial institutions. However, instead of term loans, matching grants or other forms of public private partnerships funding should be used.

5.68 Projects might also be suitable vehicles for the provision of assistance to establishing mechanisms such as guarantee funds, insurance, credit bureaux to facilitate the entry of the private sector.

V. The Way Forward

5.69 In summary, and due to the demonstrated weaknesses with the examples studied, the provision of term finance through non-financial institutions should be considered a second-best solution. Tripartite arrangements, e.g. between agro-business companies and financial institutions are more promising. Financial institutions have economies of scale in administering loan accounts and can make use of existing software and MIS. They should also be involved in screening and selection of farmers, the design of loan products and loan appraisal.

5.70 A further advantage of a financial institution is its ability to offer additional financial services such as savings, emergency and consumption loans²⁸. The corporative approach developed by Rural Bank of Panabo in the Philippines, is a good examples for this (See Rural Bank of Panabo case study). It also shows that the efficiency and sustainability of tripartite arrangements, especially in combination with interlinked transactions, can be increased by:

²⁸ However, care should be taken to avoid an over-exposure of farmers to different types of loans. Repayment should not be limited to deductions from sales proceeds of the crop, but the farmer should be allowed to repay in cash to the bank, if he derives income form other sources.

- transparency in management of farmer accounts, especially regarding deductions and outstanding loan balances;
- allowing farmers to acquire shares in the processing enterprise or share in profits.

6. ENHANCING THE ENVIRONMENT FOR TERM LENDING

6.1 This chapter contains a discussion of features of the institutional and policy environments that need to be reformed in many developing countries to facilitate term lending in rural areas. It also discusses some special measures or mechanisms that may be introduced in some locations by financial institutions, governments and donors to help reduce the risks and transaction costs that impede financial institutions from engaging in significant amounts of term lending.

6.2 The first issue discussed is macro-policy concerns, which is followed by a discussion of some of the legal and regulatory issues which are important for term investments in farming. This section includes a discussion on the main legal and institutional constraints for the use of rural assets as collateral. A vital issue then addressed is that of making the necessary long-term funds available for lending, especially when banks are involved. The chapter finishes with an outline of some risk management mechanisms which can be used by investors and lenders, namely, the design and performance of credit guarantee schemes, credit bureaux and insurance.

A. MACRO-POLICY ISSUES²⁹

6.3 One should note the sensitivity of agricultural term investments to the macro-economic environment within which they are made and operate. Macro economic stability and predictability of economic policy raise the confidence of investors and, importantly, reduce the risks inherent in longer term financing. Even if reforms are necessary, sudden changes of economic policies or key macro economic parameters like exchange rates or interest rates should be avoided.

6.4 The level of interest rates is an important determinant for the viability of term loans as financing instruments. However, experience has shown that interest rate ceilings tend to be counterproductive, as they may not allow financial institutions to cover their costs and risks adequately and ensure financial sustainability. Governments may influence the level of interest rates by:

- promoting a competitive financial market through prudential regulation and supervision;
- maintaining low levels of inflation and a realistic exchange rate.

6.5 Policy-induced distortions should be reduced: The urban bias against agriculture, reflected in agricultural price controls, heavy export taxes for agricultural products or an over-valued exchange rate, have a major impact on the profitability of agriculture and the investment climate. High interest rates on government securities might discourage banks from engaging in more risky lending activities.

²⁹ For a more detailed discussion see Coffey, E. (1998) *Agricultural Finance: Getting the Policies Right* AFR No. 2 FAO/GTZ, Rome.

Box 20: Responsibilities of Governments

- To lay down an appropriate financial system development policy, which supports effective financial intermediation, reduces financial transaction costs, increases the access of farmers to financial services, facilitates the use of appropriate loan collateral and develops a proper regulatory and supervisory framework for the different types of financial institutions.
- To provide facilities, in particular for term lending, to selected primary financial intermediaries through apex financial institutions.
- To facilitate the operation of adequate risk management mechanisms such as crop insurance, loan guarantee and deposit insurance schemes, when these are economically justified and can be administered in a cost-effective manner.

(Adapted from FAO/GTZ, AFR No.1 1998)

B. SOME LEGAL AND REGULATORY ISSUES³⁰

6.6 This section is not intended to explore the topic in detail. It serves, rather, to cover some points of particular relevance to term financing of agricultural investments. These include the costs and benefits of regulating and supervising different types of rural financial institutions, and some specific fields of prudential regulation, such as loan loss provisioning, capital adequacy and minimum reserve requirements.

6.7 The main purposes of external prudential regulation and supervision are to protect savers, to assure the sound operation of financial institutions, and to protect the stability and efficiency of the financial system as a whole. Agricultural finance, particularly through longer term loans, is a costly and risky area of banking. Prudential regulation and supervision has to assure that individual financial institutions manage these risks properly and that their activities do not undermine the confidence of the public in the financial system. On the other hand, rural and urban financial institutions are operating in different environments, and a regulatory system should take this into account in order to avoid discouraging certain rural banking activities.

Box 21: Principles of Prudential Regulation

- **Competitive neutrality** – the creation and maintenance of a level playing field;
- **Efficiency**: allocative, operational and dynamic (the ability to adapt to changing opportunities and circumstances);
- **Subsidiarity and incentive structures** – a complementary mix of regulatory mechanisms is essential, since scrutiny from just one side will be either inadequate or overly expensive;
- **Cost-benefit analysis** – regulation has a cost, and over-regulation can stifle innovation; balance is required;
- **Dynamic perspective and financial deepening** – regulatory support in the early stages may be costly in relation to the scale of operations, but it is crucial to sound future development;
- **Government prudential regulation and supervision** – governments should not use regulation to help achieve social goals which might be in conflict with sound institutional development and encouragement of innovation and efficiency.

These principles apply to financial intermediaries regardless of whether their portfolio leans toward short-term or longer term lending. However, given the greater difficulty of the latter, there is even more need for adherence to sound approaches at the level of regulation and supervision.

(Adapted from Fiebig, 2001)

³⁰ For a more complete discussion on this topic see Fiebig, M. (2001) *Prudential Regulation and Supervision for Agricultural Finance* AFR N°5 FAO/GTZ.

I. Assessing Benefits and Costs of Regulation

6.8 The main benefit, which may prompt a non-regulated financial institution to become regulated, is the improved access to a wider range of funding sources. Non-regulated financial institutions like NGOs or village banks have a narrow base of mainly local funding sources and are often highly dependent on donor funds, whereas regulated financial institutions are allowed to take deposits and can access government credit lines, central bank refinance facilities and commercial sources of funds. A second benefit is improved operational efficiency, improved professionalism of management, transparency and adherence to prudential norms and standards, which are normally triggered by external supervision.

6.9 However, regulation and supervision have costs, both for the regulatory body and for the financial institution. For the latter, the high costs of conversion into a regulated financial institution increases ongoing costs due to stricter requirements. These include: regular reporting, loan loss provisioning policies, and minimum reserves. From a developmental perspective, there are also important indirect costs, related to the loss of innovation and outreach. As shown by the case studies, many innovations in agricultural lending and term finance have, not surprisingly, been developed by unregulated financial institutions such as NGOs.

6.10 Therefore, the costs and benefits of prudential regulation and supervision have to be assessed and weighed carefully and a “rush to regulate” should be avoided³¹. Regulating small and dispersed institutions such as credit-only MFIs and small, community-based MFIs would result in extremely high costs of supervision and provide only marginal benefits to the stability of the financial system as a whole. It would, on the other hand, stifle an important potential for innovation and outreach. Regulation might become more important for lending institutions which have developed a successful term lending technology and, after having reached a certain scale in their term lending portfolio, need access to a broader range of funding sources to expand their business.

6.11 As a general rule, the external regulatory framework for financial institutions should only be specified once a critical mass of actors has ventured into a new type of financial business, and best practices have been established³². This does not apply to other areas of relevant legislation, which create an enabling environment for term finance by making key financing risks more manageable. These include the legal and institutional framework for the use of different rural assets as collateral, contract enforcement (such as the foreclosure of collateral or the repossession of leased assets), or the tax environment for term financing instruments such as leasing. These issues are discussed elsewhere in this report.

II. Areas of Existing Regulation with Particular Importance to Agricultural Term Finance

Loan Loss Provisioning

6.12 Appropriate loan loss provisioning is important to provide a better idea of a bank’s asset quality and solvency. This is especially important for high-risk assets such as agricultural term loans. However, some special features of rural lenders and the rural economy have to be taken into account in the design of a regulatory framework: e.g., less predictable loan repayments

³¹ See Christen and Rosenberg (2000) for discussion on these regulatory issues.

³² See Fiebig (2001).

in rural areas due to weather-related harvesting delays, irregular transport, etc. The resulting delays in loan repayment do not necessarily indicate a real default (an argument which urban traders cannot put forward), but the provisioning requirements reduce the apparent profitability of financial institutions and may discourage lending to farmers. Therefore, the strict provisioning requirements based on the number of days a loan is overdue, almost universally applied in urban and rural areas, may discriminate against rural and particularly agricultural lending.

6.13 Moreover, the high incidence in agriculture of external shocks such as floods, drought and pests, or temporary price drops, has to be taken into account. As opposed to seasonal finance, where a harvest might be destroyed completely, term loans tend to be more resilient if the financed asset can still be used for future income generation and loan repayments. If the external shocks are temporary and the reason for the default is clearly not related to moral hazard, a certain flexibility on the part of lenders in rescheduling agricultural term loans should not be discouraged by over-rigid provisioning requirements.

6.14 A related issue is the provisioning of unsecured loans. Most jurisdictions have a requirement related to the *amount of loans* which may be granted, as well to the *proportion of unsecured loans* in a loan portfolio. Should these ceilings be exceeded, the amount has to be fully provisioned. Again, laxity is not advocated, especially in case of term loans involving larger amounts. However, a certain flexibility should allow rural lenders to use different and innovative types of collateral and collateral substitutes to a certain extent (as demonstrated by some of the case studies) as long as the repayment performance is satisfactory. The real differences between real estate mortgage and other form of collateral have to be assessed realistically: Even the existence of collateralised rural real estate only provides a degree of protection of the assets of a financial institution, in view of the widespread delays and costs associated with foreclosure. In the case of major co-variant external shocks, selling land might be difficult, or result in heavy losses.

6.15 However, in the long run, term lending can only be expanded if institutional constraints for using rural assets as collateral are removed.

Minimum Reserve Requirements

6.16 Deposit taking institutions are required to maintain a certain amount of their funds liquid, normally as deposits in the central bank or in apex institutions. The main reason is to be able to respond to withdrawal runs and safeguard the liquidity of the financial system, which is particularly important for weak financial institutions operating in poorly-developed capital markets. However, rules which are too rigid and conservative may discourage innovation in liquidity management. The same applies for regulations limiting the use of short-term liabilities for funding longer term assets. These are core functions of financial intermediation and a source of profits for financial institutions. Improved asset/liability management is important to enable financial institutions to provide more term finance without relying solely on long-term external funds. For example, RFI networks that have quick access to central bank advances or that have sound central liquidity facilities, which can quickly advance additional liquidity in the event of runs, may permit some RFIs to at least seasonably violate normal liquidity reserve ratios.

Management and Operational Risks

6.17 For financial institutions mobilising savings deposits, it is vital to develop and sustain measures to safeguard these savings³³. Such measures involve internal control systems and practices within the institution, and external monitoring by regulatory authorities. A further issue which has been prompted by the experience of one of the case study institutions in the Philippines is whether banks should be allowed to make equity investments in companies that they also finance. This is usually covered in each country's Banking Act (some allow it, others do not). Where it is allowed, then a greater level of external supervision is required in order to safeguard the liabilities of the bank.

III. Legal Issues Related to Collateral

6.18 The crucial importance of collateral for expanding term lending has already been discussed in Chapter 4. One fundamental problem, which will be discussed in Chapter 8, is the absence of suitable collateral due to the skewed distribution of land and other assets in many countries. A second issue, which has also been mentioned, relates to the fact that developing countries' laws often limit the types of assets that can be legally offered as collateral. From a different perspective, it can be argued that producers in developing countries where collateral problems have not been resolved are at a comparative disadvantage in world markets compared to producers in countries where similar problems have been overcome.

6.19 Economic problems exist in many developing countries in the key legal provisions concerning security interests in lending (Fleisig, 1995):

- Creation: laws do not permit the inexpensive creation of security interests that are not costly to defend in court.
- Perfection: registries for assets do not exist and, when they do, laws do not permit cheap and easy public access or relatively foolproof means of determining the existence of a security interest.
- Enforcement: laws and legal institutions do not permit the rapid and inexpensive repossession and sale of loan collateral.

Constraints Related to Creation of Charges

6.20 Real estate, primarily land and buildings, is the most acceptable form of collateral for larger, long-term credits, but many problems can complicate its use in securing loans. The creation of charges is often prohibited by land reform laws or by homestead laws and 'exempt property' provisions. Land reform laws often restrict the sale of land until the land has been fully paid, and in some cases even beyond. This is to protect beneficiaries against using their land and also to prevent windfall profits, if grants or subsidized loans have been used in the land transfer process. Homestead laws and exempt property provisions are designed to protect borrowers from losing their residences or livelihoods by protecting some mortgaged property from being seized and liquidated.

³³ See also FAO (1995) *Safeguarding Deposits* AGS, Bulletin 116.

Box 22: Legal Constraints for Using Rural Assets as Collateral in Bolivia

For examples in Bolivia, the law differentiates between the *solar campesino* (small subsistence plot) and the *pequeña explotación agrícola* (small farm). Land classified as *solar campesino* cannot be mortgaged, land classified as *explotación agrícola* can. However, the delineation proves quite problematic in practice due to huge agro-ecological variations across the country. Original titles issued under the land reform are often outdated through inheritance or land sales. This creates an important degree of insecurity for both lenders and borrowers regarding the legal security and enforceability of contracts. Moreover, tools or farm equipment cannot be foreclosed. This limits the scope to offer collateral for farmers, who do not want to mortgage their land or do not possess land titles.

6.21 Such protections can be detrimental to the interests of the poor, as they prevent them from using their small land parcels or other farm assets as collateral or from purchasing small parcels or small pieces of equipment with formal loans. Thus they are forced to rely on other sources of loans, sources that may make smaller loans and may charge higher interest rates, but require little or no physical collateral. This problem may force capital-constrained investors into making less expensive investments with shorter gestation periods. The distribution of economic activities is then tilted in favour of those who can offer the best collateral, preferably urban real estate.

6.22 The absence of any formal titles, like in many parts of SSA, prevents farmers from using assets as collateral. This highlights the importance of crop hypothecation and other collateral substitutes, though their limited suitability for term lending has already been emphasized.

6.23 Merchandise, standing and stored crops, and, in many cases, machinery, equipment, and livestock are unacceptable as assets to secure loans. It is also not uncommon for business assets such as accounts receivable and inventories to be not acceptable as collateral, either, so input suppliers and dealers are constrained in their access to formal credit and, in turn, can only offer simple and inadequate informal credit to their buyers (Fleisig, Aguilar, and de la Pena, 1994). Some countries require the specific identification and enumeration of property offered as collateral, such as identifying the specific animals in a herd, rather than accepting a floating security interest in monetary value of the cattle as allowed in developed countries. In such cases, lenders must be wary about the possible sale of specific cattle because, unlike certain developed countries, there is no automatic continuing security interest in the proceeds of such sales, or whatever asset the borrower subsequently acquires with the proceeds.

Constraints Related to Perfection of Charges

6.24 Peru and Bolivia gave security of tenure to recipients by granting titles recorded in special agrarian reform registries. But since these titles were not recorded in the normal real estate registries, as required for registering land for a mortgage, they had little collateral value. Some public registries are expensive to use and not open to the public. High filing fees, long delays in registration, and constraints on obtaining access to the information add to lender transaction costs³⁴.

³⁴ See also Yaron, Benjamin, Piprek (1997).

6.25 Moveable property usually has less economic value as collateral than immobile assets in developing countries. Moreover, it has to be registered in order to avoid the possibility of the asset being pledged to several different lenders. Registries for moveable assets do often not exist.

Constraints Related to the Enforcement of Claims

6.26 Lenders evaluate collateral in terms of its marketability, ready convertibility to cash, and the transaction costs involved in disposing of it. The psychological value of collateral in encouraging good loan repayment may be as important or even more important than actually foreclosing on mortgages and liquidating pledged assets.

6.27 Enforcing claims against mortgaged property in the event of borrower default is often costly and time-consuming. The greater these transaction costs, the less acceptable is the collateral for securing small loans. The repossession and sale of mortgaged assets usually requires court action that may take months or years to complete. Twenty-one different acts were found to have a bearing on the judicial process for foreclosure and repossession in India, while eleven different acts and regulations apply in Tanzania.

6.28 Likewise, local customs about property rights may provide adequate tenure security for users of village or community-owned property but they do not have value as collateral for lenders, so cannot be used to secure working capital loans. Some countries also exempt moveable assets such as farm machinery and tools from being foreclosure. Though well intentioned, such a provision prevents farmers from using these assets to secure loans. This is especially problematic if land cannot be used as collateral.

6.29 Moveable property tends to depreciate over time, so periodic supervision and monitoring of the value is necessary in the case of longer-term loans. Lengthy procedures further diminish its value as collateral. The enforcement period may exceed the economic life of some assets such as standing crops and inventories, and there is the risk to the lender that they will be simply consumed, sold or disappear in the time interval. Even when the procedures are not inherently complicated, legal systems are often overburdened and inefficient, such that debt-recovery tribunals and courts function extremely slowly. The judicial process was found to take three months to two years in Tanzania and up to five years in India. In some countries, local politicians pressure banks to not sell mortgaged property, while community solidarity discourages people from purchasing foreclosed property. This increases the difficulty of liquidating it and obtaining fair market value. Markets for used machinery and other assets may be so thin that it is difficult to locate buyers and establish the value of the collateral.

IV. Conclusions

6.30 From the discussion above, it is clear that many problems are involved in using collateral in developing countries and they constrain the emergence of term lending in rural areas.

6.31 Key measures to improve the situation would include legal and institutional reforms to broaden the range of assets which can be used as collateral and to ease contract enforcement and foreclosure. These could include non-judicial foreclosure to save transaction costs and time and the licensing of debt collection agencies. Furthermore, the legal base for using collateral should be broadened, including moveable assets such as equipment, livestock, crops, inventory

and receivables. This should be supported by the creation of modern registry systems for real estate and moveable assets. As mentioned before, banking regulations should also be flexible enough to allow financial institutions the use of non-traditional types of collateral such as moveable assets or personal guarantees. The suitability of livestock as collateral could also be enhanced through implantation of microchips in combination with GPS technology³⁵.

6.32 However, it is important to complement these legal and institutional reforms by other measures to manage risks other than those arising from moral hazard. Collateral is not an appropriate tool for managing risks beyond the control of financial institutions and borrowers, and increases the vulnerability of small farmers. Moreover, it is an imperfect protection against co-variant risks. Even if all the above-mentioned legal and institutional problems were resolved, banks would find collateral a flawed asset when external shocks like drought or flood occur. Complementary risk management measures should also be considered. These include: price stabilisation schemes, insurance services, access to re-finance facilities by financial institutions in case of external shocks and guarantee funds. Some of these measures will be briefly discussed in the following sections.

C. MAKING LONG-TERM FUNDS AVAILABLE³⁶

I. Background

6.33 Medium and long-term loan assets obviously must be funded. Depending on the conditions and type of institution, different funding sources and asset/liability management strategies are used. The purpose of this section is to briefly comment on the advantages and disadvantages to developing country financial institutions of various sources of funds. A discussion then follows which outlines some of the techniques already being used to both increase the availability of funds for term lending, and to address the risks and costs involved by the lender in the management of liabilities in relation to building a term loan asset portfolio.

6.34 Generally, the liability structure of a lender, especially regarding the terms and costs of funds, is a strong factor determining the structure of its asset portfolio. Commercial banks, even in Western countries, concentrate their loan assets on short-term loans, mainly because their funds are mainly very liquid short-term deposits, and therefore carry an uncertain future availability and price. Long-term lending is carried out by specialized mortgage finance institutions that are able to mobilize long-term funding sources such as bonds or term deposits.

6.35 Giehler (1999) points out that the supply of concessional funds for agricultural term lending has dramatically declined in recent years. This situation serves to highlight the importance of giving attention to liability management, both to the *availability* and to the *composition* of funds for term lending. Asset/liability management has to address three areas of risk:

- **Liquidity risk:** If long-term loans are financed with shorter term liabilities (deposits, bank loans).

³⁵ This may seem ambitious, but it is technically feasible, and such is the pace of the adoption of technology, that the suggestion is not considered to be far-fetched.

³⁶ For a more complete treatment of this subject see Giehler, T. *Sources of Funds for Agricultural Lending* FAO/GTZ AFR Series No. 4 Rome, 1999).

- **Interest rate risks:** If the costs of funds (i.e. interest rates for deposits and loans) are volatile, whereas the term loan carries a fixed interest rate.
- **Foreign exchange risk:** When the institution borrows from outside the domestic currency area, and where there is no intermediary prepared to assume the potential costs of a slide in the value of the local currency.

6.36 The concepts of asset/liability management have developed over time. According to the **Golden Rule of Banking**, which had already emerged by the middle of the 19th Century, long-term assets should only be funded by long-term liabilities. This conservative rule, which aims at avoiding any asset/liability mis-matches, might be appropriate for weak financial institutions in a poorly-developed financial system. However, it does not allow the financial system to perform one of its core functions, namely the transformation of different maturity structures³⁷. Moreover, profits are correlated with risks, and an extremely risk adverse behavior won't allow banks to make profits and grow.

6.37 As a response, alternative concepts of asset/liability management have emerged which permit financial institutions to use short-term funds to a certain degree for financing longer term assets. These concepts might be applicable under certain circumstances and for some types of financial institutions. They will be briefly discussed in the next section. However, the main source of funds for building a term loan asset portfolio must be through mobilising long-term liabilities (term deposits or long-term borrowing) and equity capital (shares, reserves and retained earnings).

II. Strengths and Weaknesses of Different Funding Sources

6.38 The different funding sources generally available to financial institutions are listed in the following table, with a summary identification of their respective main strengths and weaknesses. A detailed discussion of the strengths and weaknesses of different funding sources would go beyond the scope of this study and can be found in Giehler (1999).

Table 4: Sources of Funds for Agricultural Lending – Pros & Cons and Recommendations		
Source of Funds	Advantages	Disadvantages
Government loans	<ul style="list-style-type: none"> • Low financial costs • Low interest rate risk 	<ul style="list-style-type: none"> • High administrative costs • Unpredictable and limited supply • Limit F.I. autonomy • Negative effects on repayment discipline
International loans	<ul style="list-style-type: none"> • Low financial costs • Funds available for long periods 	<ul style="list-style-type: none"> • High administrative costs • High foreign exchange risk • Unpredictable and limited supply • Negative effects on repayment discipline
Central bank loans	<ul style="list-style-type: none"> • Low financial costs • Stable supply 	<ul style="list-style-type: none"> • High administrative costs • Negative effects on repayment discipline

³⁷ In a strict sense, financial institutions funded mainly by sight deposits (which constitute the bulk of commercial banks deposits) could not even provide seasonal loans without violating this rule

Table 4: Sources of Funds for Agricultural Lending – Pros & Cons and Recommendations

Source of Funds	Advantages	Disadvantages
Compulsory deposits	<ul style="list-style-type: none"> • Low financial costs • Low degree of direct external intervention 	<ul style="list-style-type: none"> • Unpredictable supply and conditions • Negative effect on repayment discipline
Savings deposits	<ul style="list-style-type: none"> • Low financial costs • Permanent minimum core balance • Improve information on loan clients • Unlimited source • Incentives for good governance and management 	<ul style="list-style-type: none"> • High fixed operational costs • High liquidity risks due to volatility • High interest rate risk • Reserve requirements • Have to be mobilised actively • Need skilled and specialised staff
Commercial borrowings	<ul style="list-style-type: none"> • Fast supply • Fixed amount of known duration • Incentives for good governance and management 	<ul style="list-style-type: none"> • High financial costs • Costly disclosure of information • High interest rate risk • High liquidity risks
Debt instruments	<ul style="list-style-type: none"> • Long-term funds of known duration • Low interest and liquidity risk • Incentives for good governance and management 	<ul style="list-style-type: none"> • High financial costs • Costly disclosure of information • High asset quality required
Equity	<ul style="list-style-type: none"> • Flexible costs • Funds Available for Long Periods • Leverage potential • Risk cushion 	<ul style="list-style-type: none"> • Limited supply • Difficult to raise • Can be expensive in the long run (if it is not a donation) • Additional decision-makers involved

Adapted from Giehler (1999) p. 73.

6.39 As the table shows, there is no clear ranking of the different funding sources. Their suitability for funding term loans depends on different factors such as the type and characteristics of a financial institution, the level of development of the financial system and, in particular, the capital market. Savings-based institutions such as savings and loan associations, credit unions and the like have share capital and various types of deposits as their main source of funds. Commercial banks often rely mainly on deposits as a cheap funding source, but also have access to central bank refinance facilities or interbank loans. Agricultural banks and NGOs traditionally depend mainly on government and donor funding.

6.40 The size of a financial institution also has an influence on the types of funds it can access. Unit banks rely mainly on local funds such as their owner's equity, shares and deposits. This narrow base of funds severely restricts their scope for engaging in term finance. Large institutions such as agriculture development banks cannot only diversify their loan portfolio but also their liability structure. This points to the great potential of this type of institution to develop term finance products on a larger scale, provided they can be reformed into efficient financial intermediaries with a high degree of management autonomy. Several Asian development banks like BAAC (Thailand), Bank Pertanian (Malaysia) and Bank Rakyat (Indonesia) have been successfully reformed without losing their mission as development banks. One important factor in this reform process was a vigorous strategy of savings mobilization, both as an important financial service and as a cheap and reliable funding source. Government ownership, together with sound management after a long reform process, gives savers confidence. This also enables banks like the

South African Land Bank or BAAC to emit long-term bonds and debentures at low costs as refinance instruments.

6.41 Banking regulations also set certain limits on the types of funds which can be legally mobilised by different types of financial institutions (e.g., the emission of bonds or debentures or the mobilization of deposits from the public). As mentioned in the previous section, most funding sources such as Central Bank loans, commercial debt instruments and deposits from the public are only accessible for regulated financial institutions.

6.42 However, this is rather a static view: Many of these may change in the course of economic development, or as a consequence of a particular institution's development strategy. Agricultural banks may gradually substitute deposits, bond issues and debentures for government and donor funds. Mutuals may group into federations and create tiered structures and a central unit for liquidity management among members of the apex mutual. Such a central unit could also act as an interface with other financial institutions and the central bank. NGOs may opt to become regulated in order to access commercial funding sources.

III. The Way Forward: Options for Action

6.43 Support strategies should not only be targeted at different types of financial institutions, but also be adapted to their level of development (in terms of performance, operational efficiency and management skills), their integration into the financial system and the development of the latter. Accordingly, it is suggested here that a phased approach should be the aim. Along with their heterogeneity in terms of management requirements, some types of funds may have greater relevance to a bank at an early stage of development than is the case for other sources. Although not all situations will be the same, a possible phasing will now be discussed, based on the evidence from the case studies. Indications of potential areas for donor support are also identified.

Phase 1: Using Concessional Resources

a) Supporting Individual Financial Institutions

6.44 Young financial institutions, and institutions with weak management skills need stable long-term resources to start term lending. The case studies underline the importance of this type of financing early on. At this stage, while systems and staff capacity are still being developed and a reputation built, special assistance is almost certainly required. Thus concessional funds and equity would be important in the early stages of an institution's operational life. This has been the case with some of the case studies, for example, BASIX in India, which was originally capitalised by soft loans from donors. Similarly, the leasing program of the *Caisses d'Épargne et de Crédit Agricoles Mutuelles* (CECAM) in Madagascar has depended heavily on long-term, cheap resources provided for the purpose by the Government and the European Development Fund. Borrowing on commercial terms has only been used after start-up periods, but the limitations of this type of funding have been apparent in, for example, Bolivia, due to the relatively short loan duration (2–3 years) during which funds were made available.

6.45 Some important *caveats* attach to the use of concessional funds. There are hidden costs of such resources limiting their impact, which have to be taken into account. These costs are

of two types. Firstly, the additional cost involved in reporting on such funds, especially if several donors with different reporting requirements and procedures are involved. Secondly, there are the consequences of the loss of freedom of management of the recipient institution. This can make such funds rather expensive in the long run, especially if one of the results is an increase in the number of non-performing loans in the loan portfolio. Concessional funds should only be provided on the basis of a genuine and proven demand. Allied with this requirement for young banks it is important that the management should never be placed in a position where certain lending targets have to be met. As highlighted in Chapter 4, term finance requires skills and experience in assessing and managing risks and costs properly. If these are not sufficiently developed, then the push to lend will be paramount, and loss of quality in the term loan asset portfolio the inevitable result.

Box 23: FECECAM, How Donor Funds Undermined a Successful Term Lender

The mutualist network FECECAM in Benin initially developed medium-term lending to cotton farmers using the network's own funds. In the middle of the last decade donors provided funds for increasing the outreach of the medium-term loans in new areas, for additional purposes and to new clients. The availability of funds induced FECECAM to expand lending too fast. Established client selection criteria were softened or cut short, and the lending process became dominated by donor staff. Staff were not capable of handling a huge incremental term loan portfolio appropriately. The availability of comparatively cheap funds, the application of which could not be appraised and supervised properly, led to diversions of funds. All these factors resulted in low repayment rates and a poor portfolio quality, undermining the financial sustainability of the FECECAM network.

6.46 Flexibility in the conditions attached to donor resources is therefore vital, especially in a RFI's formative years. The possibilities include: equity funding, subordinated loans and concessional credit lines which are not closely targeted, but rather have much of the flexibility associated with equity. Equity and quasi equity (subordinated loans) are particularly suitable for young financial institutions, because they can be used to leverage additional funds, and they help financial institutions to meet the norms for prudential regulation.

6.47 Donor impact can be substantial, if concessional credit would enable features such as grace periods to be arranged in the case of credit-financed term investments in tree crops, for example. Moreover, donor impact might be further increased if the provision of funds is accompanied by technical assistance: Possible areas of appropriate donor assistance might include the introduction or upgrading of computer systems for loan portfolio management, liquidity management and rationalizing loan appraisal and assessment of investment projects. Computerized banking systems such as the FAO/GTZ MicroBanking System also help to reduce the cost of meeting reporting requirements and can markedly reduce human bias in lending decisions.

b) Supporting a Number of Financial Institutions

6.48 Once there is a critical mass of retail lenders able and willing to expand rural term finance, the viability of second-tier refinance facilities such as apexes or wholesale banks might be considered. These can provide credit lines for term loans or leasing to eligible retail intermediaries who would have to carry the main lending risk. They may also provide training and capacity building.

6.49 In many developing countries, long-term resources are only available to a limited extent on the capital market. Moreover, some agricultural investments, such as tree crops or land development, would require long-term loans including a grace period. Whereas medium-term loans can to a certain extent be funded from core deposits or other short-term liabilities, the provision of long-term loans without appropriate long-term funding sources would imply severe liquidity risks. In Bolivia, where several financial institutions have developed the capacity to provide medium-term loans to farmers, the provision of long-term loans is constrained by the lack of long-term refinance facilities. Even in relatively well-developed financial markets like South Africa's, commercial banks do not offer term loans with grace periods.

6.50 A wholesale lender could also provide retail lenders the opportunity to refinance their bad portfolio in case of a temporary major external shock (drought, flood) affecting a number of their clients. This, however, has to be assessed carefully case-by-case in order to ensure careful lending decisions of the retail institutions and discourage bailout mentalities.

6.51 A second, more controversial issue, is related to the cost of funds. In order not to discourage deposit mobilisation, refinance rates should be set above long-term deposit rates in the market.

6.52 Operational guideline O.P. 8.30 of the World Bank states that credit lines should only be used if it has been clearly established that there are financial institutions with sufficient retail capacity which would be able to pay market rates for funds, and that lack of long-term funds is the key constraint. Credit lines should also be accompanied by measures aimed at addressing the underlying market imperfections which constrain the flow of funds.

6.53 The use of subsidised lines of credit will be discussed in Chapter 8.

Box 24: Examples of Second-tier Institutions Providing Long-term Refinance Facilities

Land Bank (Philippines): The Land Bank is a government-owned agricultural development bank which has become the main wholesale lender for rural financial intermediaries. Apart from special lending programmes for land reform beneficiaries and cooperatives, it provides re-finance facilities for rural banks, commercial banks and other financial institutions. It administers the Countryside Loan Fund and the agriculture loan funds of the World Bank. These are aimed at providing retail lenders with access to medium and long-term funds for financing rural investments. Funds are priced at market rates (...) and are available to eligible financial institutions. Most funds, however, have been requested by commercial banks for medium and large-scale farms and agro-businesses in peri-urban areas. Credit risk is carried by retail lender; repayment rates were near to 100 percent.

FONDESIF (Bolivia): The fund for development of the financial system was established in 1997, to provide funds and technical assistance to non-regulated financial institutions in Bolivia. A similar institution (NAFIBO) was created for regulated financial institutions. FONDESIF provides loans to eligible financial NGOs and cooperatives at an interest rate equal to the long-term deposit rate plus 1 percent. Loans are provided both for onlending and for restructuring of bad debts. A major constraint is the maturity of the funds, which is limited to 5 years. It further provides grants to support the opening of new branches in rural areas.

Land Reform Credit Facility (South Africa). LRCF has been created to provide long-term refinance facilities at slightly below market rates for empowerment projects such as joint ventures between white commercial farmers and black farmers and workers. Any commercial bank or credit rated investor can apply for the funds, which can be combined with land reform grants.

Phase 2: Using Short-Term Funds for Agricultural-Term Lending

6.54 The staff of mature and well-reputed financial institutions could be trained to improve their asset/liability management skills. As mentioned before, the *Golden Rule of Banking* is an unnecessarily rigid and static position for a financial institution operating in a competitive market. Inevitably, the bulk of deposits will be short term, and the ability to continue to build a term asset portfolio will depend, at this stage, on the effectiveness of asset/liability management in the bank. A certain degree of open positions, i.e. funding term loans with liabilities of variable duration and costs, are feasible as long as bank management is capable of analysing and managing the underlying risk structure.

6.55 A more in-depth discussion of asset/liability management tools is beyond the scope of this exercise. However, Box 25 briefly presents some approaches which can be used. In turn, this will depend not only on management ability *per se*, but also on the accuracy and timeliness of data produced in the normal course of banking operations, and on the immediate usefulness of management reports produced from these data.

6.56 The building of a deposit liability base can be hastened, especially in mutual institutions, by requiring members to make regular deposits. *Thus MRCB in India now has deposits that fully cover its loan assets, without the need for outside borrowing.* As a bank matures, the role of equity capital can become less important as a percentage of total liabilities.

Box 25: Ways of Using Short-term Funds for Term Lending

Using core deposits: Though in principle sight and demand deposits could be withdrawn at any point in time, statistically there is no point in time when all funds are withdrawn. Through an *Account Variability Analysis*, a bank management can examine withdrawal patterns of deposits during the year and empirically determine the minimum balance which is permanently deposited with the bank (core deposits). This amount can be used to fund longer term loans. Even in rural areas dominated by agriculture, a core deposit base can be established. Deposits of traders and input suppliers tend to be high when farmer deposits are low, and vice versa. Access to backup lines of credit from apexes or the Central Bank in the event of runs or unusually high loan or withdrawal demand would be an important complementary measure, if this approach were adopted.

Creating access roads to additional liquidity: The scope for using short-term liabilities for term loans depends on the ability of financial institutions to access liquidity. Possibilities include: converting liquid assets such as bonds or other investments into cash, accessing interbank loans or obtaining additional funds from owners. Depending of the type of institution, an upgrading may be necessary to get access to Central Bank rediscount or re-finance facilities. Another possibility is the creation of liquidity pools through interbanking linkages. Village banks may negotiate certain credit lines or overdraft facilities with commercial banks. Mutual financial institutions often build tiered structures with their own apexes to facilitate liquidity transfers within and outside the system.

6.57 There is little doubt that many developing country banks could do more to develop savings products which are attractive, remunerative, and designed to help clients participate more actively in the money economy. This is especially true of the development of term savings or savings-cum-loan products, i.e., adapting housing finance products for use in agricultural term finance. Several financial institutions in Africa such as FECECAM, CECAM and Equity Building Society have recently introduced such products. The borrower would have to save a certain amount each week or month until a target amount is reached. Access is then given to apply for a term loan at preferential interest rates. Further research would be required to explore the scope of such instruments. Deposit insurance would be an important tool to support savings mobilisation

strategies by enhancing confidence of the public and safeguarding deposits. It would also reduce the danger of a bank run.

6.58 *Donor impact* at this stage can be valuable in such areas as:

- Provision of training in asset/liability management, and in risk analysis.
- Extending finance for on-lending for periods sufficiently long to enable loan decisions to be made on sound criteria, rather than simply meeting targets.
- Technical assistance to build, install or train staff in the use of computerized, real-time information systems.
- Assistance with developing the internal capability to understand the market for savings products, to design such products and to market them effectively.

Phase 3: Capital Market Development

6.59 With the achievement of a sound reputation among private depositors, financial institutions can logically look forward to achieving even greater flexibility through the use of instruments such as certificates of deposits and debentures in the national and, possibly, international financial markets. These instruments can give great flexibility to the bank in asset/liability management, not least because they are long-term in nature. At the same time, since they usually carry a fixed interest rate, they provide stability on the cost side of the bank's operations. The administrative costs associated with this type of operation are also low, once a bank has established its reputation.

6.60 At least partial public sector ownership appears to bestow significant benefits when it comes to raising funds on the capital market. Thus, BAAC and the Land Bank of South Africa, both Government-owned, are examples of banks which have been rather successful in raising funds at reasonable cost in this way. This suggests an avenue for further exploration – the way in which cooperative or other private sector banks might obtain similar advantages through the use of, say, a guarantee mechanism provided by or through the government. In a similar vein, better-established banks could seek a rating from official accrediting agencies.

6.61 Donor Interventions to assist in this process might include:

- Helping develop connections between rural banks and other actors in the finance industry, with a view to increasing the former's involvement in rural financial markets.
- Assistance in developing information systems.
- Assistance with obtaining a recognized rating.

D. CREDIT GUARANTEE SCHEMES

6.62 Policy makers often advocate guarantee schemes as a way to help lenders manage collateral problems, but the use of collateral substitutes may offer a more efficient solution in some countries, at least in the short term. Collateral problems have been largely ignored and

bypassed by the recent expansion of microfinance, but they must be resolved if large-scale term finance is to emerge. They require careful identification, analysis, and reform as part of longer-term projects supported by governments and donors. This section looks at guarantees.

I. Principles

6.63 Credit guarantee programs are risk-sharing mechanisms that are expected to overcome the resistance of financial institutions to lend to targeted borrowers (individuals, households, farmers, or small businesses). The objective is to stimulate lending to creditworthy borrowers who have feasible projects, but lack sufficient assets required as collateral by lenders. By sharing some of the lending risks, guarantees are expected to leverage additional funds from the financial system (induce *additionality*) as lenders make loans that otherwise would not be made. Therefore, if guarantee schemes are successful, they are more efficient in expanding lending than providing an equivalent amount of resources for refinance or loan revolving funds³⁸. Some programs anticipate that through the guarantee experience the lenders will *graduate* to making these loans *without* guarantees once they learn that the targeted clients and/or investments are not as risky as originally perceived³⁹.

6.64 A successful guarantee program may have favourable benefits for both borrowers and lenders. Besides receiving loans that otherwise would not have been made, borrowers may benefit because interest rates may be lower, terms may be longer, and collateral requirements may be reduced. Lenders may gain through reduced transaction costs and risks, larger loan volumes, and gaining new clients that become potential customers for larger loans in the future and for other products and services.

II. Empirical Evidence

6.65 Guarantee programs for lending to small and medium enterprises (SMEs) have existed for several years in the U.S. and European countries. Many schemes have been introduced to expand agricultural lending in developing countries. More recently, guarantee schemes have begun to emerge to support microfinance.

Box 26: Guarantee Schemes in Mexico and India

Mexico and India are two developing countries that have devoted considerable resources to publicly-supported credit guarantee schemes. The Mexican guarantee and technical assistance fund covers some commercial lending to agriculture and subsidizes the transaction costs of lending to low-income producers. The Indian Deposit Insurance and Credit Guarantee Corporation offers credit guarantees for lending to targeted clients, including farmers and small-scale industrial firms. Both schemes have suffered serious losses. The Nigerian Agricultural Credit Guarantee Scheme guaranteed bank loans made to small farmers. It began in 1977 but was virtually moribund by 1996. The scheme survived only by defaulting on its claims, so the volume of guarantees fell to insignificant amounts.

6.66 These examples are indicative of the chequered performance of guarantees. None of the European small and medium enterprise (SME) guarantee schemes is self-financing. Most schemes in developing countries have failed or at best experienced limited success. Some were

³⁸ If a loan is guaranteed to 50 percent of its value, US\$1 invested in a guarantee fund would create US\$2 in additional lending (provided the bank would otherwise not have made the loan due to lack of collateral).

³⁹ See Gudger (1998)

created but never made any guarantees. Many failed because they were not financially sound and became moribund when they ran out of capital. Still others fell into disuse because the administrative arrangements were so expensive, complicated and time consuming that lenders lost interest. Even when a fairly significant volume of guaranteed loans have been made, such as through the Guarantee Fund for Small and Medium Enterprises (GFSME) in the Philippines, there is little clear evidence of additionality. Many schemes continue to depend on large subsidies, so they simply amount to credit subsidies dressed in different clothes.

Box 27: Examples of Guarantees to Facilitate MFI's Access to Commercial Funding Sources

The ACCION Bridge Fund is an example of a guarantee that seems to have been more successful than most. It was designed to encourage local banks to lend to MFIs that were ACCION affiliates in Latin America so they could lend to their clients. In at least one case, the local bank dropped the guarantee requirement for lending to the local ACCION affiliate after it had a good experience with the guaranteed loans.

The International Finance Corporation (IFC) has provided a commercial guarantee agreement against a fee to MFI networks in West Africa. This enabled leading financial institutions to access medium-term funds to re-finance their medium-term loan portfolio, including cotton growing farmers. The guarantee was designed to cover only part of the lending, to support the establishment of a linkage between the MFIs and local banks. This should pave the way for future commercial bank lending to MFIs without guarantees.

Sources: WB-Rural Finance strategy, 2002 (draft)

III. The Way Forward: Better Practices for the Design of Guarantee Funds

6.67 Still, there may be circumstances in which a credit guarantee could be a useful instrument for leveraging more agricultural term lending. The key is to identify the circumstances conducive to success and to design the scheme so that it avoids the problems that have plagued most previous efforts.

6.68 A typical guarantee scheme links three agents or participants: a guarantor, a lender, and a borrower. A guarantee agreement provides the lender with the right to call on the guarantee to recover loan losses. The design requires creating an incentive-based contract that encourages all three agents to act responsibly and prudently so that additional loans are made, borrowers work diligently to repay them, and the costs and losses ultimately borne by the guarantor can be covered by fees and investment earnings, such that the scheme is sustainable. Ideally, a guarantee is only called after the borrower has done everything possible to repay and the lender has exhausted reasonable efforts to collect.

6.69 Guarantees can be backed by an actual fund or by government pledges to reimburse lenders for loan losses according to an agreement established for this purpose. The former promotes confidence that claims will be paid, without having to seek budgetary approval, but such funds can be easily bankrupted due to defects in design and management.

6.70 An appropriate design is critical so that the guarantee scheme simultaneously stimulates a substantial amount of additional lending but also produces relatively low loan losses, such that it is sustainable in the long term.

6.71 For the lenders, the additional benefits that are expected from making guaranteed loans must exceed the additional transaction costs and risks. The costs include the administrative cost of securing the guarantee, of conducting the required level of client monitoring and loan

collection, of processing guarantee claims, and absorbing the lender's share of losses not guaranteed. The risks include those inherent in lending to the targeted borrowers and the investments they make, and the risks that the guarantor will be financially unable or will refuse to pay guarantee claims.

6.72 For the guarantee fund to be sustainable, investment earnings and the fee and commission income must be adequate to cover operating costs and guarantee claims. Sustainable funds will tend to be well-capitalized, earn high returns on invested capital reserves, receive high fee and commission income, and be designed and administered so that they have low operating costs and pay few guarantee claims.

6.73 Adverse selection and moral hazard problems pose challenges for guarantee operations. For example, if borrowers believe the lenders will collect from the guarantee, they may not carefully manage their projects and make good faith efforts to repay. This possibility increases if the resources to create the fund are provided by donors, so borrowers perceive that default will cause no hardship to the lender or the country. If the coverage is high (say 85 or 90 percent) and the claim procedures are simple, lenders may fail to make reasonable efforts to collect and the resulting high claims may bankrupt the fund. But if the guarantee terms and conditions are too stringent, the lenders may choose to not participate or only make those loans that would have been made without the guarantee, so there will be no additionality. The guarantee must be designed and administered to prevent lenders from engaging in opportunistic behavior and selecting to guarantee only their riskiest loans.

6.74 In the long term, training and technical assistance provided to lenders as part of a guarantee scheme might be more important in developing countries than the actual guarantees. If the designers of guarantees are correct in arguing that it is possible to identify borrowers and investments that are less risky than perceived by the lenders, then it is necessary to train lenders to use appropriate client screening and lending technology. The guarantee then provides additional security to the lender in the short-term but becomes unnecessary in the long-term, once the improved lending technology is in place.

Box 28: Scope and Limitations of Self-managed Guarantee Funds

A new type of "self-managed" guarantee has emerged in recent years which has the potential to avoid some of the problems of centrally-managed public guarantee schemes. Several models exist. A self-help organization may create a guarantee fund with member contributions to issue guarantees only to members.⁴⁰ NGOs may receive donor grants to constitute guarantee funds for their clients. An NGO may own a guarantee fund that is topped up by a standby letter of guarantee issued by an external organization to a local bank. Some of these funds are managed by banks, thus reducing the costs for the NGO.

These self-managed funds have remained small and relatively ineffective in terms of outreach and have become a financial burden because costs have exceeded revenues. The management requirements have often been underestimated and the organizations lack sufficient expertise to manage them well. However, as experience is accumulated, there may be some NGOs or self-help organizations that demonstrate they can successfully manage short-term lending and guarantee programs, so term lending can be slowly added to their operations. Governance issues, however, always present potential threats to owner-managed financial institutions and NGOs or RFIs with no clear owners.

⁴⁰ This is a larger scale version of the guarantee funds that MFIs create by deducting guarantee fees from borrowers in group loans to create a pool of funds for use in assisting fellow borrowers to make on-time payments.

6.75 No set of best practices has been identified for guarantee schemes for term lending in agriculture. Suggestions have been made for best practices for SME guarantee schemes and they are indicative of the key issues to be analyzed in designing a guarantee scheme (ref. Levitsky, 1996) for agricultural loans:

- **Operating costs, fees and commissions.** Guarantors often charge a one-time front-end commission of 1 to 4 percent of the amount of the loan. Then an annual fee varying from 1 to 3 percent of the amount of the actual guarantee is also charged. This income usually does not fully cover operating costs, so they are subsidized by investment income, especially during the start-up phase of the guarantee.
- **Risk-sharing.** Several considerations are involved in reducing moral hazard. First, borrowers need to have something at risk, and should be required to offer some collateral even if it is not normally required for a loan. Second, borrowers that default must be denied further loans from all lending institutions. Third, lenders should have at least 30–40 percent of the loan at risk while guarantees of less than 50 percent may significantly reduce the interest of banks to participate in the scheme. Fourth, loan payments should be allocated in proportion to the risk shared and not be credited fully to the lender's risk portion. Fifth, borrowers might be classified by risk level and the structure of fees and guarantee coverage set at higher levels for the riskiest borrowers.
- **Transaction costs.** Transaction costs for the lender should not rise, and preferably should fall with the guarantee. Lenders have the primary responsibility for making loans so the guarantee scheme should expect to conduct only a fairly quick review of loans made before granting guarantees. The guarantee staff may develop specific skills such as in the valuation of collateral so transaction costs can be reduced for the lenders. A system of accreditation may be used when banks can be verified as having strong financial structures and proper screening, monitoring and collection procedures, so accredited banks can issue both the loan and guarantee. Moral hazard is controlled by the guarantee staff periodically reviewing the portfolio of guaranteed loans to determine if the lender has practiced due diligence in lending and followed proper procedures for issuing guarantees.
- **Guarantee claims.** Claims procedures need to be spelled out in detail and in advance, then followed so that the lenders develop confidence in the scheme as well as to minimize disputes and administrative costs. Many schemes cover the share of lost principal as well as the same share of 3 to 6 months of lost interest. Lenders may have to initiate legal proceedings against delinquent borrowers and foreclose on collateral before making a claim on the guarantee. But legal proceedings are often so slow that lenders may not have to obtain legal judgments before a guarantee is paid. Many guarantees have organized collection facilities and have taken over the process of collection for defaulted loans after guarantees have been paid. A 25 percent recovery rate is regarded as an attainable target. One of the contributing factors for low recovery rates in developing countries is the difficulty in enforcing the security interests that lenders have in the loan collateral, as discussed in the previous section.

6.76 The design of a guarantee scheme has to be developed in conjunction with local lenders considering their actual lending experience. Most schemes need to be altered after the first few years of operation, based on the learning that occurred in the start-up phase. Experience has shown that guarantees have not been a panacea for resolving the problem of harnessing financial institutions to finance SMEs. An important conclusion is that SME guarantees cannot be imposed on a faulty financial system, unsound and inefficient financing institutions and a general culture and legal system that condone non-repayment of debts. By extension, guarantees for term lending in agriculture cannot be expected to succeed until lenders first develop a track record of efficient and sustainable working capital lending to farmers. Lenders must be interested in learning to work with the sector and willing to commit themselves to developing the expertise to make good term loans. Without such a commitment, a loan guarantee scheme alone will not contribute much additionality nor develop a system of sustainable term lending. Moreover, no guarantee fund can solve fundamental structural problems if lending to agriculture is inherently too unprofitable and risky (Viganò, 2002).

E. CREDIT BUREAUX

6.77 Credit bureaux or registries are another potential innovation to improve access to credit. A credit bureau is a specialized institution that collects and disseminates information on borrowers' credit histories. As a source of information, it can produce multiple benefits by reducing lender transaction costs and risks, promoting greater transparency about the financial transactions and obligations of borrowers, inducing greater competition among lenders for good clients, and creating incentives for timely loan repayment as borrowers come to appreciate the value of a good credit history. Credit bureaux may take on greater importance in countries where it is politically difficult to change laws and regulations that would make it easier and cheaper to efficiently use collateral to secure loans⁴¹. A number of start-up credit agencies have sprung up in West Africa since 2000, but results are not yet known.

6.78 Many developing countries, especially in Latin America, have developed private and public bureaux or registries. They collect information on credit histories from affiliated financial institutions, assemble it into a standardized database, and for a fee provide affiliates access to individuals' credit histories. This information is used by the affiliates to screen clients and make loan decisions. In some countries, all regulated financial institutions must furnish data to public registries. Not all financial institutions become affiliates, however. For example, MFIs may not be members, because only regulated institutions are allowed to participate, or they find it too expensive for the benefits received, or the size of their transactions do not reach the minimum accepted for registration. Moreover, some institutions prefer to not participate because they have expended great effort accumulating information about their own clients and fear they may lose the best ones if the competition gets access to this private information.

6.79 Credit bureaux might be an effective way of reducing some of the costs and risks of term lending, but it is unlikely that they will be relevant in the near future, considering the nature of rural finance in most countries. Credit bureaux are most useful where there are many competing lenders, serving many clients, so the total number of transactions is large, and it is difficult for financial institutions to directly exchange information. Consumer credit typically represents this type of situation and microfinance may be entering this stage of development in some urban areas. However, the rural finance situation where term finance might be introduced

⁴¹ See Galindo and Miller (2001) and Jappelli and Pagano (1999).

does not always display these features. There is often only one or a few institutions involved and usually they do not compete with one another in specific localities. Moreover, the potential clients normally engage in only a few financial transactions, and they tend to use informal or microfinance sources that would not participate in credit bureaux. Term lenders in this situation can easily obtain information directly from the few financial sources that are relevant in order to compile credit histories on potential clients. Only at later stages of development will urban-based credit bureaux begin to expand into rural areas and serve important functions for rural term lending.

F. INSURANCE AND OTHER RISK MANAGEMENT TOOLS

6.80 The analysis in previous sections of this report has pointed out that one of the core constraints of term finance is the inability of farmers and financial institutions to properly manage risks, especially systemic risks. This forces both farmers and financial institutions into costly risk-avoiding strategies, foregoing opportunities for investment and growth. Even the best lending technology cannot protect against co-variant risks such as drought, floods, pests or sudden price declines. A farmer's main risk management strategy is diversification in a number of farm and non-farm activities. However, this precludes them from specialisation and technology adoption and consequently from reaping economies of scale.

6.81 Accordingly attempts have been made to design risk management mechanisms that will efficiently and effectively contribute to safeguarding agricultural investments, including term investments. Among these mechanisms are firstly, various insurance products, dealing mainly with climate and disease/pest risks secondly there are commodity marketing products, such as the purchase of put options. The rest of this chapter outlines some of the experience to date with these mechanisms, and their relation to term investment. This section cannot explore insurance and other risk management tools in any depth. It will, however, mention some innovative new concepts for agricultural and rural risk management, which might be explored further.

I. Agricultural Insurance

6.82 Insurance *per se* has become a normal part of risk management in the monetary economy, and its application to the risk of loss to plant and equipment is obvious and needs no further discussion here. But how relevant is *agricultural* insurance to the management of risks associated with term investment in developing country farming?

6.83 Agricultural insurance and particularly crop insurance has had a chequered history in developing countries. Along with lenders, agricultural insurers face moral hazard risks, adverse selection and high transaction costs which are difficult to resolve under developing country conditions. Some of the main problems of crop insurance are:

- insurance was provided for a large number of perils made verification of claims extremely difficult and increased problems of moral hazard. this led to an increase of claims;
- the costs of verifying claims in scattered smallholdings and processing of large numbers of claims is time consuming and costly;
- as agricultural development banks, public crop insurance programmes were often under political pressure, e.g. to make high disbursements in selection years.

6.84 In sum, public crop insurance programmes were highly dependant on public subsidies. In most cases, the benefits to society were not clear enough to justify these amount of public resources.

6.85 Though global agricultural insurance premiums are estimated to amount to US\$6.5b annually, the share of this accounted for by developing regions is only 13 percent.⁴²

6.86 Unsurprisingly most current agricultural insurance activity is associated with high input/high value output farming, such as intensive fruit production, in which borrowing for term investments is very common. Here insurance against perils that can affect the expected income stream from such investments is frequently required by lending banks.

6.87 Insurance in all types of agriculture can be based on coverage of losses from any type of physical peril, or it can be restricted to losses from a limited number of named perils. Coverage of just one named peril, hail, has been arranged and sold for more than 200 years in many countries. The success of this type of product has led to the design of policies that offer broader coverage, adding perils such as flood and windstorm, all the way to “all-risks” covers. Clearly, the greater the range of perils, the more expensive the crop insurance protection, often to the point where it becomes uneconomic for many if not most farmers.

6.88 Affordability of cover is certainly an issue for farmers. Insurers, for their part, face problems of moral hazard and adverse selection – both related to information adequacy and cost. Indeed, these difficulties have greatly restricted the extent to which insurance programmes have been developed by the commercial sector for small-scale, scattered and sometimes very remote farmers. In addition, the key peril for many developing country farmers is drought – notoriously difficult and expensive to insure using classical crop insurance technology.

6.89 Novel ways of overcoming these difficulties through area-based derivative insurance products have recently been suggested. In these the assessment of loss is done not on an individual basis (which is prohibitively expensive for small-scale farms) but rather on an homogenous area basis. Further, the trigger for indemnity payments is derived not from firsthand evidence of loss, but from climate data. Provided such data – e.g. rainfall records, are secured against fraudulent adjustment – the cost of setting up and operating the trigger is very low. Naturally only some perils lend themselves to this type of approach. Drought is a prime candidate. By contrast, the most commonly insured peril in developed agriculture, namely hail, could not be handled with this type of derivative product, due to its highly localised incidence. This demands individual verification and *in situ* assessment of loss.

6.90 When insurance can be arranged, it can constitute of very useful safety net for the cash-flow from a farming enterprise. An insurance indemnity would replace some of the expected cash return from the investment, when an insured event occurs.

6.91 However, the possibility or otherwise of arranging insurance should never be the sole determinant for an investment or a lending decision. A valid demand for insurance may exist when the following conditions are met:

- a significant proportion of family income comes from farming;

⁴² In more detail, the regional shares of this 13 percent are: Africa (mainly South Africa) 2%, Asia 4%, Latin America 4%, and Central/East Europe 3%. Data provided by PartnerRe Agricultural Services.

- there is a substantial cash investment in the enterprise;
- the incidence of the peril can be proven;
- losses from the peril can be estimated accurately;
- purchase of the policy makes economic sense for the farmer/investor, so demand is real;
- sale of the policy is profitable for the insurer, thus ensuring continuity;
- transactions cost for both parties are low, and, above all, the term investment should be financially viable over time, even without insurance.

6.92 It is worth underlining the last point. The role of insurance should be to cushion the losses arising from an insured event, and to assist in smoothing income flows over time. It cannot make a doubtful investment profitable. Indeed, since the administrative costs of insurance have to be borne on top of the actuarially determined sum of indemnities, over time the purchase of insurance results in higher production costs. On the other hand, the investment may simply not be possible without the smoothing effect of insurance on income and expenditure, since an investing farmer may be unable to handle situations when farming losses cause large seasonal deficits in the family's cash-flow.

6.93 In summary, when there is heavy dependence on a farming income stream, for loan repayments as well as for covering other costs, the possibility of insurance could be explored as an addition to other means of managing risk. Primarily this involves the investor, and his or her financier, seeking cover for the *income stream* resulting from the investment.

II. Micro-Insurance

6.94 Death, illness and physical disability are major reasons for loan default. In case of term loans, these borrower related risks increase. Micro-insurance concepts have been introduced and tested in different parts of the world and include health insurance and life insurance. The experience of SEWA in India shows that there is some scope for building linkages between microfinance institutions and professional insurance providers⁴³.

III. Commodity Price Risk Management Scheme

6.95 This initiative led by the World Bank is a multi-agency attempt to introduce forward contracting, through the purchase of put options, to developing country commodity producers. Much preparatory work has been done, and the initial contracts have recently (2002) been made, for coffee sales. Several banks have exhibited interest in the initiative so additional lending or lending at improved rates to farmers may result. The limitations of this mechanism as a spur to term finance will be immediately apparent, since forward contracting of this type can only insure against seasonal fluctuations. The more important longer term price trends cannot be addressed with this mechanism.

⁴³ See McCord, M (2001) "Health care microinsurance – case studies from Uganda, Tanzania, India and Cambodia" in *Small Enterprise Development* Vol. 12 No. 1, March 2001.

7. THE CHALLENGE OF FINANCING SMALLHOLDER TREE CROP DEVELOPMENT: ISSUES AND OPTIONS

INTRODUCTION: THE CASE FOR SMALLHOLDER TREE CROP DEVELOPMENT

7.1 Chapter 2 briefly mentioned the difficulties faced by banks and farmers in financing investments in tree crops, due to their long-term nature and the gestation period involved. This section reviews these issues more in detail and discusses different approaches by which they might be addressed.

7.2 Tree crops⁴⁴ are one of the preferred investments by smallholder farmers. In remote or mountainous areas or on acid leached soils, they might be the most attractive investment opportunity, both in terms of profitability and cash income as well as environmental sustainability. In these regions there are few alternative farming opportunities and the scope for diversification into non-farm activities might be narrow. Tree crops, especially those requiring immediate processing, provide additional contributions for regional development through value adding and downstream activities. For farmers tree crops constitute long-term investments, which provide regular cash incomes, sometimes on a continuous basis (e.g. tea, rubber). Cropping intensity can be adjusted in response to prices or competing household needs and opportunities, at least for traditional varieties. Older farmers can secure their livelihoods through sharecropping arrangements, which also help younger farmers to acquire skills and capital.

7.3 Many tree crops, such as coffee, cocoa or rubber, are labour intensive. This characteristic, and the limited scope for economies of scale, favour their production by smallholders. Not surprisingly, smallholders account for a significant proportion of many types of tree crop production, worldwide. Large-scale plantations have clear advantages for those crops which require little management (such as oil palm) or which need to be processed immediately after harvesting (e.g. sugar cane, tea, export banana). However, here too smallholders have started to compete, either as outgrowers or as independent producers, such as in the cases of oil palm in Indonesia and banana in Costa Rica.

7.4 However, smallholders face disadvantages against estates with regard to access to information, new technologies, markets and capital. All these factors constrain their ability to plant High Yielding Varieties (HYVs) which might become increasingly necessary to remain competitive, especially in the face of declining prices in most tree crop markets.

7.5 Commercial tree crop development and production, especially for export markets and based on HYVs, is a complex area requiring both specific skills and the availability of financial and non-financial support services. Moreover, the viability of tree crops depends on a number of

⁴⁴ They include oil crops like coconut and oil palms, beverage crops like coffee, cocoa and tea, industrial crops like rubber, spices like cloves, and fruit trees like citrus, mango, etc. though fruit trees are often only cultivated on a garden like scale they have a huge market potential and will increasingly be grown commercially. The same applies to forest species: Deforestation, and increasing environmental concern may not only lead to higher timber prices, but also to a specific demand for environmentally sound timber from smallholder plantations.

factors, including agro–ecological conditions, availability of high quality planting material and other inputs (e.g. weed control, fertilisation, fencing) at crucial stages of tree crop development. Farmers need to have clear land rights to engage in investments and possibly for accessing loans⁴⁵. Long–term market and price trends need to be carefully assessed before taking investment decisions. Financing cannot be considered without taking these other issues into account. Though this chapter focuses on specific financing challenges related to tree crop development, the importance of these complementary issues for designing successful financial products and strategies should be emphasised.

7.6 Governments and donors have tried to address these complex issues in sub–sectoral tree crop development schemes, designed either to develop tree crops in new areas, or to assist smallholders replant or expand their existing plantations with HYVs. These schemes, notably the Nucleus Estate Smallholder (NES) and Project Management Unit (PMUs) approaches, usually provided a full package of support including long–term loans. However, most smallholder tree crop development has taken place outside of government schemes, indicating that smallholders are able to at least finance part of the costs for establishing HYVs on their own (Guyon, 1997). Recognising what smallholders lack and what assistance they need are key points in the success of projects aiming at financing smallholder tree crop development on a sound, cost–recovery basis.

A. MAIN CONSTRAINTS AND CHALLENGES FOR FINANCING SMALLHOLDER TREE CROP DEVELOPMENT

7.7 This section briefly reviews the main issues and constraints faced by farmers and financial institutions when financing tree crop investments. There are commonalities which characterise tree crops, but also important differences among various crops regarding their cash–flows, risks and product characteristics. These have to be analysed carefully to determine financing requirements, the scope and limits of self financing, the potential role of financial institutions and the need for (and type of) specific complementary financing arrangements. Therefore, there is no fixed blueprint or standard approach for tree crops.

I. Cash–Flow Related Issues

7.8 The main challenges of financing tree crop development relate to the long–term nature of this type of investment and the time lag between initial expenditures during establishment of a plantation (gestation or immaturity period) and the time of full production. The cash–flow during the immaturity period is negative if investments in tree crops are isolated from the general cash–flow of the farm household system. This problem can be attenuated through intercropping during the first 1–2 years. However, there still remains a critical period when intercropping is no longer possible but crops are still immature. This period could be called the “financing gap”. During this period the farm–household needs sufficient additional income sources to sustain livelihoods and to cross–subsidise tree crop development costs, or to serve as source for repaying short or medium–term loans. Otherwise, a long–term loan might be required to cover general household expenditures as well as tree crop related costs, during immaturity of the trees.

⁴⁵ However, in some societies with communal land tenure systems (e.g. in SSA or in Indonesia), planting of trees constitutes a strong claim on the land.

7.9 There are important differences between tree crops, and between varieties and management systems regarding the length of the gestation period and the respective capital requirements during this period.

Lengths of Gestation Period

7.10 Tree crops can be divided into short and long gestating crops:

- **Short gestating crops** (e.g. oil palm, coffee, cocoa and tea) have an immaturity period of 3–4 years, depending on varieties, location specific factors and maintenance.
- **Long gestating crops** (e.g. rubber, coconut, fruit trees and timber species) have immaturity periods between 4–5 years (hybrid coconut), 6–7 (rubber) up to more than 10 years for timber and many tropical fruit trees.

7.11 This has implications for the lengths of the financing gap. In the case of short gestating crops this period is only 1–2 years and can easily be bridged using other income sources or even loans. In case of long gestating crops, the gap is longer and may create more serious cash-flow problems for the household.

Expenditure Pattern during Immaturity Period

7.12 Most tree crops under most management systems show a similar expenditure pattern during immaturity: A substantial part of total development costs accrue in year 1, especially if land clearing and levelling, irrigation works or fencing are necessary. Costs in subsequent years for weeding, fertilisation, disease control and partial replanting tend to be much lower.

Box 29: Main Costs during Establishment of a Clonal Rubber Plantation

With rubber, the highest costs in cash and kind accrue at the beginning of year 1. These include: land clearing and preparation, purchase of planting material, fencing and initial fertilisation. During years 1–3 after planting, cash expenditures are relatively low. Modest fertiliser applications and some replanting are needed, and the crop will require a lot of protection from wild pigs and other animals. In years 4–6, intensive weed control through herbicides is necessary to control the growths of imperata grass, which increase the fire risk.

7.13 Capital requirements during immaturity depend to a large extent on the type of planting material and management systems used. Improved varieties such as clonal rubber or hybrid coconuts have the potential to increase yields and net income considerably and to shorten the gestation period compared with traditional varieties (in the case of coconuts from 10 to 4–5 years). However, they require much higher expenditure for planting material and other inputs during the immaturity period.

7.14 This has two important implications:

- Smallholders either need high levels of existing income (e.g. an existing plantation or off-farm income) or a long-term loan to sustain their livelihoods and meet expenditures during the immaturity period.

- If the full development costs, especially those accruing in year 1, are financed through a long-term loan, the resulting interest costs during immaturity will place a heavy burden on farmer's net revenues, unless subsidised interest rates are used.

7.15 Both factors may constrain the ability of farmers to plant HYVs.

II. Issues Related to Risk

7.16 Obviously, the risks of investing in and financing tree crops increase with the length of the immaturity period. A further factor determining risks relates to the capital costs during immaturity. Though HYV produce higher returns to resources employed, they require higher capital expenditures, especially during year one. Any external event damaging or destroying the immature plantation results in an even higher proportional loss than is the case with planting traditional varieties. Apart from cash-flow constraints, these risk considerations often deter smallholders from investing in HYVs. The major risks related to investment in tree crops are summarised in Box 30:

Box 30: Main Risks Related to Investments in Tree Crops

Production risk:

The immature plantation is prone to risks like pig damage, pests or fire hazard, which may lead to a total loss of the investment in the worst case. The mature plantation may still be destroyed by fire or be damaged by pests and diseases, but the risk of total loss is lower. In addition, depending on the crop and conditions, regular maintenance is necessary. Improved varieties, especially, require regular fertilisation and maintenance to reach their production potential.⁴⁶ Lack of funds to purchase inputs or labour shortages at critical stages of plantation development increases the risk of losing trees, and therefore the substantial initial investment. Smallholders are often unable or unwilling to incur these risks and prefer traditional varieties with a low cost/low risk profile.

Marketing risk:

Economic parameters like in- and output prices, labour costs, demand and supply trends, the foreign exchange rate etc. impact on the profitability of tree crops and are difficult to predict. Apart from long-term declining price trends, most tree crops are characterised by cyclical price fluctuations (pig cycle), which may seriously affect their profitability and cash-flow, and thus the repayment capacity of the investor. Individual farmers without contractual marketing relationships may face problems in selling their future produce at remunerative prices during cyclical price dips. Hedging, forward contracts or put options, where they are available, can only protect farmers against seasonal price fluctuations, not against long-term price falls.

Financing risk:

Due to their long-term nature and gestation periods, considerable resources are tied up for longer periods of time. This exacerbates asset/liability management problems of financial institutions, as discussed in Chapter 6. Long-term loans, especially those carrying variable interest rates, are also risky for the farmer. This is especially the case for those farmers who have over-specialized in one tree crop enterprise, and have locked themselves into loan servicing commitments with the expectation that crop prices will continue to be high. Such farmers are extremely vulnerable to price fluctuations and may easily default on loans during a "baisse" in the commodity market.

⁴⁶ Clonal rubber can only develop its full yield potential if it is regularly maintained during immaturity.

III. Issues Related to Product Characteristics

7.17 A further important issue to be considered in tree crop financing is the characteristics of the harvested product. Perishability and bulkiness may result in a direct link between production and processing. This is the case of crops like oil palm, sugar cane and tea which require immediate processing because of rapid quality deterioration after cutting⁴⁷. Where an automatic link between production and processing exists, loan repayment in kind through deduction at factory level is possible at low transaction costs. Even long-term loans might be recovered this way, as long as competition from competing buyers can be controlled.

7.18 Other tree crops like rubber, coffee or coconuts can easily be stored and transported, even over long distances, after harvest and before processing. Competitive output markets are more likely to emerge because both farmers and processing factories have different options to sell produce or source raw material. In some cases, such as rubber, first processing stages can be carried out even on small farms, and do not require capital intensive investments. In case of crops without a direct link to processing, credit repayment through output marketing is unlikely to be successful, because there are too many possibilities of (and incentives for) side selling.

B. HOW SMALLHOLDERS FUND TREE CROP DEVELOPMENT

7.19 Before discussing the role of external financing for smallholder tree crop development, attention should be paid to the fact that a significant part of smallholder tree crop development has occurred spontaneously, without support from governments. This shows that farmers have adopted different strategies to cope with the risks and challenges of financing tree crop development. They have managed to plant large areas of land using their own funds and by relying on traditional sources of credit. These strategies include:

- use of low input/low risk technologies;
- intercropping and use of mixed farming systems, including both annuals and other perennial crops planted between young growing trees;
- use of existing plantations as source of funds for expansion;
- use of non farm income;
- Staggering tree planting over many years, such as in agro-forestry systems, where damages of young trees through animals can be controlled

⁴⁷ Fresh Fruit Bundles (FFBs) need to be processed within 48 hours, sugar within 6 hours and tea within one day. The bulkiness of FFB or sugar cane further limits the possibilities of transport over longer distances, especially in case of poor roads.

Box 31: Jungle Rubber — Low-input and Low-risk Technology

In Indonesia, only a minority of smallholder farmers plant tree crops like rubber as pure mono-crop plantations. Most smallholder tree crop farming is on a continuum between pure mono-cropping and agro forestry systems. Farmers intercrop rubber with coffee, fruit trees or timber species (*jungle rubber*). Traditionally, jungle rubber has been planted after forest clearing, using unselected planting material on upland rice fields. After intercropping with rice or other annual crops during the first three years, the plantation is left to forest re-growth. No maintenance is provided until tapping can be started, usually 8 years after planting. In the meantime, the farmer uses his labour for clearing other land or planting other crops⁴⁸.

The use of unselected seeds and the low levels of input use avoid high capital requirements and reduce the risk of failure, and can thus be accommodated within the general farm household cash-flow. Farmers living in forest areas have a long tradition of harvesting timber, fire wood and non-wood forest products, both for home consumption and for commercial use.

I. Examples of Farmers' Self-Financing Strategies

- ***Life cycle strategies and the role of sharecropping:*** Sharecropping is an important informal financing strategy. It helps young farmers to gain experience and accumulate funds for investing in their own plantation. Existing plantations serve as a source of funds for financing expansion. For older farmers, plantations might provide old age security, and sharecropping compensates for lack of working capital and for a declining labour force.
- ***Use of off-farm income sources:*** Wage labour is an important income source especially for poorer and younger tree crop smallholders. Petty trade in the form of kiosks are another form of side income which is mainly used by the better-off families amongst rubber producers.
- ***Spontaneous migrant – Financing within informal networks:*** Informal financial mechanisms are often used within informal social networks such as extended families, ethnic groups or village communities. The Bugis in Sulawesi (Indonesia) have developed high yielding cocoa plantations entirely without external financial or project assistance (Guyon, 1997).
- ***Adaptation of recommended agronomic best practices:*** As mentioned above, farmers are often not able or willing to take the risks of investing in clonal varieties. They adapt agronomic best practices according to their own constraints and requirements. These strategies may not be ideal from an agronomic point of view, and they would not be used on commercial estates. However, they might be most appropriate for the specific resource endowments and farm-household cash-flows of the concerned smallholder families⁴⁹.

⁴⁸ Except for initial land clearing and protecting of immature crops, farmers prefer to manage tree crops on an individual household basis. Because there are no peaks for labour demand for tree crops and no irreversible damage on crops if labour is temporarily withdrawn, smallholders can fit tree crop cultivation around their other economic activities.

⁴⁹ One example is the use of clonal seedlings (trees that are not bud grafted but have been grown from seeds collected in clonal plantations) which can yield up to 750 kg per ha, but are less risky and much less demanding in term of input requirements. A second example is the widespread practice to start tapping already in the 4th or 5th year after planting. Though this clearly reduces the economic life and of the plantation and the yields in later years, it may be the best solution for resource-constrained poor farmers with no access to long-term finance.

- ***Existing plantations as sources of funds for tree crop expansion:*** Experience in Indonesia shows that farmers who participated in tree crop development schemes, often managed to use the allocated plantation as a stepping stone for diversification, or for funding additional plantation development outside the scheme area. Though this often occurred at the expense of the schemes⁵⁰, it shows the ability of farmers to self finance expansion, once they acquired a minimum stock of tree crops.

7.20 A careful analysis of farmers' self financing strategies in any particular local context should be the basis for the design of any support strategy, including financing. Any external finance for smallholder tree crop development should be structured to complement rather than replace farmer's own financing strategies. It should target specific and identified constraints which cannot be tackled by farmers themselves or by local financial institutions.

II. Main Challenges Faced by Farmers: Replanting and Adoption of HYVs

7.21 The previous section has shown that farmers mainly plant traditional varieties under low input systems, partly to minimise risks and partly due to the financial gap during immaturity of the crops. Lengths of the gestation period, capital expenditures during this period and the availability of side incomes are crucial determinants for the ability of farmers to finance investments in HYVs. Planting of short gestating crops, even using HYVs, might still be accommodated through informal financial arrangements, the use of short-term bank loans and other income sources. The planting of HYVs of long gestating crops is inherently difficult for smallholders, due to the prolonged financial gap. Having stated this, improved varieties providing higher returns to invested resources (land, labour and capital) might eventually be essential if farmers are to sustainably enhance their livelihoods and remain competitive in the market.

7.22 A second constraint is related to replanting. Farmers prefer new plantings instead of replanting, mainly for two reasons:

- The existing plantation can be used as a source of income to secure livelihoods during the immaturity of the new plantation.
- In traditional land tenure systems, planting of trees on communal land constitutes an inheritable claim on the land.

7.23 However, replanting might be needed if the existing plantation is too old and if further expansion of the area under low yielding trees is no longer possible, e.g. due to land shortages. Traditional farming systems such as the jungle rubber system in Indonesia might become unsustainable with increased population density. Replanting with clonal rubber appears to be a good option to improve livelihoods, especially in areas with limited possibilities for diversification.

7.24 Small farmers with limited land resources, whose livelihood depends mainly on their existing plantation, may not be able to finance replanting. The cash-flow problems are particularly severe if traditional varieties of long gestating crops are to be replanted with high input clonal varieties. In principle, farmers could plant or replant HYVs gradually. However, in

⁵⁰ Farmers use these strategies under NES schemes to avoid deductions from the sales proceeds for loan repayment.

practice such an approach might be constrained by economies of scale in marketing of perishable and bulky products (e.g. oil palm). In areas with high risk of damages of immature trees through animals, fencing or other protective measures may also have economies of scale, and therefore require a minimum area to be economically viable (see Box 32).

Box 32: Indonesia – Economies of Scale in Rubber Replanting

The risk of damage through animals results in high initial costs for fencing and other protection measures during the early immaturity period. There are economies of scale in this type of protection. Farmers tend to (re)plant at least 1 ha of rubber. Often, contiguous blocks belonging to different owners are replanted simultaneously, within a continuous fence. Therefore, a minimum scale for planting/replanting is required. This reduces the viability of a “step by step–approach” for replanting, which results in high costs for the individual farmer. However, for many resource–poor farmers with little land or standing rubber, this is the only option.

C. OPTIONS FOR FINANCING TREE CROP DEVELOPMENT

7.25 Different options will be discussed for financing smallholder tree crop development. First, experiences and lessons learned from tree crop development schemes will be discussed. Then alternative approaches, based on diversification, intercropping and the use of the rural banking system will be explored.

Lessons Learned From Financing Models for Tree Crop Development

7.26 Smallholder tree crop development schemes were promoted by governments and donors for the following purposes: i) enhancing foreign exchange earnings; ii) increasing the commercialisation of smallholders; iii) promoting regional development; and lately, iv) reducing rural poverty. Since the 1990s, there has been a shift in the donor community from sub–sectoral approaches towards regional development aimed at reducing poverty. In such a context, tree crops are only considered as one means for increasing smallholders’ incomes and livelihoods, not as an objective *per se*. However, important lessons for future tree crop development strategies can be learned from past approaches. The discussion in this chapter is mainly based on the findings of a tree crop sub–sector review carried out by FAO on smallholder tree crop development projects in Indonesia during the past three decades (see Box 33). It also considers project documents and an earlier review of different approaches used in South East Asia by Guyon (1997).

Box 33: Tree Crop Development in Indonesia

Indonesia provides interesting lessons, because it has used a number of different approaches for smallholder tree crop development for a variety of crops (mainly oil palm, rubber, coconut, tea, coffee and cocoa) during the last three decades. A number of projects were carried out, most of them co–financed by international development banks. Smallholder tree crop development projects were an important tool within a policy to settle inhabitants from the highly populated islands of Java and Bali to the sparsely populated Outer Islands, mainly Sumatra and Kalimantan (transmigration programme). Thus, the government played an active role in tree crop development through the Directorate General of Estates (DGE), government owned plantation companies (PTPs) in NES schemes and Project Management Units in different parts of the country. The Central Bank (Bank Indonesia) provided long–term refinance facilities for tree crop development which were handled by government owned and by private commercial banks. Since the 1990s, the government has followed a policy of encouraging more involvement of private plantations and commercial banks in smallholder tree crop development. Apart from direct government intervention in construction and financing tree crops, the government used indirect measures such as the allocation of concessions (linked to smallholder development) and offering subsidised long–term loans.

7.27 Two main approaches have been used by donors and governments for smallholder tree crop development: The NES–approach and the PMU approach.

I. The Nucleus Estate Smallholder (NES) Approach

7.28 The NES approach has mainly been used for establishing large plantations in sparsely populated areas, often combined with settlement projects. It is based on links between technical assistance, finance and output marketing. The Nucleus, a private company or parastatal, develops a large plantation using estate methods and technologies. Smallholders sometimes participate as wage labourers during construction. The Nucleus is financed by the government or through banks using loan and equity finance. When the tree crops come into production, a part of the plantation is handed over to smallholder farmers (conversion). Normally, each smallholder receives 2 ha of the estate crop plus 0.5 ha for growing food crops. Only the plots which fulfil minimum quality criteria in terms of density and quality of trees are transferred to smallholders and are subject to cost recovery through a Smallholder Credit Agreement (SCA)⁵¹.

7.29 The smallholders sign an SCA, which obliges them to sell all their produce to the Nucleus. The smallholder loan includes the development costs of a two ha plot plus the interest accrued during the immaturity period. Deductions are made for repayment of the long–term loans. Repayments are normally set at 30% of the estimated cash. To save transactions costs, smallholders are organised in blocks and input supply and credit are often channelled through cooperatives which receive fees of 2 percent for their services.

7.30 In Indonesia, since 1977, around 400.000 ha smallholder tree crop plantations have been established under NES, including rubber (46%), oil palm (41%) and hybrid coconut, tea and coffee (13%). Many of the first generation NES were funded by donors like ADB and the World Bank.

Strengths

- The NES approach allows planting of large areas under estate conditions. It is particularly suitable for developing tree crops in sparsely populated areas, possibly in combination with settlement schemes.
- Economies of scale in production and marketing can be achieved.
- Collection in kind through deduction from the produce at factory level is a cost effective way of loan recovery for crops with an immediate link to processing, as long as outside selling can be controlled.

⁵¹ This quality audit is carried out by a team consisting of the Directorate General of Estate Crops (DGE), bank, local government, coop/farmers, which classifies the plots in four categories. Only plots in category A and B were transferred to the smallholders whereas class C and D had to be partly or completely replanted. The responsibility of replanting lies with the *inti* (Nucleus estate).

Weaknesses

7.31 One obvious problem results if there are competing buyers who can pay more for the produce (because no loan deductions have to be made). Outside selling to avoid credit repayment was a particular problem for rubber and coffee which normally have several marketing channels. This scenario is by no means uncommon, even for supposedly “safe” crops such as oil palm. In West Africa, there are small-scale village level processors as competing buyers (see Box 34), whereas in Asia, increased density of oil mills and/or better road networks have led to increased competition. Though beneficial for the farmer, this undermines interlinking as a loan repayment mechanism.

Box 34: Extra-contractual Marketing in Ghana

One problem for the Ghana Oil Palm Development Company (GOPDC) is that a number of small palm oil mills have sprung up around the periphery of their concession, in close proximity to GOPDC out-growers. These mills pay the same price or slightly more than GOPDC and pay immediately in cash. The inability of GOPDC to pay in cash when produce is delivered to the Company is a major competitive disadvantage, which strongly encourages producers to sell to other processors. The current GOPDC payment process takes about three weeks. At the current stage in the life cycle of the out-growers' palm trees, the 17,000 ha under cultivation should be producing about 170,000 tons (10 tons/hectare) of palm fruit per year. However, only about 120,000 tons are being delivered to the GOPDC's 32 collection stations or to the mill, suggesting a considerable level of extra-contractual marketing.

In response to this extra-contractual marketing the company has decided that seedlings which were previously provided on credit will, from now on, be sold for cash. A new out-grower with the average 2.5 hectares would, therefore, have to invest 6.5m Cedis (US\$938) to start a new farm. Out-growers feel that this investment would put up such a high barrier to entry that it would exclude nearly all new entrants.

7.32 Further problems result from the fact that Nucleus companies and out-growers are highly unequal partners, in terms of access to information, educational background and market power. Moreover they do not have the same objectives (see Chapter 5). A monopsonistic situation always conveys the danger of opportunistic behaviour by the mills. Miss-management of accounts (differences between bank, Nucleus and Coop) or high deductions to cover high overheads of the Nucleus have occurred frequently in Indonesia. If farmers feel cheated (e.g. if the price paid by the Nucleus is lower even before deduction for loan repayment than the price offered by private traders) they try to avoid the perceived exploitation through outside selling. Conflicts between smallholders and Nucleus are frequent, both in Indonesia and elsewhere.

7.33 However, it has to be emphasised, that outside selling can be minimised in well managed NES schemes. Experiences like the Ophir scheme in Indonesia (see Box 35) show that efficient management and transparency in regard to calculation of deductions and management of smallholder accounts are of utmost importance for achieving high repayment rates and creating a win-win scenario for all participants. This requires considerable input in farmer training and strengthening of farmer organisations, especially those in charge of account management. Unfortunately, at least in Indonesia, the Ophir model remains a rather exceptional case.

Box 35: BDP West Sumatra and Ophir

The Provincial Development Bank (BPD) of West Sumatra is an example of how banks can play an active and successful role in smallholder tree crop development schemes. In the early 1980s, BPD West Sumatra decided to participate in financing the Ophir plantation, an oil palm NES covering 4800 ha of smallholder plantation with each farmer receiving a 2 ha plot. The scheme which was executed by the government owned estate company PTP IV, received considerable technical assistance from GTZ for improving farmer organisations and financial management skills. Farmer groups were established and received training in technical and non-technical matters during the construction of the scheme. Only after this initial period of capacity building, the groups were organised in Cooperatives. A simple computer software was developed which could be handled by the farmer groups, the cooperatives, BPD and PTP IV. This software allowed the farmers to monitor their accounts and control any deductions made for different purposes such as loan repayment, replanting fund, road maintenance, etc.

BPD acted as a channelling bank for a KfW loan and provided a number of additional rural banking services to farmers. However, contrary to other banks it perceived the Ophir scheme as a potential new market and was prepared to undertake the necessary complementary investments. These included opening a new branch, several cash offices and 2 mobile units in the scheme area, training farmers and their organisation in account management and in managing loans. In addition, savings mobilisation was actively promoted. The bank offered different types of short and medium-term loans for farm- and non farm related purposes. The farmers managed to repay their long-term loans earlier than scheduled. Inspired by the good repayment performance, the bank decided to replicate the Ophir approach in several locations using KKPA-funds⁵². Loans to agriculture now account for nearly 14% of the total outstanding portfolio, 62% of which is refinanced by KKPA.

Key factors for success were:

- Good site selection
- Efficient and transparent management
- Training and empowerment of farmers and their organisations, empowering them supervise financial accounts
- An active bank providing much needed complementary financial services
- Additional donor inputs, including financing and capacity building

Joint Ventures: A Future Avenue for NES?

7.34 As mentioned in Chapter 5, joint ventures between farmers and agro-business companies are being proposed and implemented to overcome some of the flaws of the NES approach. Shareholdings of farmers in NES schemes (including the processing enterprise and the plantation company) were introduced in Malaysia at the end of the 1980s on mature NES plantations. The farmers converted their plots into shares in the NES, covering both the plantation and processing enterprise. Apart from dividends, farmers had the possibility of being employed as priority workers on “their” plantation (Guyon, 1997). Such an approach is currently also suggested in Indonesia.

7.35 The idea is based on the fact that the main profits often accrue in processing and marketing rather than in production of tree crops. For example, in Indonesia, the IRR in oil palm

⁵² Credit for Members of Cooperatives: This is the latest of a series of long-term refinance schemes offered by the Central Bank. KKPA loans can be used for any purposes as long as the end borrowers are members of cooperatives. It works under the executing mode, thus the bank carries the full credit risk. Interest rates to end borrowers are fixed at 16%, refinance rate for commercial banks were first set at 3% and later increased to 9%.

plantations is currently around 19% whereas the IIR for oil mills is around 36%⁵³. If smallholders were shareholders in oil mills, they would receive a share of the profits in milling⁵⁴.

7.36 Proponents argue that joint ventures may redress some of the imbalances inherent in the NES–approach, resulting from the asymmetric and monopolistic relationship between farmers and Nucleus. Conflicts and problems such as outside selling of FFB could be reduced through better incentives within a fairer partnership and a sense of belonging. The Nucleus may also provide better extension and other support services to the farmers, who are now part of the company.

7.37 Shareholding would also tackle a further issue which may arise in mature NES schemes. Farmers, after having completely repaid their loans and received their land titles, might turn to other crops, leaving the factory idle⁵⁵. In the case of a joint venture, the only exit strategy for farmers from growing oil palm would be to sell his/her shares. This would ensure continuity of production. Issues related to joint ventures, are further discussed in Chapter 8 and in the case study on Equity Share Schemes in South Africa.

II. The Project Management Unit (PMU) Approach

7.38 The PMU provides a full package of support services, including the selection of farmers and sites, the provision of planting material and other inputs, extension and credit. Credit, usually in the form of long–term loans with a subsidy element, is either provided by a bank or directly by the PMU. The PMU approach is often used in existing smallholder areas for replanting or expansion using HYV.

Strength of the PMU–approach

- Ensures the availability of all support services, including financing.
- More participation of smallholders in plantation establishment reduces costs and increases capacity building

Weaknesses

- Largely bypasses the financial system.
- Lack of institutional sustainability.
- High costs of loan administration and collection.
- Further issues related to the PMU–approach will be discussed in the following sections.

⁵³ FAO, 2002.

⁵⁴ In theory, this would increase the scope for using term loans at market rates for financing smallholder tree crop development.

⁵⁵ In fact this was the major driving force behind the implementation of joint ventures in Malaysia (Guyon, 1997).

III. Major Issues Related to Tree Crop Development Schemes

7.39 Based on the experiences in Indonesia, some major issues related to tree crop development schemes will be discussed. Most of them apply to both the NES and the PMU approach. These include:

- Low levels of cost recovery.
- Involvement of banks versus direct financing through projects.
- Using long-term loans versus grants.
- Indirect versus direct cost recovery.

Issue 1: Low Levels of Costs Recovery

7.40 This is a common feature of most tree crop development schemes and a major concern. Some of the underlying problems are related to the financing mechanisms, others to the implementation and institutional procedures. Both approaches have been plagued with low levels of cost recovery. By the end of the 1980s, in many cases, only 20 percent of the loans were fully repaid. The only exceptions were oil palm NES projects in areas with low levels of infrastructural development such as roads and few alternative marketing channels. Evidence suggests that this picture remained unchanged during the 1990s.

7.41 As mentioned earlier, tree crop development is a complex area, requiring the integration and coordination of financial and non-financial services. Low levels of cost recovery are due to a number of factors, which are related to technical and management problems in establishing and managing plantations, as well as to the financial arrangements and institutional settings for cost recovery. Some specific problems of the NES-approach have already been discussed. Further problems are:

- **Lack of bank involvement in the project at the early stages:** Banks were only brought into the scene at conversion and had no say in the selection of sites, participating farmers or (Nucleus estate) companies or the calculation of farm models. These are critical parameters for a financial institution to minimise credit risks⁵⁶.
- **Underestimation of costs of credit collection:** In case of the WB assisted NES projects, the spread after conversion was set at 2,5% of outstanding loans, below the estimated costs of loan recovery. In case of PMU-projects, BRI was expected to provide village collectors. The resulting costs were considered by BRI as being above the spread provided by the project. Therefore, the incentives of banks for recovering loans were low.

⁵⁶ The underlying problems are the different objectives and performance indicators of DGE and Bank Rakyat Indonesia (BRI), the main participating bank. DGE has to meet output targets such as areas planted or farmers settled in regard to finance, the focus was on disbursement rather than repayment. This is already implicit in the underlying concepts of cost recovery (DGE) versus credit (BRI). BRI as a bank has to look at profitability and risks: A loan can only be granted if it is likely to be repaid.

- **Poor selection of farmers:** Poor selection of farmers often undermined the success of the schemes. Some participants fell outside the age range, were not permanently resident in the project area or had credits in arrears, e.g. rice loans. A considerable percentage of participants were so called ‘white collar farmers’; these are well connected individuals who soon became absentee landowners with no real interest in growing tree crops.
- **Low quality of plantations:** A particular problem was the low quality of plantations. Sub-standard plantings frequently required replanting and delayed conversion of the plantations to smallholders⁵⁷.

Issue 2: Participation of Banks in Schemes

7.42 Participation of banks in past tree crop lending was plagued by many problems, mainly due to a different set of objectives between banks and tree crop development agencies.

7.43 Two approaches for bank participation were used in Indonesia:

- Under the **executing modality**, the bank carries the full risk of loan repayment. Funds are provided as liquidity credit⁵⁸, but banks have to contribute up to 35 percent of the loan amount from their own funds. The bank is therefore actively involved in the screening and selection of borrowers, inspection of sites and borrower supervision.
- Under the **channelling modality**, funds are provided by the Ministry of Finance or donors, and the credit risk is borne entirely by the government. The handling bank only serves as an intermediary for disbursement and repayment of funds, and administers the loans against a fee.

7.44 Generally, the executing mode leads to a more active involvement of the banks and thus to better repayment performance. However, banks are often reluctant to engage in such loans, unless some trusted agency (e.g. the government or a private Nucleus company) provides a guarantee for repayment. Tree crop development agencies such as PMUs or Nucleus companies also often prefer the channelling mode, because banks do not interfere in selection of sites or participating farmers. However, the channelling mode provides too few incentives, checks and balances to deliver satisfactory outcomes.

⁵⁷ Before conversion, the interests accruing were paid by the government, plus a spread for administration costs. After conversion, the spread was reduced and did not cover the costs of collection. This created incentives for BRI to delay conversion. In addition, government had to bear the costs of substandard plantings and replanting. This resulted in disputes about the classification of plots, especially between class C and D, as the criteria are somewhat arbitrary. The farmers were also interested in delaying conversion, because inflation would reduce the real amount they had to repay. Delays in conversion further undermined their willingness to repay. Once a critical level of arrears had accumulated in a region, farmers were collectively blacklisted and formal bank lending was suspended.

⁵⁸ Liquidity credits are credit lines provided by the Central Bank to the commercial banking system for on-lending for defined purposes e.g. development of NES, and to target groups (e.g. members of cooperatives).

7.45 The reluctance of the banking sector to engage in tree crop finance is in part based on the negative experiences during the first generation of projects. In case of Bank Rakyat Indonesia (BRI), it was fuelled by increasing confusion about its role as a commercial versus a development bank, especially after the financial sector reforms in the early 1980s and the successful launching of the BRI's Unit Desa system. However, the examples of the Ophir scheme (see Box 35) shows what can be achieved, if a bank takes a more active stance regarding smallholder tree crop development.

Box 36: Conditions for the Provision of Long-term Loans through the Banking System

The use of long-term loans as cost recovery instruments requires certain preconditions, such as: a) existence of bank branches in the project area, b) bank staff trained in tree crop loan appraisal, c) capacity and authority of bank to alter the repayment schedule in case of unexpected price changes, d) solvent banks which can assume parts of the credit risks, e) high and uniform standards of project implementation, f) proper cadastral surveys and land titles issued before conversion, g) transparent and competitive pricing formulae in place, h) flexible credit packages tailored to the individual smallholder.

The involvement of banks requires a high degree of institutional coordination which may lead to delays and higher costs. The value of the assets financed (trees) must be evaluated independently, land titles must be in place, and the creditworthiness of the individual farmer must be assessed.

Banks should not be forced to participate in tree crop development schemes. Incentives such as training in loan appraisal, access to stable long-term funds at fixed interest rates and a partial loan guarantee might be necessary to encourage bank participation. However, banks should be obliged to share at least part of the risks and use some of their own resources. This share might be increased upon completion of an initial learning period.

The provision of long-term loans is likely to be feasible only for those crops which allow collection in kind through the marketing system, unless the farmers can offer sufficient high quality collateral.

7.46 The last WB-funded PMU-type rubber and coconut development project in Indonesia (TCSDP⁵⁹) concluded that the best approach would be not to involve the banking system at all and provide all support services through the PMU, including disbursement, administration and recovery of credit. The initial costs for year one were provided as a grant; for the following years the farmer could take loans provided by the PMU at market rates (21% p.a.). This approach was meant to minimise the distortions of the financial system and convert the interest rate subsidy into an outright grant.

7.47 However, the establishment of an efficient credit administration and cost recovery system proved to be costly and time consuming, and was completed with considerable delay. Though experiences showed that a transparent system is well accepted by the farmers, the delays in setting up the system contributed to low repayment rates⁶⁰. Farmers who wanted to repay their loans in order to get a formal land title and to access working capital loans from banks had to wait until the system was operational.

7.48 There are additional problems, which question the wisdom of providing and recovering long-term loans through PMUs. Though a transparent loan administration system and

⁵⁹ Tree Crop Smallholder Development Project.

⁶⁰ At time of the PCR in 2000, 13.4% of all outstanding credit has been recovered and only 21.1% of outstanding from previous projects (SRDP I and II). The main reason for this may have been the delay in setting up the loan administration and collection system. Anecdotal evidence suggests that many farmers asked the PMU how they could repay their loans to get rid of their debts and be granted the land title, but had to wait until the system was operational. This has certainly undermined repayment moral.

the granting of land titles after full loan repayment certainly provide strong incentives for farmers to repay, no effective sanction mechanisms are in place to discourage wilful default. Foreclosure of pledged land is not practical. Moreover, PMUs are temporary institutions with a single set of objectives and are viewed by farmers as such. They cannot use mechanisms developed by micro-finance institutions to encourage repayment, such as linking timely repayment to the access to a new loan for either working or investment capital. Finally, underfunding of PMUs may lead to lack of incentives and mobility (vehicles, fuels) for effective loan recovery, while loan collection through extension workers created doubtful incentives to the farmers, some of whom tried to avoid these officials.

Grants Instead of Subsidised Loans?

7.49 The previous section has shown that credit schemes for crops such as rubber and coconuts, where there is no automatic link to marketing, are unlikely to result in high recovery rates. Consequently, different approaches, including the use of matching grants, might be explored for these crops.

7.50 Though long-term loans provided under projects were in practice often analogous to a grant (due to low recovery rates), high collection costs reduces the amount of public resources which can effectively be transferred to the farmers. Negative side effects such as high fiscal costs and damage to the rural financial system may outweigh the benefits of increased income of a limited number of smallholders. Moreover, due to weak loan enforcement procedures, long-term tree crop loans were often considered by the farmers as grants rather than as loans. This undermined credit discipline and thus financial deepening. In addition, the extent of the debt overhang in a region with a high share of tree crop loans in arrears discouraged further lending by financial institutions or even the opening of new branches.

Box 37: Level of Subsidies in Tree Crop Projects in Indonesia

Past tree crop development projects in Indonesia carried high implicit rates of subsidies. During the first generation of projects (1970 – 1990), no interest payments accrued during the grace period. In combination with low interest rates during maturity (varying between 6,5% and 12%), this reduced the present value of the costs recovered by 30–50%, depending on the credit terms, even in case of 100% loan repayment.

The 1989 WB-review of smallholder tree crop development projects (World Bank 1989) assessed the level of subsidies inherent in different schemes, through a comparison between the discounted cost and revenue streams, assuming a discount rate of 10% and a repayment rate of 70%. The cost comprised all the components resulting in private benefits, which the smallholder had to repay. The revenues were the payments received net of BRIs collection costs. The effective subsidy element was 67% for the SRDP⁶¹-type projects (rubber and coconut PMU), 84% for the SCDP⁶² and 78% for the NES/PIR projects. In the last-named case, no interest was capitalised during the grace period of 5 or 6 years. In cases where conversion had been considerably delayed, the value of the outstanding loan has been reduced considerably through inflation.

7.51 This questions the rationale of using long-term loans for tree crop development. If a subsidy is deemed necessary on social grounds, it might be better to provide an outright grant and exploring the scope for indirect cost recovery through a tax or cess (see next section).

⁶¹ Smallholder Rubber Development Project.

⁶² Smallholder Coconut Development Project.

7.52 As already mentioned, the WB-funded TCSDP has chosen such an approach, providing the first year expenditures as a grant. For the following years credit was offered at commercial rates, but farmers were not obliged to use the whole package of inputs. TCSDP offered different repayment schedules to farmers and encouraged them to repay as soon as possible. Even repayments in one instalment were possible. Many farmers chose to repay over a period of 3–5 years. This was possible because the overall amount of credit was relatively low. Despite the provision of grants to cover the expenditure during the first year, total costs were not higher than under previous projects which provided long-term loans at subsidised interest rates.

7.53 This serves to focus on the rationale of the use of public resources to subsidise smallholder tree crop development. As has been outlined in the previous section, there are instances where socially and economically beneficial tree crop investments can not be carried out by smallholders due to lack of access to long-term funds or complementary income sources. Experiences in Indonesia and elsewhere show that smallholder tree crop schemes can contribute to sustainable poverty reduction, regional development and increased foreign exchange earning. However, this has normally been achieved at high cost. A major caveat of the “full package” approach of most NES and PMU schemes are the high costs per beneficiary and the associated limited outreach.

7.54 Public support should be preceded by a comprehensive cost benefit analysis, taking also into account the indirect costs and benefits for neighbouring farmers and communities (see Box 38). Moreover, a long-term market assessment is of crucial importance, covering trends in demand (quantity, quality, new export markets, substitute products) and alternative suppliers (new countries with comparative advantages).

Box 38: Indonesia – Positive and Negative Externalities Related to Large-scale Tree Crop Development

Positive:

- trigger regional development through employment, up-stream and downstream linkages;
- enable farmers to self-finance expansion/diversification into other activities. There are instances where farmers defaulted on their project loans/ did not manage their plantation well, but used money to plant their own plantation;
- skills spilled-over to neighbouring farmers, facilitating the adoption of new technologies.

Negative:

- conflicts with local population, especially in case of transmigration programmes;
- conflicts between Nucleus companies and out-growers/local farmers, as well as large-scale private plantations (funded through subsidised term loans provided under a different government and donor funded programme);
- environmental problems due to forest clearing, intensive use of pesticides and monocultures.

7.55 There might be different perspectives between international development finance institutions and national governments regarding the use of grants for smallholder tree crop development. Whereas governments may wish to invest in tree crops as strategic crops for export earning, value adding and poverty reduction, donors like the WB have to keep an eye on the situation on the international commodity markets and the impacts on other producing countries. They should therefore be cautious about any direct support for enhancing supply of tree crops which are mainly produced by smallholders in developing countries and which are characterised by low demand elasticities. The recent “explosion” of Vietnamese coffee production shows the harmful effects of government supported supply expansion on other developing countries. It may

also prompt the need to re-assess options for an international commodity policy aimed at reducing ruinous competition between producing countries, especially for beverage crops. Any loan assistance should be viewed with a lot of care (see Box 39) and would need to take into account the availability of options for diversification into other cash crops and non-agricultural exports.

Box 39: WB-policy on Lending for Plantation Crops

Major concerns about the harmful effects of generalised lending for plantation crops for all producing countries have a long tradition in the Bank. Lending for sugar cane has been restricted since 1961, and the wider restriction on beverage crops (coffee, tea and cocoa) originated in 1973. Any Bank project investment in inelastic demand commodities had to ensure that the export benefits from an individual country's investment would off-set the export loss of all competing developing countries through hypothesized falling prices. However, the application of this criterion was lifted several times, when price and market prospects were judged positive.

There is an opposing view, within and outside the Bank, arguing that a general lending restriction would be most harmful to the weakest exporting countries, with less access to investment finance. Even if the lending restriction would have a positive effect on world commodity prices, there is the likely danger that this would lead to increased investment by those countries (and larger scale producers within producing countries) which have the best access to long-term finance and complementary services and infrastructure. There have been several initiatives inside the Bank to lift the restriction for slow growing poor countries with a high dependence on beverage crops for foreign exchange earning and with few alternatives for diversification.⁶³

Indirect Cost Recovery through a Cess-cum Grant Approach: A Viable Alternative?

7.56 If direct cost recovery through long-term loans is not feasible, indirect cost recovery mechanisms through a tax or cess system in combination with grants might be explored, e.g. for financing rubber replanting. A cess cum grant approach has been used successfully by countries like Thailand, Malaysia and Sri Lanka during the early stages of tree crop development (Guyon, 1997, World Bank 1989). The main arguments in favour of indirect cost recovery are:

- low collection cost associated with the cess;
- suitable mechanism for providing a stable flow of resources to the sector;
- relative underdevelopment of the formal financial sector in rural areas with regard to its ability to finance tree crop development.

7.57 Between 1969 and 1974, export cesses were used to finance tree crop development in Indonesia. The main problem was that only a fraction of the funds were actually recycled for tree crop development, whereas the lion's share "disappeared" in the general development budget.

7.58 The use of cess cum grant approaches has distortionary effects, such as:

- a lower domestic price in relation to the world market price reduces the marginal return of farmers resources devoted to the crop, in case of farmers who do not get the grant;
- it might create artificial demand and encourage planting beyond market demand, thus distorting the farmers resource allocation;

⁶³ Source: OED, 1993.

- applied on a massive scale, it would substitute to a certain extent for private resources.

7.59 These effects can be minimised through:

- reducing the size of the grant to maximise the farmer's own contribution;
- providing the grant for different long gestating crops;
- building-in a phase-out mechanism for the grant;
- reducing the availability of the grant to commodities with a low supply elasticity, which cannot easily be financed through the banking system (crowding out thereby becomes less likely);
- limiting the system to export commodities, because of the larger market size and to avoid taxation of domestic consumers.

7.60 A modest export tax would have the least distortionary effects, as its incidence would only affect the producers, who would also be the beneficiaries. The main risks and challenges would be:

- ensuring that the tax revenues are reinvested in the rubber sector;
- transparency of allocation and channelling of tax revenues, clear criteria regarding regional distribution and targeting of small producers, mainly based on jungle rubber;
- grant should be part of a system to provide quality planting material and extension, a part should be used to induce diversification to enable farmers to meet the expenditures during the following years of immaturity and/or be able to repay loans from the rural banking system.

7.61 Some more serious problems may occur in the longer run, for example if the competitiveness of the tree crop sub-sector declines or market conditions change. Attempts to phase-out the system may face strong political resistance. A second major problem is the distortion of investment decisions, if farmers do not bear the full costs of the investment. Some of these issues will be further discussed in Chapter 8.

7.62 The use of a cess-cum-grant system is clearly a second-best option and has to be designed carefully to avoid the risks outlined above. However, it might be better than the current practice of using subsidised credit. In any case, the distortions have to be weighed against the social and economic benefits of a faster and more widespread smallholder development as a basis for regional economic development and poverty reduction.

IV. Alternative Ways for Financing Smallholder Tree Crop Development

7.63 The limits of tree crop development schemes in terms of outreach, sustainability and funding requirements point to the need to explore alternative ways to enhance farmers' possibilities to finance investments in high value tree crops. These methods are primarily geared

at broadening the farm household cash–flow to increase the ability of farmers to self–finance parts of the development costs, complemented by the use of short and medium–term loans from the rural banking system.

V. Smoothing Farm Household Cash–Flow through Diversification and Intercropping

7.64 Diversification leads to a more balanced household cash–flow, by:

- reducing the dependence on the tree crop cash–flow, especially during the immaturity period, and increases the resilience of the household against external shocks;
- increasing the self–financing capacity of the household, as it helps farmers to sustain livelihoods during the immaturity period or to finance some expenditures for investments in tree crops;
- enhancing the bankability of the farmer, because diversified farm–households can use different income sources to repay short or even medium–term loans for planting material or other inputs even during the immaturity period. In addition, loans do not have to finance the entire cost of the investment (see the next section).

7.65 A strategy to promote diversification can rely on three pillars: 1) intercropping; 2) diversification of farming operations through mixed farming, agro–forestry systems or integration of livestock; 3) off–farm income. The main differences between intercropping and diversification are, that the former only provides income during parts of the immaturity period and does not compete for land, whereas the latter directly competes with tree crops for land (and other farm resources), but provides additional income during the whole immaturity period.

7.66 The potential of intercropping for attenuating cash–flow problems during the early immaturity period has long been neglected by crop research institutes. In some cases, e.g. Kenya, it has even been outlawed to force farmers to produce the main cash crops, thereby maximising the country’s foreign exchange earnings.

Box 40: Options for Diversification and Intercropping

Options for diversification:

There are several options for diversification. These include:

- **Agro-forestry systems and timber production:** Timber species can be grown together with rubber or as monocultures even on soils which are not suitable for annual crops⁶⁴.
- **Mixed farming systems** integrating tree crops with different gestation periods: eases also cash-flow for replanting.
- **Integration of livestock:** Cattle breeding can be incorporated in oil palm and coconut cultivation. This creates on-farm employment and an additional source of cash income.
- **Non-farm income sources:** Under a regional development and livelihoods focus, the potential for off-farm activities could be developed more fully in tree crop areas. Proven approaches of rural micro-finance programmes could be important tools for this.

Options for intercropping:

Another important tool to ease the impact of the negative cash-flow during immaturity is intercropping. Different options exist for intercropping during the first two or so years after planting:

- Intercropping with **food crops:** These traditional systems smooth consumption requirements but rarely generate enough cash to finance inputs or seedlings.
- Intercropping with **high value crops** such as vegetables, watermelon and chilli is viable in areas with good market access and water supply. It provides high returns and a frequent cash income during immaturity which can even be used to repay short-term loans (see Box 41: BPR Trahab Gandah, a Rural Bank Involved in Tree Crop Financing in Indonesia). Inter-cropping with other biennial cash crops like banana, pineapple displays similar features.

Other Potential Constraints for Diversification and Intercropping

7.67 It has to be acknowledged that options for diversification and intercropping may be limited by regional constraints. As mentioned initially, tree crops are often grown in mountainous areas and on acid soils with limited agro-ecological potential for annual crops. These areas are often remote and with poor infrastructure, further constraining the production and marketing of high value crops such as vegetables. This may mean that farmers, understandably, will show little interest in diversification into crops with poor profitability potential. Remoteness and limited local markets also limited the potential for non-farm activities.

Enhancing the Role of Rural Financial Institutions in Tree Crop Financing

7.68 Due to the considerable risks and lack of adequate long-term funding sources, F.I.s are generally not able to provide long-term loans to farmers which match the cash-flow needs of the tree crop (BAAC is an exception). There are other ways, how rural F.I.s can contribute to finance tree crop development.

⁶⁴ There is a growing demand in international markets for high value timber. Because of environmental concerns, and rising consumer awareness in OECD-countries, there is a shift in demand towards certified wood from socially and environmentally sustainable smallholder production. Multinational furniture companies increasingly engage in contract growing schemes with smallholders for timber production, providing technical assistance, planting material and inputs and a cash payment during immaturity.

- They can finance diversification in short-term activities (farm and non-farm related) and intercropping, which attenuate the impact of tree crop establishment costs on the household cash-flow.
- Provide savings facilities and short-term loans for different purposes; these contribute by smoothing farm household cash-flows and helping to cope with transitory liquidity shortages.

7.69 Both measures reduce or even eliminate the need for long-term loans. They help farmers to sustain their livelihoods during the immaturity of the tree crops. Depending on potential for intercropping/diversification and the type of tree crop and the farm household cash-flow, reliable access may allow the full or partial financing of tree crop development costs, particularly the costs accruing after year 1 until the first harvest. A phased approach might be necessary: F.I.s would finance diversification to smooth their farm-household cash-flow and create a base for repayment of short-term loans. Eventually, parts of the tree crop establishment costs may be financed through short or medium-term loans, to be repaid from other income sources.

7.70 Banks may not be willing to finance farmers who have never grown tree crops before. Farmers would then need to establish the first plantation out of their own resources. Once the farmer has developed a plantation, access to finance for expansion will be easier because the income stream can be used for loan repayment. In addition, the existing plantation proves the farmer's ability to manage tree crops, plus his ability to manage the necessary financing. Some tree crops, such as rubber, oil palm or tea, are compatible with the micro-finance techniques for loan repayment through frequent small instalments, because they generate a constant cash-flow throughout most of the year (as opposed to seasonal annual crops and fruit trees).

7.71 There is a huge potential for the involvement of financial institutions in existing tree crop schemes, as well as with farmers who have benefited from earlier schemes. Few banks have realised and exploited this potential. BPD West Sumatra and BPR Trahab Gandah are two examples (see Box 41).

Box 41: BPR Trahab Gandah, a Rural Bank Involved in Tree Crop Financing in Indonesia

BPR Trahab Gandah is a privately owned rural bank in South Sumatra, Indonesia which has developed lending to small farmers for agricultural purposes as a profitable activity within a nearly untapped market. As most rural banks and commercial banks are located in urban areas, competition for low risk lending like salary loans to employees or short-term loans to traders is stiff. In agriculture and particularly for farmers, BPR Trahab Gandah only competes with private moneylenders charging interest rates up to 10% monthly. This leaves enough scope for developing better and still cost-covering loan products for tree crop farmers.

BPR Trahab Gandah has a total outstanding loan asset portfolio of Rp2.7b; 90% of this amount has been lent for agricultural purposes. It finances mainly rubber and oil palm expansion, chilli and vegetable production. The average loan amount is Rp1.7m, (US\$170) the maximum loan ceiling is at Rp20m (approx. US\$2,000). The percentage of non-performing loans, of 4.52%, is below BI's target.

It offers two loan products:

- **Flat credit** charges a monthly interest rate of 3% which has to be repaid together with principal in several instalments. Maturities are between 6 – 24 months
- **Interest credit** is provided at a monthly flat rate of 3.5%. Only the interest has to be repaid in monthly instalments, whereas the principal has to be repaid as a lump sum at the end of the maturity period

BPR finances expansion of rubber and oil palm. Most of its clients are beneficiaries of former WB projects SRDP and TCSDP, and have at least 1 ha of clonal rubber. Only 10% are jungle rubber farmers wishing to replant a part of their rubber. Farmers who have benefited from past tree crop projects can draw on a high and continuous income stream to meet expenses during immaturity of the new plantation. However, some demand credit to cover initial expenses such as land clearing, planting material and fertiliser. In most cases, the loan of Rp1.5–2m finances only part of the costs. Labour expenses are not financed by BPR Trahab Gandah.

The bank has acquired considerable knowledge of rubber cultivation and other agricultural activities. Bank staff visit the clients for loan appraisal. Together with the farmer, the bank first carries out an assessment of the household cash-flow to determine the credit need. Loan amounts are therefore limited and targeted to specific periods of immaturity. The personal contact also allows greater flexibility with regard to collateral. If land titles are not available, moveable assets or household goods are pledged. In addition, moral pressure is exercised through the involvement of religious leaders in the selection and supervision of farmers. Due to its flexibility, BPR Trahab Gandah can exploit a niche market not covered by BRI's Unit Desas, because in most cases land titles are still deposited at the PMU.

Moreover, the bank plays a pro-active role in assisting farmers with insufficient existing income to firstly diversify into high value crops. This helps them to sustain their livelihoods during immaturity, meet some of the expenses of tree crop planting and repay loans. Chilli and vegetables can be grown in the region and are highly profitable, also because of good market access.

The example of BPR Trahab Gandah shows, that there is considerable scope for expanding rural bank lending to tree crop farmers, if the bank takes a pro-active stance and develops a suitable financing technology and client relationship. However, this development is most likely to occur in areas where past projects have established a regular cash-flow through planting clonal varieties, and where possibilities for intercropping and diversification into short-term high value activities exist.

7.72 A strategy of creating sustainable sources for smallholder tree crop finance based on the rural financial system requires intensive training and support for both the farmers and the banks. Farmers would need training in financial management skills to analyse and project their household cash-flow over a longer time horizon, taking into account all major expenses and income sources. A financing and investment plan would have to be developed with farmers, including different options such as intercropping, diversification and off-farm income. Such an intensive participatory training enabling farmers to analyse, manage and plan their farm household cash-flow and determine critical gaps and need for loans is crucial and is likely to have high pay-off on terms of improved investment and loan repayment performance. Banks need to be convinced to approach the training of farmers in financial management skills as a long-term investment in their own interest, which helps them to create a market of reliable costumers.

7.73 In addition, financial institutions themselves may need specific training to be able to actively support smallholders' tree crop financing strategies. Due to the widespread perception of agriculture and tree crops of being too risky and not bankable, bank officers are usually not familiar with agricultural loan appraisal. A better understanding of farmers' constraints and opportunities and tree crop production could help change this attitude. Especially in areas with good potential for growing tree crops profitably, and where there is vigorous competition between rural financial institutions for financing non-farm activities, some might discover tree crop farmers as a potential market to be developed.

7.74 Such training could be provided by a PMU-type of institution with a mandate of facilitating rather than providing finance. Obviously such a strategy would have to be complemented by support services such as supply of planting material through a certified private nursery system, extension and applied research geared towards smallholder technology adoption. These would increase the profitability of tree crops and lower the risks of failure. Improved roads and communications would lower transaction costs in rural banking and foster competitive output markets, leading to higher farm gate prices.

Limits of the Strategy

7.75 The limits of a strategy based on rural financial institutions have to be acknowledged. It is only feasible in areas where financial institutions are already established and where scope for economic diversification exists. Often tree crops are grown in areas which are hostile for the establishment of sustainable financial institutions. Constraints include: low population density, poor infrastructure, and high dependence on agriculture for household income. The preferred clients would be farmers with existing tree crops, preferably high yielding varieties or sufficient additional income sources. In addition, strong commitment from the management of the financial institution is required. This is more likely in public banks with a development mandate or in areas with strong competition between financial institutions. The weaker institutions, which cannot compete with commercial banks may follow the example of BPR *Trahab Ganda* and discover tree crop farmers as a market.

7.76 It is likely therefore that micro-finance institutions will remain a relatively minor player in the financing of tree crop development. If they become active, it will be more as a provider of complementary finance. This will lead to a slower but possibly more sustainable process of technology adoption. The outcome in terms of area planted would be unpredictable because neither the farmers nor the financial institutions would be obliged to use the funds for tree crops, if other activities are more profitable.

D. CONCLUSIONS

7.77 Table 5 summarises the advantages and disadvantages of the main strategies for tree crop financing discussed in this chapter. It shows that there is no "magic model" or "one size fits all" approach.

Table 5: Tree Crop Development Approaches at a Glance

Management System	Rural Financial Institutions	Project Management Units	NES
Advantages	<ul style="list-style-type: none"> • Can build long-term relationships with farmers • Can finance diversification • Provide different financial services 	<ul style="list-style-type: none"> • One-stop shop for financial and non-financial services • Have proven highly effective in establishing of or replanting with HYVs 	<ul style="list-style-type: none"> • Highly effective in block planting of large areas • Allow interlinking if marketing monopsony can be enforced
Disadvantages	<ul style="list-style-type: none"> • Can normally not provide long-term loans • Can only finance farmers with high non-farm incomes • Are only feasible in areas with scope for diversification 	<ul style="list-style-type: none"> • Supply driven: only offer services for one crops • Not sustainable • By-passes rural financial system • Weaknesses in loan recovery 	<ul style="list-style-type: none"> • Only suitable for some crops • Often not sustainable (attracts competing buyers) • Creates highly unequal partnerships and dependency of smallholders

7.78 In view of the variety of farming and livelihood systems, overall strategies or models are of limited use. In view of scarce public resources, governments and donors are forced to make strategic choices:

- focus on the selective introduction of HYVs for a minority of farmers, versus
- focus on the majority of farmers, using a less productive set of measures.

7.79 Some basic principles and guidelines for financing smallholder tree crop development can be concluded at this stage:

(i) ***Finance farm households, not tree crops:***

- Structure external finance for smallholder tree crop development in a way that it complements rather than substitutes farmers' own financing strategies, based on a careful analysis of the constraints in a particular local context.
- Consider financing tree crops as a means to enhance the livelihoods of a farm household instead of an objective *per se*.
- Ensure that farmers have access to reliable sources of credit in case of cash shortages at critical periods during immaturity of the plantation.
- Foster diversification and intercropping to soften the impact of the cash-flow of tree crops on the household cash-flow and open additional sources of self-finance for investments in trees.

(ii) Use a flexible approach:

- Provide the farmer with different technical options (different varieties, inter-cropping) adapted to his asset base and household cash-flow instead of a full package of support, which has limited outreach and high costs.
- Minimise debt, maximise equity, also in view of the high risks involved in long-term investments. Promote savings behaviour and create convenient and safe savings facilities.

(iii) Assess the need for and feasibility of long-term finance and grants on a case by case basis:

- Limit the use of long-term loans to crops with an immediate link between production and processing in areas with low level of competition, where in-kind credit collection is feasible at low cost.
- Ensure transparency in the management of smallholder loan accounts, e.g. through making simple low cost software for monitoring of accounts available for farmer groups, banks and Nucleus companies.
- Consider the use of grants and indirect cost recovery systems only in situations when the adoption of HYV of long gestating crops has clear and long-term benefits for farmers and other financing approaches are not feasible.

(iv) Promote complementary investments and services:

- Foster investments in upstream and down-stream activities such as certified private nurseries to supply quality planting material, marketing infrastructure and processing facilities: this should lead to higher prices, more competition and transparency, price premiums for quality, increased profitability of tree crops and lower overall investment risk.
- Train farmers in financial management skills and financial institutions in cash-flow based loan appraisal.

8. KICK-STARTING ARRANGEMENTS FOR TERM INVESTMENTS

A. BACKGROUND

8.1 The case studies have shown the scope but also the limitations of the financial market approach for financing term investments in agriculture. These limitations include:

- **Regional limitations** Rural financial institutions, especially the ones offering term finance, are most likely to emerge in high potential areas, close to markets, with suitable infrastructure and a high population density.
- **Limitations related to certain investments:** Financial institutions tend to finance only certain types of investments with short or no gestation periods, low capital requirements and a steady cash-flow. Larger and especially lumpy investments with longer gestation periods and/or a highly seasonal cash-flow (like many tree crops) usually have to be self-financed by farmers. External finance, such as rolling-over of short-term loans, can only play a complementary role.
- **Limitations related to certain clients:** Farmers need to have considerable skill and prior experience in order to qualify for a term loan or a lease. In addition, they have to provide collateral. Rolling over short-term loans to finance longer-term investments normally requires that farmers have additional income sources to service the debt payments. Despite the importance of deposit mobilisation, it has to be recognised that there are some circumstances in which locally mobilized deposits are an inadequate source of funds for lending for term loans.

8.2 This means that if a purely financial market oriented approach is pursued, it is possible that there will be both a slower pace, and a more uneven pattern of technology adoption or enterprise diversification than socially desirable. A more pro-active approach might be needed in some cases to make optimum use of opportunities for sound agricultural term investments.

8.3 This chapter will first define the term “kick-starting” and explain how kick-starting mechanisms relate to other measures and approaches discussed in this study. It then discusses the basic rationale behind them and outlines some specific situations when they might be justified. It then turns to the discussion of problems in the use of such measures and proposes some general guidelines to assess their costs and benefits. Furthermore, major instruments such as grants, declining interest rate subsidies for term loans and “soft” equity finance will be discussed, highlighting some design criteria and problems/trade-offs in their implementation, based on the case studies.

B. KICK-STARTING MEASURES TO ENHANCE TERM FINANCE

8.4 The term “kick-starting” has been used in this chapter’s title to describe the temporary use of public seed funds to support capital investments (asset accumulation) by individuals or groups. It comprises interventions which are **temporary** and targeted at **commercially viable and sustainable investments**, which – for one reason or another – do not

attract appropriate financing in the financial marketplace. These investments are economically viable in the sense that they create a reasonable internal rate of return before financing, but a much lower rate of return after financing, when market interest rates for external funds are applied to the estimate. There are also situations when certain term investments might be deemed necessary primarily on poverty grounds, but might not achieve a positive financial rate of return. Examples are tools, equipment or irrigation for food insufficient and extremely vulnerable households or HIV infected rural dwellers. These situations cannot be discussed in this report. They are simply noted.

8.5 Kick-starting interventions have important dynamic objectives beyond the financing of specific investments, such as:

- Integrating poor people into financial markets.
- Stimulating increasing volumes of complementary commercial finance.
- Enhancing the scope for economic diversification through upstream and downstream linkages.
- Fostering the emergence of sound, efficient financial institutions, e.g. by reducing the risks related to clients or agricultural activities.

8.6 Measures aimed at enhancing the availability of term finance, may be grouped into four categories of intervention, according to the extent to which they address specific local situations and target groups. Kick-starting measures, in the sense these are defined above, are clustered into Category 4 below.

Category 1	General policy measures and legal/institutional reforms to enhance the environment for term finance and term investments
Category 2	Instruments for reducing risk and transaction costs affecting both providers and consumers of term finance (insurance, guarantee funds and investments in such physical infrastructure as transport, marketing, communication, water supply)
Category 3	Measures targeted at suppliers of term finance, such as setting up and strengthening financial institutions through technical assistance and capitalisation on both commercial and concessionary bases
Category 4	Direct support at the client/investment level to convert needs into effective demand: Training and capacity-building for individual farmers or farmer group enterprises, matching grants to leverage local capital formation, and measures for co-financing small-scale and local-level productive infrastructure

8.7 These kick-starting measures also differ in regard to their breadth and depth of outreach. The four measures are listed in declining order of breadth, but in increasing order of depth. For example, Category One measures have a broad outreach in so far as they increase the amount of term finance available in a country and reduce its costs. However, their might still not reach certain areas, poorer farmers or would still not permit financing of viable term investments to an extent which would be considered socially desirable. Category Four measures, on the other hand, have a narrow outreach, but allow specific targeting along regional, client or investment criteria.

8.8 A second difference is related to the time horizon between planning and implementation as well as between implementation and ultimate effect. Policy and institutional reforms involve complex political decision making processes which delay the pace of their implementation. Once implemented, their impact on the availability of term finance may be slow and uneven, along the lines outlined above. Kick-starting arrangements, however, permit rapid implementation and produce immediate, direct effects, but their impact is limited to the local level.

8.9 So far, the report has dealt with measures in the first, second and third categories. It should be stressed that **measures in all four categories should complement, rather than substitute, for each other.** Direct investment support without policy and institutional reforms are likely to be unsustainable. A core problem of the old paradigm was that the provision of cheap funds was meant to compensate for policy distortions such as urban bias.

C. SITUATIONS WHERE KICK-STARTING MIGHT BE NECESSARY

8.10 Generally, public interventions to kick-start investments may be justified when they convey important economic benefits that are not reflected in market prices and therefore do not translate into financial benefits. This might be the case for investments of a public-good character at the local level which can be used by all or most members of a community. This applies in principle to infrastructure such as small-scale irrigation systems, pumps, roads or marketing/storage infrastructure. A second case would be investments by individuals or groups which have important positive externalities or spill-over effects to other community members, though the latter did not contribute to the direct costs (and do not share the risks) of the investment. A local processing enterprise increases the demand for produce and creates employment to a wider range of people. A tractor might provide hiring services for transport, land preparation for many farmers in a community, even if privately owned.

8.11 Both cases might justify public private co-financing or – depending on the case – partial recovery of the investment costs. Public co-financing must not be limited to investments which are owned collectively by a group or by the whole community. The ability of an investor to manage and properly maintain an investment should also be taken into account. In cases of larger equipment, storage or processing facilities, investments by entrepreneurs within or outside the community might be the preferred option to be supported by kick-starting arrangements, if they are likely to provide tangible net benefits to a large group in the community.

8.12 Based on the above, the following situations may require a more pro-active and targeted approach for financing rural term investments:

I. Case 1: No Financial Markets or Financial Infrastructure Exist in Certain Locations

8.13 Remote areas with low population density, lack of productive infrastructure and adverse conditions mean low levels of economic activity and little diversification. This limits the rural population's potential for savings and self-financing of investments, as well as the scope for financial intermediation and institution building. However, there might be possibilities to kick-start local development through viable term investments which reduce production and marketing risks, generate additional income, enhance the demand for services and products through up-

stream/downstream linkages and, as a result, trigger the eventual emergence of additional financial institutions and services. Examples of kick-starters could include:

- irrigation or post-harvest facilities, which reduce production and marketing risks and increase other investment opportunities;
- tree crops, which are often the only suitable cash crops in mountainous regions or regions with acidic and leached soils;
- nucleus estate-outgrower schemes and other contract farming arrangements provide scope for public/private partnerships.

II. Case 2: Financial Institutions Are Not Able to Finance Certain Types of Profitable Investments

8.14 Even if financial institutions are in place, they may not be able to finance certain term investments. This refers especially to larger scale and indivisible investments with longer gestation periods, such as trees (crops and timber), purchases of land or farms, small-scale irrigation or drainage systems and processing/storage facilities. In many of these cases, economies of scale may exist so small-scale technologies or sizes of the investment are uncompetitive.

8.15 Problems of financial intermediation can have different causes, which have been discussed in more detail elsewhere in this report:

- High transaction costs, risk premiums and costs of funds may cause interest rates above the financial rate of return of the investment.
- Macroeconomic instabilities discourage long-term finance.
- Lack of collateral and absence of measures to insure against systemic and co-variant risks.
- Lack of appropriate funding sources.

8.16 Addressing these measures in a systematic way through policy and institutional reforms (intervention categories 1–3) is certainly the first and best option. However, in the meantime there may be viable, important projects the benefits of which warrant special financing. The absence of financing results in costs to the economy in terms of missed opportunities for growth, diversification, poverty reduction or eventual integration in world markets. Therefore, a two-pronged strategy may be required, combining both conventional and kick-starting measures.

III. Case 3: Financial Markets Do Not Serve the Poor

8.17 The selection criteria applied by the case study institutions illustrate that borrowers of term loans are generally required to possess a certain level of human and physical capital. Human capital not only includes general education, but also skills and experience related to the management of specific productive assets and activities. More importantly, financial markets tend to have a wealth bias related to the possession of physical assets by providing larger and more convenient loans only to established farmers who can provide the necessary collateral. The

entrepreneurial poor⁶⁵ are therefore often either excluded or have to go through a long “graduation” process with uncertain outcomes. This has regressive income effects, especially in limited markets, where only a few farmers can avail themselves of profitable investment opportunities.

8.18 Apart from general measures such as reforming collateral legislation (Category One), specific investment support measures might be required to graduate poor farmers, with insufficient specific experience into viable clients. Kick-starters should combine training in technical matters with financial assistance. Training in farm and financial management helps the poor to build human assets, whereas matching grants could help the poor to build up an initial equity base which could then be leveraged through loans.

IV. Case 4: Special Situations that Merit to Be Redressed

8.19 There are particular situations where productive term investments are instrumental for economic recovery and for meeting overriding political and social concerns. Therefore, they have a higher priority in the allocation of scarce public funds:

- Post-crisis and emergency situations require re-building of productive assets and infrastructure.
- Historical imbalances in the distribution of rural assets have to be redressed. A classic case is land reform programmes, which require the financing of land purchases and on-farm investments for farmers with low levels of farm management skills and assets; such farmers usually also have had little contact with and virtually no track record in the financial system.

D. ASSESSING KICK-STARTING MECHANISMS

I. Need to Assess Costs and Benefits

8.20 There are many cases when public support for investments might be justified in principle. However, any kind of public intervention has to pass the acid test of a rigorous cost-benefit analysis. In the case of farm-related term investments, this has to cover both the investment itself and the financing mechanism used. If a market failure has been identified, the ways and means of public intervention can address it effectively and efficiently have to be assessed thoroughly. The experiences with the old paradigm of subsidised and directed credit show that institutional failure can potentially supersede the market failures it was meant to address, leading to an overall negative outcome (especially if fiscal costs are included).

II. Need for Clear Objectives and Performance Criteria

8.21 In order to assess any kick-starting measure, the objective of the intervention has to be spelled out clearly. The following core criteria might be applied to assess if the proposed investment is a suitable means to achieve the objective:

⁶⁵ Those with entrepreneurial skills and talent, but without sufficient assets to meet financial institutions' requirements in terms of equity contributions, down-payments and collateral.

- **Sustainability:**
 - Is the investment economically viable and financially sustainable?
 - Can it be managed efficiently by the target group?
- **Effectiveness:** How does the investment contribute to meeting the objective(s)?
- **Undesired effects:**
 - What will be the resulting effects on supply and demand on product and factor markets?
 - Will it contribute to oversupply leading to price declines (especially in limited markets)? If so, can new market outlets be identified?
- **Efficiency:** Is the investment the best use of scarce public resources to meet the objectives?

8.22 A similar set of criteria ought to be used to assess the financing mechanism and institutional design:

- What is the targeting efficiency, i.e. can those investors for whom the intervention is intended be targeted to the exclusion of those who do not?
- Will it complement, leverage, trigger or crowd out private financing?
- Will it contribute to financial institution-building?
- Will it create permanent entitlements and a related fiscal burden, or does it have an “exit strategy?”
- Are there other possible undesirable effects, such as rent seeking, and how can they be controlled?
- Is it possible to establish rational and transparent criteria for allocating public transfers to certain regions and target groups (and not to others)?

E. PRINCIPAL MECHANISMS AND DESIGN CONSIDERATIONS

I. Main Financing Instruments for Kick-Starting

8.23 The principal mechanisms considered here are grants, declining interest rate subsidies and concessionary equity finance⁶⁶. The focus is on the client/farmer level⁶⁷. As will be shown below, in practice these mechanisms are often combined.

⁶⁶ Subsidies comprise a wide range of measures which reduce the cost of an input or service or increase the price of an output. Examples would be tax exemptions for imported capital goods or certain term finance products (e.g. leasing), tariffs and other measures for price control, or direct transfers to reduce the financing costs for the investor.

8.24 A distinction should be made between grants and subsidies. Grants are one-off payments which are disbursed (in cash or kind) for a clearly-defined purpose and target group. They are not intended to be permanent entitlements. Subsidies, in turn, are frequently permanent transfers of funds to reduce the costs of inputs or services. They create distortions, because of their permanent nature, may lead to an ongoing flow of resources into sectors and activities which are economically not viable. Moreover, they can create a heavy burden on public sector finances.

8.25 **A general rule would therefore be to use grants instead of ongoing subsidies.** However, as will be shown below, there are instances when the cash-flow problems of a term investment can be more properly addressed by the use of declining interest rate subsidies instead of grants. The main issues would then be to find an institutional design which minimises their possible negative impacts. Thus, a decision has to be taken on a case by case base. Different ways to design grants and subsidies and the major problems and trade-off in the use of these instruments will be discussed in the following section

II. Major Issues Related to the Use of Kick-Starting Arrangements

Issue 1: Distortions Versus Correction of Market Failures

8.26 It is often difficult to draw the exact line between distorting and non-distorting interventions. For example, a credit line providing long-term re-finance facilities to retail lenders for financing term investments might be considered as non-distorting, if it is priced at the current market interest rate for term loans. However, from a different perspective, it is still distorting because it increases the supply of term loans beyond the amount which the financial system would offer at a certain price (interest rate). In this case the justification is that the financial market is insufficiently developed to be able to respond. In the same vein, there are many ways for subsidising term loans without explicitly targeting the interest rate.

8.27 Grants and subsidies distort markets by altering the supply and demand structure of goods and services. However, existing markets are not free from distortions, e.g. by historically-skewed distribution of land ownership and productive assets in general, or by rent-seeking behaviour of powerful groups and individuals. As mentioned above, certain rural markets (and especially rural *financial* markets) have a tendency to perpetuate inequalities by limiting lending to only those who already have considerable financial capital (assets, collateral) and human capital (skills, education). Existing markets are shaped by past public policies, institutions and subsidies⁶⁸. The limitations of micro-finance for financing farm related assets, especially in sparsely populated areas, have been discussed elsewhere in this report. From this perspective, grants would help to redress historical discrimination against the poor and improve the efficiency of markets and their potential to include the poor.

⁶⁷ The use of these concessionary financing mechanisms for capitalizing financial institutions has been discussed in Chapter 6. Some specific applications for tree crops have been discussed in Chapter 7.

⁶⁸ World markets for agricultural products are a clear example of this. SSA now competes with agricultural exports from countries which have — apart from the ongoing subsidies — benefited over several decades from public support. Kick-starting arrangements to support SSA agriculture have to be seen in this broader context of distorted markets.

Issue 2: Grant Allocation

8.28 Due to budgetary constraints, only limited amounts are generally available to fund such kick-starters. Such a limitation usually means rationing the assistance, so that only a part of the target group will benefit from a grant. This raises important equity concerns, which should be carefully assessed before starting a grant programme. Decisions about grant allocation amongst regions or amongst groups/individuals within regions normally involve tough choices. They are frequently somewhat arbitrary and prone to rent seeking and other undesirable practices.

Issue 3: Targeting Efficiency and Rent-Seeking

8.29 The availability of “free or cheap money” inevitably creates incentives for rent-seeking behaviour. Apart from affecting the targeting efficiency, this could result in indirect economic costs when non-eligible individuals invest resources in rent-seeking, instead of productive, activities. This problem is linked to the amount of the grant available individually, and to the transaction costs needed to obtain it.

8.30 Complicated procedures for controlling allocation and use of grants tend to create high overhead costs, reducing the cost effectiveness of the entire grant programme. Moreover, the creation of additional bureaucracy may increase the scope for rent seeking.

8.31 One means of discouraging rent-seeking and increasing the targeting efficiency into project design is to build-in elements of self targeting. This might be achieved by increasing the transaction costs for obtaining a grant in relation to the grant amount. Such an approach is frequently used in micro-finance programs to foster the self-selection and targeting of the poor. Depending on the circumstances, applicants could be required to join a savings group and regularly deposit a certain amount, or to attend capacity-building activities over a considerable period of time in order to become eligible for a grant. This would not only increase the effectiveness of the grant, but also discourage people who have other alternative sources of funds for investments.

8.32 A second possibility for self targeting within a pre-defined group of eligible beneficiaries is the use of matching grants which are linked to an equity contribution of farmers and/or availability of complementary commercial loan finance. If carefully designed, matching grant programmes can stimulate savings behaviour and help to select farmers who are serious about the proposed investments. To avoid arbitrary grant allocation, matching grants might be triggered automatically, if the farmer has saved a certain amount of money, or if a financial institution is willing to provide complementary loan finance at commercial rates. In this case it is important that the financial institution carries the risk of the loan to ensure that only viable projects are financed.

8.33 The combination of loans and variable matching grants might be dangerous, if standards for rigorous loan appraisal are undermined by political pressure, rent-seeking or poor institutional design. The participation of financial institutions in loan and grant appraisal only adds value if banks are obliged to share a significant part of the risk.

Box 42: Lack of Commercial Principles in a Grant-cum-loan Approach

The Colombian land reform law (1994) introduced market-mediated land reform on a “willing seller-willing buyer” principle as the main approach for land redistribution. Landless people and landlords would voluntarily negotiate a price for the land purchase. Eligible landless beneficiaries are entitled to get a grant of 70 percent of the land price; the remainder would be financed by a commercial long-term loan priced at variable market interest rates. In practice, only the state-owned *Caja Agraria* was involved, backed by a loan guarantee from the Land Reform Institute INCORA. On-farm investments would be financed by term loans and farmers could apply for variable grant (*Incentivo a la capitalización rural*) of 40 percent of the value of the loan.

Despite the high grant amounts, the programme resulted in high default rates, coupled by low outreach. Land prices were mainly related to market prices, resulting in loan amounts far above the loan repayment capacity of the productive enterprises. Periods of high commercial interest rates and climate shock caused by El Niño aggravated the situation. Finally, political disbursement pressure and the INCORA guarantee, led *Caja Agraria* to laxity in loan appraisal.

Source: Hollinger, 1999

Issue 4: Effectiveness and Equity

8.34 Matching grants have the potential to increase the effectiveness of grants for financing investments, especially if they are linked with commercial loans: if a financial institution is involved in investment appraisal, the financial viability of the investment can be assured and scarce grant resources be leveraged. This permits the financing of more capital intensive investments such as land purchases.

8.35 However, there is a trade-off between equity and efficiency goals, because the matching requirement favours the “better-off” farmers, unless a saving-up period is required to trigger the grant (see above). On the other hand, grants without any equity contribution create negative incentives and are likely to undermine the rural financial system. They might only be justifiable in emergency/post crisis situations or in special situations such as land reforms.

8.36 In the latter case, as shown by the recent experiences in South Africa, spreading the available grant budget over large populations, without any matching, may result in insufficient grant amount per beneficiary to allow any significant investment to take place.

8.37 In addition, as the example of the *Land Reform Credit Facility* in South Africa shows, certain investments such as purchase of viable farms might require considerable amounts of term finance to allow individual farmers to sustainably escape poverty. Grant-only approaches, especially if they are spread over large number of beneficiaries, may be too little to make a difference. The funds either have to be concentrated on a small number of beneficiaries to achieve a lasting impact, or be spread widely and have little impact. Even if a sliding scale matching grant approach is used, such as in the South African case (see Box 43), there is a trade-off between equity and effectiveness.

8.38 Finally, as in case of term loans, grants for financing term investments should be accompanied by considerable training in technical areas as well as BDS and financial management skills.

Box 43: South African Land Reform Programme – From “Subsidy Farming” to Matching Grants

In post-apartheid South Africa, the Department of Land Affairs provided a Land Acquisition and Settlement Grant to *historically disadvantaged black farmers to create a solvent demand* within the market-assisted land reform programme. In its initial form, it comprised a one-off grant of 16,000 Rand (around US\$1,600), subsequently raised to R20,000 (US\$2,000) for which landless black South Africans could apply in order to finance land acquisition, housing and productive on-farm investments. However, given the small grant size in relation to commercial land prices and strict prohibitions on the sub-division of agricultural land, grant recipients were obliged to pool their resources and acquire farms on a communal basis by means of a Communal Property Association (CPA), a legal vehicle specially developed for this purpose.

Given the communal nature of the resultant enterprises, most of these land transfers resulted in resettlement schemes (with limited subsistence production) as opposed to productive farming enterprises. The new landholding CPAs incorporated little, if any, management and marketing expertise, and because of their co-operative nature offered no collateral value for commercial banks. The lack of commercial intermediation in the land transfer process (which revolved around the development of ‘viable’ business plans by consultants) enabled many marginal or failed commercial farmers to offload their assets at inflated prices to unsuspecting land reform beneficiaries. In fact, the fixed per-capita grant resulted in the formation of highly arbitrary CPAs, membership of which was often determined exclusively by the amount of grant required to purchase any particular farm (*also called subsidy farming in S.A.*). Starved of credit and experienced management, most early land transfer projects resulted in failure, often accompanied by environmental degradation. The legacy of land reform in the early years of the programme’s implementation was therefore rather negative, with poor land being granted to inadequately equipped and undercapitalised cooperative groups, often in areas and sectors which were in long-term decline.

In 2001, the single per capita grant was replaced by the LRAD (Land Redistribution for Agricultural Development) grant, a sliding-scale matching grant. Under LRAD, grants of between R20,000 and R100,000 are available to black South Africans, depending on the financial contribution put up by the applicant. A minimum equity contribution of R5,000 by the beneficiary is required to access the basic R20,000 grant, but this contribution can be made as an ‘in kind’ contribution (as labour or ‘sweat’ equity), as materials or farm implements, or in cash. A cash contribution can also consist of loans, made available by banks. The ratio between own contribution and LRAD grant increases in relation to the grant amount: The maximum grant of R100,000 requires a minimum equity contribution of R400,000 by the beneficiary. Significantly, LRAD grants are available to existing (black) farmers who wish to expand their landholding or to finance fixed improvements on existing land.

In many respects, LRAD’s variable sliding scale grants marked a significant improvement on the single per-capita grant that characterised the early stages of the land reform programme. Through the beneficiary’s contribution requirement and the incentives to leverage grants with commercial term loans, they helped to overcome the widespread phenomenon of ‘subsidy farming’. They are particularly suited to financing worker shareholdings in Equity Share Schemes, a vehicle for implementing viable land reform projects at the high value end of the land market, through joint ventures producing export crops (See below).

Issue 5: Institutional Issues

8.39 There are issues related to the simultaneous provision of grants and loans in a certain area, especially if provided by the same institution, as this may confuse farmers. Loans and grants should therefore be administered by different institutions. This may lead to problems of inter-institutional coordination, which may result in delays of approval and disbursement, putting the whole project at risk. On the other hand, if grants are too easy to get, this may attract the wrong persons.

8.40 A possible solution is to earmark a certain amount of grant funds, which are triggered automatically on a first-come, first served basis, if a financial institution agrees to co-finance and is willing to carry the financial risk. If the loan is re-financed by a specific apex body, such as the

LRCF, the latter can supervise general eligibility criteria for projects and beneficiaries. In general, grant allocation procedures should be as clear, simple and transparent as possible.

III. A Case for Subsidized Interest Rates

8.41 Apart from concerns about institutional design and incentives, the choice between subsidised interest rates and one-off grants also depends on the cash-flow of the asset/enterprise to be financed. In the case of investments where the cash-flow is increasing gradually over time, a declining interest rate subsidy disbursed over several years might be more appropriate and cheaper than a grant in year 1 combined with a term loan at commercial interest rates.

8.42 This is especially true in the case of modest inflation rates. If investments are financed by non-indexed long-term loans, inflation increases the cost of a loan to the borrower in the first years (through higher interest rates) and defers higher revenue to a later date. If a term loan is not indexed and repayments are carried out in equal nominal instalments over the whole maturity period, inflation will gradually reduce the real value of the instalment over time⁶⁹. On the other hand, the nominal value of net farm proceeds increase with inflation. A declining interest rate subsidy would be a measure to address the cash-flow problems. The farmer would pay a lower rate (smaller instalments) in the early years, which would gradually increase as the interest rate subsidy is being phased out along projected inflation. A declining interest rate subsidy model was developed by Ithala Finance Corporation in South Africa, for financing the transfer of sugar cane farms from the mills to medium scale farmers (see Box 44).

8.43 The concept of a declining interest rate subsidy is in fact a mix between a grant and a term loan with grace period (without capitalisation of interest payments). Grant funding, though reducing the total loan amount and therefore the total financial costs, might still lead to cash-flow problems during the early years. A complete grace period with capitalisation of interest rates not only increases the total financing costs, but also creates serious moral hazard problems. A grace period only for the principal with interest payments being covered by a subsidy is another option, which would, however, increase total subsidy amounts and thus costs to the public sector.

8.44 A declining interest rate subsidy could be designed in a similar way to a grant by depositing a lump sum payment in an interest bearing deposit account. This would not only increase the NPV of the amount (because of interest on the deposit), but allow for adjusting the amount of each subsidy payment, should the inflation rate or the net farm profits fluctuate considerably from the appraisal targets.

8.45 If subsidised interest rates are considered for financing long-gestating investments, rigorous supervision of borrowers and investments is crucial to avoid diversion of funds. Moreover, there must be a real possibility of securing loans and applying sanctions in case of default. The transaction costs of supervision and possible sanctions have to be assessed realistically to determine the real cost of the subsidised loan (NPV of direct subsidy plus NPV of assumed transaction costs). If supervision and sanctions are likely to be unfeasible or result in excessive costs (See tree crop discussion in Chapter 7), grants during the immaturity period would be preferable. Depending on the case, these might be complemented by loans at commercial rates provided by financial institutions. Term loans should not be a disguised mechanism for partial cost recovery of investments by tolerating less than satisfactory repayment rates.. Such an approach would have a negative impact on the credit culture and constrain financial deepening.

⁶⁹ Note that this does not result in a loss for the bank, as long as the real interest rate at time of appraisal is positive and the inflation rate does not increase above the interest rate of the loan over time.

Box 44: ITHALA – Positive Experience in the Use of a Declining Interest Rate Subsidy in a Land Reform Context

In the mid-1990s, the sugar mills in Natal, South Africa, decided to withdraw from sugar cane production and concentrate their activities on milling. Some of the sugar estates have been subdivided into medium-scale farms of 80 – 100 ha to be transferred to black farmers. To finance these land transfers, Ithala Finance Corporation, a provincial development bank in KwaZulu Natal, has developed an innovative long-term loan product, incorporating a declining interest rate subsidy. So far, 120 farmers have acquired farms, and the arrears rate has only been 0.5%.

According to Ithala's projections, the cash-flow would not allow farmers to service loan repayments for long-term mortgage loans (declining balance) at the full market rates (16.5%) during the first few years. However, due to the projected average inflation rate of 12%, the nominal value of annual farm income increases over time, whereas the nominal value of the annual loan repayments remains constant. Two alternatives were considered to address the initial cash-flow problem: 1) A one-off grant in year one covering 18% of the total loan amount, and 2) a declining interest rate subsidy to be phased out with expected inflation: The same amount would be deposited in an interest bearing account at Ithala. Interest rates would be subsidised to 10% in year 1 and then gradually increased over five years until reaching the market rate.

The projections show that despite the slightly higher IRR of the grant model over 20 years, the interest rate subsidy has three advantages. Firstly, the cash-flow remains positive with a sufficient margin over the whole period, whereas the grant can only resolve the cash-flow problems over the first two years. Secondly, the deposited amount provides greater flexibility to adapt subsidy payments to unforeseen fluctuations in the cash-flow, whereas the grant model is very vulnerable to fluctuation until year 6. Therefore, the interest rate subsidy can respond more flexibly to "learning costs" which are inevitable for less experienced farmers. Finally, the total amount necessary to overcome cash-flow problems during the first years would be much higher than the amount required for the interest rate subsidy.

Box 45: Financing Irrigation as a Means for Extending the Provision of Rural Finance

The financing of irrigation (pumps and wells) can serve as an entry point for extending different financial services to individuals or groups of farmers. The main benefit is the reduction of production risks and realising the potential for production diversification, leading to a more steady income flow. Therefore, repayments can be made in smaller but more regular instalments.

The Bolivian financial NGO, CIDRE, used this approach in a region near Cochabamba, where unreliable water supply was the main bottleneck to agricultural development. Bore wells and irrigation pumps were financed for groups of dairy producers who were already organized into marketing associations. This allowed an intensification of dairy production through improved fodder supply and diversification into other farming activities, such as vegetable production. The use of irrigation groups of 30-40 farmers proved to be an efficient mechanism for guaranteeing repayments, because the delivery of water depended on prompt payment of both irrigation fees and loans. The chairman of the group and some other members had to mortgage their land as additional security for the lender. This increased peer pressure and therefore the effectiveness of the group lending mechanism. CIDRE monitors the performance of individual farmers. The most productive and reliable clients can then apply for individual working and investment capital loans. The main risk elements – marketability of the incremental production and technical failure – are addressed through feasibility studies and ongoing monitoring

The access to long-term funds at concessionary interest rates allowed CIDRE to finance these larger scale investments at affordable interest rates for the farmers, which are above term deposit rates, but lower than term loans to individual farmers provided by other financial institutions. The lending technology described above, ensured high repayment rates. As CIDRE is the only financing institution providing such kind of loans in this region and for this type of clientele, there is no unfair competition with other lenders.

IV. Other Issues

8.46 A grant mechanism for community owned assets could build in a cost recovery mechanism by recovering the grant amount through deductions from the profits of the investment (e.g. a mill) to capitalise community-owned financial institutions. Increased access to future loans within the community might be a feasible incentive for cost recovery.

8.47 Indirect cost recovery measures might be considered in designing grant schemes. Especially in the case of financing formalised enterprises (joint ventures) or farmers in export sectors, costs are partly recovered through increased tax revenues.

Box 46: Combining Grants with Commercial Financial Intermediation to Establish *Equity Share Schemes* (South Africa)

The Land Reform Credit Facility (LRCF) was established in 1999 to overcome the flaws of the earlier purely grant-based land reform approach. The purpose was to finance Equity Share Schemes (ESS) between landless black farm workers and white commercial farmers in the production and processing of high value export crops such as apples, table grapes and olives. Typically, the original owner-operator remains the (co)owner-manager, with a portion of the owner's shares (usually, but not always a minority) allocated to the worker shareholders. ESS normally comprise a land redistribution component and an investment component. The model removes constraints inhibiting black farmers from becoming individual commercial farmers, related to high land/farm prices for suitable land and lack of management expertise and bankability.. The former owner benefits from increased productivity and better working relations through a new enterprise culture, and may divest additional shares at a later stage to the workers' trust.

Two main instruments were used to finance the establishment of ESS: The land reform grant (described above) and LRCF. LRCF is a wholesale lending facility, offering long-term loans with a grace period up to 5 years to commercial banks and credit-rated investors, who wish to finance ESS on similar terms. The interest rate to commercial banks is set between 2-3% below the 3 months (wholesale) bankers' acceptance rate. Commercial banks are free to set the on-lending rates but have to carry 100% of the credit risk, ensuring careful screening and appraisal of loan applications and avoiding re-capitalisation of non-viable white farms via the land reform grant. According to ABSA, the main participating commercial bank, only about 10% of all applications for LRCF loans involve viable projects. In practice, interest rates to end-borrowers have been close to or slightly below market rates. End-recipients of LRCF loans automatically qualify for a capacity-building grant to finance the organisational development, training and capacity building of the new partners in the enterprise. The LRCF operated on a first come, first served basis (funds permitting) and automatically approves loans to applicants who conform to its basic land redistribution criteria. The LRAD grant has been used to capitalise the workers' shares, further reducing the effective interest rate of the whole project (see case study for details).

F. JOINT VENTURES AS AN ALTERNATIVE TO INDIVIDUAL TERM INVESTMENTS?

8.48 The Land Reform Credit Facility in South Africa is a promising way of combining loan and grant funding for establishing viable enterprises. It also provides an example for establishing Joint Venture Companies (JVC) between farm workers and commercial farmers. The concept of (JVC) between farmers/workers and commercial investors, as well as farmer-owned enterprises in the form of joint stock companies (JSC) has received increased attention recently.

8.49 Most of these programmes are of a fairly recent nature and it might be premature to draw strong conclusions about the scope and limitations of the approach. However, some issues emerging from the case studies in South Africa and the Philippines should be highlighted. Governance and financing issues are closely interlinked.

Box 47: Examples of Joint-venture or Joint-stock Companies Including Farmers

Philippines: Inspired by the *Corporative Approach* (see case study), the Land Bank of the Philippines (LBP) initiated the *Access Program* in 1999. LBP finances up to 40% of the investment costs as equity in an agro-business company, established as a joint venture between a commercial entrepreneur and farmers as raw material suppliers. Over a period of 5–10 years, the farmers gradually buy out LBP through deductions from the proceeds of their product deliveries. Joint ventures between plantation companies and workers are also being used as vehicles within the land reform process.

Malaysia/Indonesia: JVCs have been created in the tree crop sub-sector in Malaysia and are now being introduced in Indonesia.

Kenya: The Kenya Tea Development Authority (KTDA), a former parastatal in charge of the smallholder tea sub-sector, has gradually established 65 tea factories, which were co-financed by CDC through equity finance and the World Bank through loans. During the last decade, tea smallholders gradually bought out CDC and the Kenyan government through deductions from the tea proceeds. Farmers now fully own all tea factories and KTDA, which still serves as their management agent. The listing of shares on the Nairobi stock markets is now under discussion.

I. Potential for a Win-Win Scenario

8.50 Joint ventures between farmers and agro-business investors may have several advantages over conventional approaches such as cooperatives or contract farming arrangements. They may overcome the typical management and capital constraints of cooperatives, while still enabling farmers to reap economies of scale, participate in profits of down-stream activities and get reliable access to inputs, output markets and support services. Their income not only depends on farming but also on patronage refunds, dividends and increases in the value of shares, which are marketable. Joint ventures between commercial farmers and landless workers may also be an alternative to conventional land redistribution programmes. The limited profit margins in agriculture can be increased through vertical integration.

8.51 Agro-business investors may have different interest/benefits from such partnerships:

- Conflict situations between commercial farmers and their workers (Southern Africa) or between big plantation companies and smallholders/workers (Philippines, Indonesia) might be resolved.
- The efficiency of contract farming and interlinking arrangements can be improved. Problems of contract farming schemes often evolve around asymmetric information and lack of transparency, creating mistrust and incentives for free rider behaviour, such as outside selling or buying.
- As the *Equity Share Schemes* in South Africa demonstrate, the productivity of workers improves and the costs related to supervision decrease because of better incentives and a sense of ownership.

Box 48: Sustainable Business Development Model Proposed by PT London Sumatra in Aceh

The private plantation company London Sumatra (Lonsum) has developed a new model for creating joint venture partnerships involving farmers, local and provincial governments and private companies.

Key features:

- Integration of livestock with organic oil palm production on 1,500 ha. scheme includes a CPO mill, a refinery and a kernel crusher
- Each farmer receives 4 ha which is equivalent to 4 shares. Dividends will already be paid during immaturity: Rp100,000 in Year 1, Rp150,000 in Year 2 and Rp200,000 in Year 3.

The company will be run as a joint venture with the following capital structure:

- 79% of the shares held by the farmers,
- 7% district government
- 7% provincial government
- 7% Lonsum

The proposed financing of farmer shares would be through a special re-finance programme for long-term loans operated by the Indonesian government. Loans for plantation development would be repaid through deductions from FFB sales, whereas the repayment of loans for capitalisation of farmer shares would come out of the company profits.

Lonsum does not receive significant monetary gains from its share of 7%. It sees its role as business incubator/mentor and hopes to reap benefits in the longer term.

8.52 The potential of JVCs relates to the long-term nature of the partnership, which conditions the behaviour and expectations of both parties into a long time horizon: Transparency and access to information creates trust and reduces potential conflicts around prices, wages and interest rates. Moreover, as farmers are no longer dependent on one parameter (the product price), a joint venture can react more flexibly to changing market conditions. The *Corporative Approach* (Philippines) shows that incentives are particularly strong if farmers can increase their shares and eventually become the majority shareholder of the enterprise. Such a dynamic approach enabled Rural Bank of Panabo to divest its capital and provide a range of loan products secured only by interlinked transactions between the corporative, the farmers and the bank. The interest of RPB was in building up a clientele with greater incomes and expectations – leading to more business for the bank.

II. Issues and Constraints Related to Governance and Management of JVC

8.53 There is a trade-off between governance/management requirement and empowerment of the farmer/workers:

- A marginal participation of farmers in the companies equity should be avoided: farmers need to receive tangible benefits to get a sense of ownership;
- A majority shareholding position of the farmers reduces the incentives for the investor and may put the soundness of management at risk.

8.54 The most feasible options seem to be the following:

- A strong minority position of the farmers might be the most feasible option, as it combines incentives to the main investor and availability of management expertise with meaningful shares for the farmers, resulting in tangible benefits.
- A dynamic partnership might emulate principles of Venture Capital and Build Operate Transfer (BOT) approaches.

Box 49: Merging BOT and Venture Capital Approaches for Financing Rural Investments?

Build Operate Transfer (BOT) schemes have been used so far as a mechanism for financing large-scale urban infrastructure. A private investor builds (and finances) a large-scale project (e.g. road, power plant) and operates it over a period of 15–20 years to recover his costs plus a reasonable profit. The concept might also be applied for financing smaller scale rural infrastructure such as water supply, processing plants, warehouses, market infrastructure, etc., as joint ventures.

The corporative approach (Philippines) to set up rice mills could be seen as a hybrid between venture capital (because of the gradual divestment) and BOT (because of the full financing of the initial investment). However, it is rather exceptional to find a bank which is willing and able to manage rice mills over a certain time. For scaling-up the corporative approach, RBP has created a separate Foundation specialised in creating and managing *corporatives*.

To attract private non bank investors, other modifications might be needed. A venture capital facility buying a strong minority position on behalf of the farmers, would allow the commercial partner to control the business over a considerable time and derive meaningful dividends. He might eventually be bought out by farmers or other parties such as local governments or community funds.

Issues Related to Asymmetric Partners

8.55 The structure of the joint venture must take into account the huge asymmetries of the partners involved and provide the necessary incentives and safeguards. Commercial investors and small farmers/workers differ not only in terms of their socio-economic and educational backgrounds, but also with regard to their risk aversion approaches, and their time horizons.

Different Times Horizons and Risk Profile of Shareholders

8.56 Farmers/workers need to receive tangible benefits rather soon to improve their living conditions, in order to develop a sense of ownership and feel committed to the JVC. On the other hand, the joint ventures require financial stability, especially during the initial years. The use of discretionary dividends is one way to address these issues. The commercial investor waves his dividends until the capital base of the enterprise has been stabilised.

8.57 Questions of exit options for existing shareholders and entry options for new shareholders must be addressed, along with regulations about the tradability of shares. Can shares only be sold within the company or also to third parties? Do all farmers and workers automatically build-up shares over time through deductions from their due payments, or can they opt for higher prices/dividends? When can shares be sold and what are the payment modalities? Especially if grants are used for capitalisation of farmer/worker shares, the sale of shares must be regulated to prevent windfall profits.

Capacity Building

8.58 Farmers must be familiarised with basic concepts of company management and the rights and duties of shareholders. The issues of transparency and accountability must be resolved, especially if farmers are represented through a cooperative or trust in the Board of Directors. Mechanisms and procedures for conflict resolution have to be established. The drafting of the related by-laws does need substantial external support. If Equity Share Schemes are introduced, sufficient funding must be earmarked for ongoing capacity building and backstopping through competent legal and business advisors.

III. Issues Related to Financing of Joint Ventures

Profitability

8.59 The key condition for the viability of JVCs is high profitability. This is particularly important, if share purchases are to be financed gradually through deductions from purchase prices of agricultural products, wages or dividends.

Box 50: Costs and Profitability of Investments in the Palm Oil Sub-sector in Indonesia

Processing factories like mills for Crude Palm Oil (CPO) are capital intensive: For example in Indonesia, investment costs of an oil mill with a capacity of 60 t/hour amount to about Rp90b (US\$10m). If 2,500 farmers would acquire 50 percent of the shares, the amount per farmer would be US\$2,000. In addition, investment costs for 2 ha of oil palm plantation are Rp30m (US\$3,000). However, the profit margin can be increased significantly through vertical integration. The IRR of oil palm plantations is around 18% in average, whereas the IRR of CPO-mills is around 36%.

Source: FAO-TCIP assessment mission, June 2002

8.60 Investments in agriculture/agribusiness are normally less profitable and quite risky. The stability of empowerment-JVCs is more sensitive to low profits than other enterprises. If farmers do not receive competitive prices for their products, there is always the danger of outside selling and disintegration of the JVC. The same applies to worker-shareholders with regard to their salary payments. As highlighted above, tangible benefits are crucial especially during the establishment period. In the long run, a minimum requirement for the stability of JVCs would be, that the combined revenues (product prices/salaries, patronage refunds and dividends) equal the opportunity costs (outside selling or wage labour elsewhere). Commercial investors are less sensitive to short-term losses, but would also expect a reasonable return on both their capital and their management inputs, in the longer term.

Maximise Equity Finance, Minimise Loan Finance

8.61 In view of these aims, the financing structure should be such as to limit incremental risks to the extent it is possible to do so. The initial capitalisation of ESS should be a mix of loan and equity finance with a higher equity component than “normal” commercial enterprises would require. This would provide more flexibility in contingency operations such as the waiving of dividends and divestments, should this be necessary to ensure stability in payments of salaries and purchase prices. The Land Reform Credit Facility seems to be a viable model for additional loan financing, providing the right mix of incentives and checks and balances.

8.62 It is important that the shares of the farmers should not be financed through loans. Rather this building-up of equity should be done using matching grants, sub-ordinate loans or concessionary equity. If shares were to be financed through loans, substantial profits would be needed for repayments over several years, squeezing the scope for paying salaries of workers and management or – in case of farmer shareholdings in a processing enterprise – competitive prices for the raw material, and dividends.

Warehousing of Shares

8.63 Obviously a commercial equity provider (venture capital fund) would not invest in such a JVC. A specific equity finance provider would have to be created. In addition to the above, concessionary equity finance for financing JVCs as empowerment projects has the following advantages:

- The equity investor contributes management expertise and has better access to information than a lender.
- Depending on its institutional structure, it could also provide complementary loan finance.
- It allows the so-called “warehousing of shares” on behalf of farmers.
- It can safeguard the interests of the workers/farmers, especially during the establishment period of a joint venture, and can play the role of an arbiter in case of conflicts.

8.64 Warehousing of shares refers to a situation where an investor, usually a development bank or a developmentally-oriented venture capital fund, would make a capital investment on behalf of the farmers, buying a certain amount of shares. The investor would then gradually divest by selling its shares to the farmers/workers.

8.65 Apart from governance and management issues, the main constraint is the uncertainty related to the divestment schedule and, more particularly, the ability of the farmers/workers to buy out the equity investor. The case study experiences do not permit strong conclusions to be drawn on this.. In case of the corporative in the Philippines, the divestment through deductions from rice sales proceeds was fast and allowed the farmers to obtain a majority shareholding after many years. In South Africa, the profits in the high value export sector of orchard production were deemed too low and variable (compared to the total value of the enterprise) to allow the build up of a significant worker share in the short run. The case study concludes however that the availability of grant funding has been crucial both to create incentives for commercial farmers to engage in ESS, and to create tangible benefits for the workers.

Box 51: New Farmers Development, a Development-oriented Equity Investor in South Africa***BACKGROUND AND MISSION***

NewFarmers became operational in 1995 and is a private equity/venture capital investor and catalyst in agribusiness. It has an empowerment focus within the context of furthering economic growth in Southern Africa. The main goal to make profitable investments in agribusinesses and high value agriculture and thereby create co-ownership and empowerment opportunities for project participants. To achieve this, it does business with all entrepreneurs, irrespective of race, creed or gender. It strives to help establish a productivity-based work ethic in the businesses in which it invests. It also aims to contribute to land and agricultural reform, and to economic transformation in general.

INVESTMENT APPROACH

Projects should have strong earnings potential and over time provide the opportunity for NewFarmers to profitably disinvest. A package of investment instruments is offered, such as equity, debentures, preference shares and loans. The package is structured to fit the repayment ability of the project and to maximise the shareholding of the operating partners. A committed entrepreneur supported by a competent management team is important. NewFarmers normally prefers minority equity stakes of between 25 and 49 percent and operating partners and employees should preferably have a substantial stake. A range of schemes is used to involve employees in a meaningful way, for example employee equity schemes.

The total share capital of R5.4m (around US\$5m) has been provided by international development banks, including CDC Group (former Commonwealth Development Corporation), Proparco (affiliated to the French Development Agency) the Netherlands Development Finance Company, and South African banks and investors

PROGRESS

Currently four projects are operational, three in the Western Cape, one in Mpumalanga. Five projects have already been successfully disinvested. Examples of current projects include:

Kievko (Badplaas, Mpumalanga)

50% owned by NewFarmers, employees 9% and other operating partners 41%; production of long life tomatoes in greenhouses; currently 2.2 ha under greenhouses; activities currently being expanded.

Cape Olive (Paarl, Western Cape)

79% owned by NewFarmers, employees 3.5%, original owners 17.5%; growing, processing, packing and marketing of olives under the Buffet brand; also 12 ha wine grapes; currently 180 ha of olives; processing plant to be expanded; prefer further equity partners.

Erfdeel (Piketberg, Western Cape)

60% owned by NewFarmers, employees 21% and other operating partner 19%; citrus, table grapes, wine grapes; currently 71 ha planted; activities to be expanded; prefer further equity partners.

The shares of the employees have been financed through the LRAD grant. The high share of NewFarmers in these joint ventures highlights the capital intensity of South African export oriented and high value agriculture. NewFarmers now faces the challenge to profitably divest by selling the shares to the employees.

9. MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

9.1 The scarcity of examples of successful term finance arrangements in agriculture highlight the **intrinsic difficulty of this activity** compared to other fields of banking. The general constraints for agricultural lending, such as seasonality, moral hazard problems, inappropriate collateral, low population density, and high incidence of co-variant and systemic risks are exacerbated by specific problems related to longer terms. The appraisal of risks and profitability becomes more difficult over longer time horizons and the margin of error increases for both investor and financier. Banks face difficult tasks of managing liquidity, interest rate and portfolio risks, unless they get access to long-term re-finance facilities at fixed interest rates. Moreover, macro-economic instability and legal and institutional weaknesses related to the use of collateral and contract enforcement in general further restrict term finance in many countries.

A. ASSESSING THE CORE PROBLEM: IS THE MAIN CONSTRAINT SUPPLY OF TERM FINANCE OR DEMAND?

9.2 It is not just supply issues that are responsible for low levels of term finance in rural areas. All too often, lack of credit, particularly long-term credit, has been overstated as being the prime constraint for small farmers to carry out investments. Demand issues are also important, and some constraints affect both supply and demand. Attention is given, firstly, to factors affecting demand. In summary, these are the factors that determine the ability of farmers to carry out profitable term investments. Then factors affecting supply will be summarized.

I. The Main Constraints: Systemic Risks and Transaction Costs

9.3 Systemic risks related to rainfall, pests and diseases, sudden price declines or changes in macroeconomic or political conditions are difficult for farmers to manage. Moreover, high transaction costs, especially in sparsely populated areas with poor communication and transport infrastructure, limit the profitability of farming activities (and thus investments).

9.4 Governments and donors have often been tempted to increase the supply of term loans as a shortcut to foster on-farm investments, without addressing properly the constraints related to systemic risks and transaction costs. Such a policy often does not lead to financially sustainable investments and poverty reduction, and may severely damage the rural financial system if applied on a massive scale. Long-term loans translate into long-term debts for the farmers, with constant repayment obligations. This is dangerous in an environment characterised by high incidence of systemic risks, as the farmer may lose tangible assets (land, equipment) provided as collateral and his reputation with lenders or the community.

9.5 Moreover, long-term loans may result in substantial financial costs for the borrower. The use of subsidised interest rates attenuates the direct financing costs, but may lead to higher costs in the future. Apart from the effects of high default rates and cheap funds on the financial system, subsidised loans targeted at specific activities may lead to over-specialisation of farmers into high risk activities. This increases their vulnerability to external shocks or to changes in the basic parameters underlying the profitability of the investment (e.g. in case of high yielding varieties of tree crops). A second risk is linked to the massive uptake of certain technology and the

medium term consequences on profitability or natural resources. There are numerous examples where promotion of pump irrigation through subsidised term loans has led to oversupply and eventual price declines due to limited markets for the produce of irrigated farming. Another danger is to water table levels, when excessive pumping takes place.

II. When Does a Term Loan Make a Difference?

9.6 In view of these problems, the key question under a poverty reduction perspective is when the availability of term loans or other term finance instruments could make a difference for a farmer *without leading to an over exposure to risks*, and when other, less risky financing strategies would be the better options.

9.7 This depends on the profitability of investment opportunities in a given region, the costs at which term finance can be provided, and the characteristics of the investment and farm household. Farm related investments have quite different features in terms of total cash requirements, cash-flow and gestation periods, divisibility or economies of scale, management requirements etc. Many small scale investments with a big impact on the livelihoods of small farmers have low capital requirements and may be expanded gradually. Hand powered equipment or treadle pumps, purchase of animals, or the planting of traditional varieties of tree crops may be financed through savings and short term loans being partly repaid from the general household cash-flow. The need for term finance is clearer in the cases of lumpy or larger scale investments with economies of scale and long gestation periods. Examples include: high yielding varieties of tree crops, larger farm machinery, processing facilities or purchase of entire farms.

9.8 Term finance should only be considered for farmers with good farm and financial management skills, who already have some experience with the asset or activities to be financed, and who can make a significant equity contribution. Small farmers respond to systemic risks through diversification into different farm and non-farm activities. Poor farmers and other rural dwellers often prefer to invest in short term activities with a quick turnover such as trading, small scale food processing and small livestock, which explains the popularity of micro-credit. When it comes to the financing of investments in new areas, e.g. related to diversification into new activities or to the adoption of new technologies, small farmers tend to use their own funds first. Furthermore, they expand their investments gradually, using short term loans and savings from formal and informal sources. This helps them limit possible losses and retain their creditworthiness with formal or informal lenders for working capital needs or emergencies.

9.9 Poor farmers might be better assisted through reliable access to savings and short term loans, instead of term loans. These farmers could be assisted to diversify into activities with different maturities and cash-flows. This would enable them to “roll-over” short term loans for financing investments with a longer gestation period like tree crops. Reliable access to loans in case of emergency frees household resources which might otherwise be kept liquid or in low risk, low return activities as a cushion against external shocks. Micro-insurance products could have an even larger impact. Such strategies might support poor farm households to self-finance investments, build-up a track record and accumulate a stock of assets which helps them to qualify for term loans at a later stage. These might also be the only viable options in areas with high incidences of systemic risks, high inflation and thus interest rates, and weak financial institutions.

9.10 For the more advanced farmers, these risk management and smaller-scale financing strategies are costly because they restrict their potential for making larger and lumpy investments and thereby reap economies of scale through specialisation and intensification. Moreover, in an increasingly competitive international market environment, farmers in a country with a weak supply of term finance have disadvantages against competitors from other countries with easier access to such finance. Therefore, the availability of appropriate term finance products is important, especially for more entrepreneurial farmers with considerable experience and real growth potential. These are either farmers who have grown out of micro-lending programmes or other entrepreneurial farmers, which still do not qualify for term finance products from mainstream institutions because of their small scale or their lack of collateral. In contrast to saving-up strategies, term loans enable farmers to carry out productive investments now, and use the incremental incomes to repay the loan. This accelerates the pace of technology adoption. These farmers are the main target group of most of the case study institutions.

B. VARIOUS TERM FINANCE PRODUCTS

I. Term Loans

9.11 Term loans are the most widely used instrument for financing term investments. Term loans can be provided for a wide range of purposes and allow a considerable degree of flexibility in regard to disbursement and repayment modalities (in cash or kind, grace periods, frequency of repayments). Moreover, the concept of lending is better known and more readily understood by term finance providers and farmers than is the case with leasing or equity finance.

9.12 Several issues are related to the use of term loans for financing agricultural term investments:

- Firstly, term loans are based on a fixed repayment schedule and thus require an ex ante assessment and projection of the future cash-flow of both the investment and the farm household. This proves to be quite difficult in practice. Standardised loan appraisal models based on the projected cash-flow of specific investments alone are not appropriate for informal businesses like small farmers, because they do not pay sufficient attention to fungibility issues. Due to the overlapping of farm and household cash-flows the repayment capacity has to be assessed taking into account all income sources and expenditures. Further, the liabilities of the farmer with other formal and informal lenders have to be taken into account.

Rural financial institutions are best suited to carry out such an appraisal, because they can build a long-term relationship with a farmer, and gradually increase the period of loans, based on the his or her performance as a borrower. However, the case studies have shown that rural financial institutions, especially those with a microfinance background, rarely have the skills to carry out a financial appraisal of the investment. They then assess the repayment capacity only in base of the existing cash-flow of the farm household. In effect they are thus applying a consumption loan concept for appraising the financing of productive farm investments, instead of taking the expected incremental income derived from the investment at least partly into account for appraisal and determination of the repayment schedule. Such an approach might be recommendable: a) for weak and

inexperienced lenders; b) for high-risk investments; c) for first time borrowers. It is, however, impractical for larger investments and excludes farmers with profitable investment opportunities, but insufficient existing income to repay the loan.

- Secondly, a good lending technology helps a financial institution control risks related to technical or management failure or moral hazard, and to reduce transaction costs. However it does not protect against systemic risk which often leads to default in the case of agricultural lending. The lender has to distinguish whether a default is caused by external factors outside the responsibility of the borrower (systemic risks), or to moral hazard or poor management practices. This is difficult due to asymmetric information, putting term lenders in a dilemma. A zero tolerance policy, as often applied in micro-finance, might not be appropriate for agricultural term loans in view of the higher incidence of co-variant risks, and the difficulties of foreclosing on collateral.
- A further drawback of term loans is the need for tangible collateral, at least when it comes to larger loans over longer periods. Farmers may not be able to offer suitable collateral. Financial institutions may face difficulties in creating, perfecting and enforcing security interests on loans.

II. Leasing

9.13 It is a popular mechanism in developed countries for financing productive assets such as farm machinery and equipment. The principle of separating the ownership rights from the user rights of an asset has two main potential advantages over term loans. First it may substitute for collateral and, second, provide tax benefits, depending on the legislation. In developing countries it is the first of these that is likely to be important.

9.14 However, there are considerable difficulties in using leasing for farmers and informal enterprises, particularly in rural areas. In many respects, lessors face similar constraints to lenders, e.g. related to access to long-term funding sources and cash-flow based appraisal. Due to the absence of collateral, the need to supervise lessees frequently becomes critical, resulting in high transaction costs. Only two examples could be identified of financial institutions which managed to tackle these constraints for term financing, in these cases for farm machinery, equipment, irrigation pumps and livestock. However, in these examples there were additional features to reduce risks, such as high down payments and a focus on leasing new equipment. Both increased the financial cost for farmers, and thus reduced outreach.

III. Equity Finance

9.15 It has two key advantages over both leasing and loan finance: i) It can be adjusted more flexibly to volatile conditions in agriculture and changing profitability and liquidity positions; ii) The investor participates in the management of the enterprise, which reduces moral hazard problems caused by asymmetric information and helps to provide additional management inputs.

9.16 However, there are several difficulties in using equity finance and venture capital in the agricultural sector: i) Appraisal and monitoring of equity investments require specific skills, and are time-consuming and costly tasks. Therefore equity finance is only feasible for larger scale enterprises such as agro-business companies or plantation companies using formalised measures for book keeping and disclosure of financial statements; ii) The profitability of agriculture and agro-business does not compare to other economic sectors, when adjusted for sector risks. Therefore, commercial equity investors do not find the agricultural sector attractive.

9.17 On the other hand, there is an increasing interest in using equity finance as a means to capitalise joint ventures between farmers or workers and private investors in agro-business. For example, in the Philippines a rural bank has used a venture capital approach to capitalise rice mills. These mills were established as joint ventures between the bank and rice farmers. The farmers are gradually buying out the bank through deductions from the rice sales proceeds. In South Africa, equity finance is being used for the capitalisation of empowerment projects in a land reform context, in the form of joint ventures between commercial farmers and landless farm labourers in the production of high value export crops. The evidence is still too limited to allow stronger conclusions about success of this approach in terms of financial sustainability, real empowerment of farmers/workers and the conditions for replicability elsewhere. But the mechanism shows promise when carefully used.

C. RURAL FINANCIAL INSTITUTIONS AS PROVIDERS OF TERM FINANCE: LESSONS FROM THE CASE STUDIES

I. Importance of Competent Financial Institutions for Successful Term Finance

9.18 Term finance is a specialised activity requiring specific knowledge and skills. There are many reasons to support the view that financial institutions are in the best position to provide term finance and should become the main providers in the long term.

- a financial institution's core business is the assessment of risks and of the repayment capacity of clients;
- they have economies of scale in administration and processing of loans;
- they can provide ancillary financial services such as savings products or short term loans;
- they have better access to funding sources.

9.19 The case study institutions provide some indications on what financial institutions, which are operating under a financial sustainability requirement (new paradigm), can achieve under developing country conditions. Despite the limited number of examples and the differences regarding types of institutions and country environments, some lessons emerged about scope of FIs to engage in term finance, the main constraints they face and how governments and donors can support the expansion of the "frontier of term finance" in rural areas can be expanded in a sustainable way. Apart from strengthening financial institutions, enhancing the effective demand of rural clients and improving the general environment for term finance, some situations may require a more pro-active approach to kick-start the financing of term investments.

Box 52: Main Features of Term Finance Provided by the Case Study Institutions at a Glance

There are two groups of financial institutions: (i) New institutions founded during the last 10 years with substantial donor support; (ii) Old financial institutions which have gone through a longer period of institutional transformation and reform.

- Most financial institutions of group one are only able to provide medium term loans (some leasing) up to a maximum of 5 years, or 3 years in Sub-Saharan Africa (SSA). Only the “old” institutions are able to provide longer term loans.
- Assets which are frequently financed include farm machinery (animal traction, small tractors), irrigation equipment (motorised pumps), livestock (dairy cows, poultry), transport, cowsheds, or small items of processing equipment (mills, presses). If leasing is offered, it is used for the same purposes. These assets are characterised by medium level capital requirements, short gestation periods and a relatively steady cash-flow, either from use on the investor’s own farm or by renting/providing hiring services or by having multi-purpose uses.
- The main target groups are established farmers with a track record in the financial system, diversified income sources, and the ability to provide some collateral.
- Further risk management practices include:
 - Lending only to established farmers with a track record, and only for expansion of existing activities
 - Lending only for assets/activities, which have proven technical viability in a certain area
 - Institutions focusing on regions with high agricultural potential, where risk mitigating features such as irrigation or crop insurance are in place. Good public infrastructure (roads, communication), is necessary
 - Low level of competition helping to control the liabilities of the farmers and having a positive impact on repayment performance, because farmers are interested in maintaining a good relationship with the financial institution.
 - Secured market and marketing outlets are often a pre-requisite. Especially in SSA, single channel marketing systems in major export crops (tea, coffee, cotton) enabled financial institutions to establish a lien on the crop and ensure loan repayment through automatic deductions from produce marketing returns.

II. Developing an Appropriate Financing Technology

9.20 This is probably the most crucial issue for addressing specific risk and transaction cost issues related to financing farm related investments. Micro-lending technologies such as graduation of clients into increasingly larger loan sizes, frequent repayments in small instalments or collateral substitutes can be adapted to control moral hazard risks, especially for smaller investments which produce frequent cash-flow and do not have a long gestation period (some livestock, multipurpose assets). Standardised loan packages for specific investments might be appropriate for larger farmers, but are likely to result in high default rates in the case of small farmers, as witnessed by lending under government schemes and projects. Loan appraisal should be carried out on an individual basis to tailor the disbursement and repayment as closely as possible to the farm household cash-flow. Appraisal and repayment schedules should be based on existing household cash-flow plus the cash-flow of the investment. Long gestation periods for both principal and interest should be avoided.

9.21 Frequent contact with the clients and a long standing relationship are important to reduce risks and lower the costs of obtaining information and supervising borrowers. Good knowledge of local conditions eases appraisal and helps to better understand the reasons for default. Good relations with local authorities and group leaders, based on future expectations, are important for screening farmers and for enforcing repayment discipline. Lending to individuals is generally preferred, despite higher transaction costs, to avoid risks of weak governance of groups,

related to management of larger loans or of group owned assets. However, there are some notable exceptions, and groups can play an important role in screening and supervising borrowers.

III. Other Relevant Issues

Ensuring the Availability of Non-Financial Support Services

This is essential to reduce risks of technical and management failures. The provision of these services by the lender should be discouraged, because the farmer might make the lender responsible for any failure, and so justify avoidance of repayment obligations. Strategic partnerships with agribusiness firms, equipment suppliers, NGOs or government extension services appear to be the better choice.

Making Suitable Technologies Available

9.22 In some countries the non-availability of suitable technology for small farmers is a major issue. Supporting the development of a private-sector based supply chain for farm machinery and equipment is an important area for governments and donors. It can have a positive impact on the productivity of investments by making less costly equipment available which is best suited to local condition, and by ensuring the availability of appropriate equipment, spare parts and after sales services like repair shops, etc. Micro irrigation development is an example of successful supply chain development for small scale equipment in South Asia and in some African countries. For tree crops, the availability of quality planting material should be ensured through supporting the development of private nurseries.

9.23 Offering different financial services including savings, short term loans for working capital or other purposes, or insurance products helps to stabilise the farm household cash-flow and reduce vulnerability. It further serves to establish stronger ties between a financial institution and farmers, and provide the basis for a long term relationship. Small farmers may “graduate” into becoming term borrowers. Reliable access to future loans, including those for emergency purposes, is highly valued by farmers and provides a strong incentive to repay term loans on time.

Role of Competition

9.24 Increased competition for low risk clients (salaried employees, traders) in urban areas has prompted some micro-finance institutions to diversify into rural areas. Such a move can be initially attractive. But if competition for the better clients builds up also in rural areas, then there is the danger of some clients engaging in multi-borrowing. Over-indebtedness can be the result. Better communication between financial institutions, or even the establishment of credit bureaux can help avoid such situations.

Collateral

9.25 Compared with conventional banks, the case studies show that there is scope for using collateral substitutes for smaller term loans, or complementing insufficient collateral through collateral substitutes, such as joint liability mechanisms and co-guarantors, and liens on produce. Though the latter have no market value they can be effective in guaranteeing repayment if the farmer has a long standing relationship with the lender and if there are few other sources of

finance at comparable terms. However, as amounts and terms increase, there will be a need for additional collateral. In view of the limitation inherent in the use of conventional collateral (high costs and delays in creating charges, foreclosing and selling), most institutions combine traditional collateral with social collateral. The use of non-traditional collateral like pledging of farm assets and household goods might become problematic in areas with increased competition between banks because farmers may pledge the same asset to different lenders.

Scope and Limits of Interlinked Transactions

9.26 Interlinking credit with output marketing is a powerful tool to substitute for collateral. It can also help ensure reliable loan repayment, at very low cost. It has a particular importance in Africa, where other forms of tangible collateral are often not available. The few examples of financial institutions in Africa which provide medium term loans for animal traction and other purposes are often limited to export crops like cotton (Mali, Benin) or coffee and tea (Kenya). These crops still have a single channel marketing outlet. Interlinking requires the involvement of a non-financial institution like a marketing board, cooperative, trader or processing enterprise. Its effectiveness depends critically on the ability to discourage outside selling by farmers, to avoid repayments. Therefore, in practice, additional collateral may be sought in the case of term loans.

9.27 Interlinking in conjunction with a single channel marketing outlet implies also risks. The ability of the lender to simply deduct repayments at source carries the danger of relaxing the standards of loan appraisal and may lead to inefficiencies. This is especially dangerous in a supply-led situation, where a non-financial institution is primarily interested in increasing the production of a certain crop, and channels funds directly or through a financial institution to farmers. This might benefit the farmer as long as prices are high. If prices decline farmers' incomes are further reduced by high deductions which limit the incentive to further cultivate the crop. If financial institutions are part of such tripartite arrangements, they should ensure sound banking practices. Moreover, they should offer farmers the possibility to borrow for different purposes and repay also in cash out of other income sources.

9.28 Interlinking in a competitive environment requires efficient provision of services, transparency in account management and calculation of deductions, and a long-term relationship between farmer, company and financial institution. The Philippines example of the "corporative-approach" suggests, that equity participation of farmers in the processing company may be one way to achieve this.

Portfolio Management Requirements

9.29 Agricultural term finance is an extremely risky activity and has to be dealt with carefully by financial institutions in order to maintain a healthy portfolio. These institutions need to manage their portfolio risk across sectors, regions and client categories. This restricts the extent to which they can engage in term finance, and therefore the amount and number of loans available for farmers. Small and local institutions like village banks or cooperatives have limited scope for diversification, whereas large institutions like national agricultural development banks can diversify between regions, economic sectors and client categories.

Sources of Funds

9.30 Most financial institutions try to minimise mis-matches between assets and liabilities in order to reduce interest rate and liquidity risks. In the face of this, their ability to make term loans is largely dependent upon access to long term funding sources, preferably at fixed interest rates. This is especially important for relatively inexperienced institutions. The existence of donor funds has often been crucial at this stage. More experienced and larger institutions need to enlarge and diversify their funding sources, e.g. through development of term savings products, borrowing from other banks or issuing debentures and bonds. Smaller institutions can provide term loans more readily if they establish liquidity pools, e.g. through being part of a group or federation of banks. They may also be able to access funds through linkages with commercial banks.

9.31 As noted, support to rural financial institutions through facilitating access to long term funding sources such as equity or sub-ordinate loans will in the future remain important. It should, however, be accompanied by asset liability management training and capital market development. In the long-run, government and donor resources will not be sufficient for funding term finance. Care must be taken to protect financial institutions from foreign exchange risk, in the case of international borrowings. Another risk factor which needs to be controlled is the possible interference of donors/governments in lending decisions. Such interference may undermine the soundness of the financial institution

Need for a Gradual Approach

9.32 These difficulties point to the importance of adopting a gradual approach towards agricultural term finance, in line with the capacity of the financial institution. Trial and error processes are inevitable. *Agricultural term finance requires a major change in the procedures of financial institutions.* An appropriate financing technology has to be developed, new staff with an agricultural background may need to be contracted or existing staff be trained in loan appraisal or asset liability management. An adequate management information system needs to be adopted, and access of additional funding sources is required. This points to the importance of public support from donors and governments to set up viable term finance arrangements.

Crucial Role of Donors/Government Support

9.33 The role of governments and donors has been instrumental in the establishment of most of the case study institutions and/or in improving their ability to develop suitable term finance products. The support has been most crucial in terms of technical assistance in developing a financial technology, the provision of seed funds for young institutions or the pilot testing of financial innovations, at concessionary terms. Some institutions were established by donors or governments with the particular mission to provide rural and agricultural finance, and then gradually transformed into viable financial intermediaries (e.g. Caja Los Andes, BASIX, Agrocapital). Others received ongoing support in the development of new products, such as ANED, CECAM and FECECAM. Reformed agricultural banks (BAAC, BRI) could capitalise on earlier public investments in branch networks, trained staff and higher rating in capital markets due to the implicit guarantee of government ownership. It is critical to maintain a balance between the mission of lending to rural and agricultural sectors and adhering to prudential norms and standards.

9.34 The danger of inappropriate donor support must be recognised. Institutions should not be pushed into agricultural term lending, e.g. through lending quotas. Institutional procedures and lending standards should be respected. Public ownership or equity participation of donors in financial institutions are important as driving forces for financial innovation in this difficult area of banking. Only a few government-owned agricultural development banks have managed to maintain a suitable balance between their mandate of financing the rural economy and operational autonomy to ensure sound lending practices. Increased competition is also important, but is not sufficient alone. Sound economic and financial sector policies are vital.

D. NON-FINANCIAL INSTITUTIONS AS TERM LENDERS?

I. Equipment Suppliers and Agri-business

9.35 The empirical results of the research suggest that there are only a few instances in which non-financial institutions, such as suppliers of farm machinery and equipment, or agri-business companies have been able and willing to provide term finance. They face similar constraints to financial institutions, such as the liquidity management problems, limited access to long term funding sources, and absence of collateral. Their potential strengths compared to financial institutions include a better knowledge of technical matters related to production or equipment, closer contact to farmers and easier interlinking with marketing. However, these are often offset by disadvantages regarding their ability to properly assess the repayment capacity of farmers, administer large numbers of smallholder accounts and enforce loan repayments.

9.36 Equipment suppliers often have extremely restrictive collateral requirements and limit their financing to the acceptance of deferred payment arrangements for a minor part of the purchase price, usually up to a limit of six months. Smaller suppliers lack appropriate sources of funds to engage in lending. However, they may be potentially more creditworthy than farmers and their role in financing farm equipment might be increased through proper training in loan administration and liquidity management, and better access to sources of funds. Leasing might be another option to be explored.

9.37 Agribusiness companies generally restrict their financing to in-kind provision of seasonal inputs. Advances are then deducted when the produce is delivered, with the costs of services provided to farmers on credit being deducted at the same time. These services may include transport, storage, or irrigation, which would require capital investments beyond the scope of farmers. In this regard, agri-business companies may to a certain degree substitute the need for term investments by their outgrowers. Direct provision of term loans by processing companies to outgrowers is limited to cases when a complete monopsony on the product marketing chain allows automatic deductions at source. However, such monopsonies tend to be unstable over time and attract competing buyers, undermining the collection mechanism. Moreover, due to lack of funds or insufficient capacity to handle large number of smallholder accounts, financial institutions often participate within tripartite arrangements (bank, farmer, buyer/processor).

9.38 There might be some potential to further support tripartite arrangements. Key to success is then the design of a strategic partnership which distributes risks and costs in a fair proportion amongst the partners, and creates a system of checks and balances which does not result in excessive delays or transaction costs.

II. Projects

9.39 Projects generally face similar problems to other non-financial institutions. Their main strength is the provision of a package of financial and non-financial support services, at least in the case of sub-sectoral projects such as for tree crop development. Project management units (PMUs) have often been effective conduits for providing these services to target farmers. However, their main weakness is the lack of sustainability. Most of the services might disappear after the end of the project. This is a major disadvantage in the provision of financial services, as repayment performance in rural areas with poor collateral and contract enforcement procedures significantly depends on future expectations and long-term relationships. PMUs are often perceived by farmers as temporary single target institutions offering “cold money” from donors or the government. Furthermore, they are output-target driven and the provision of sustainable financial services is seldom an objective. The incentive for loan collection by project staff might be questionable and collection through extension workers might be problematic as farmers may try to avoid them. Finally, the costs of establishing loan administration systems and collecting loans are often underestimated.

9.40 Therefore, in general, projects should work in partnership with financial institutions wherever possible. Such a partnership can lead to financial deepening, if the project can serve to convince the financial institution that lending to the target groups can be done profitably. This might be possible, if the project promotes financially viable activities and tackles important risks through: training and capacity building of farmers, enhancing private sector based support services; strengthening providers of appropriate technology. The use of partial guarantees and access to long-term funds will be needed in most cases, especially during the initial period of the project. However, risk sharing and co-finance arrangements should be phased out gradually and complemented by technical assistance in the necessary technical and banking matters.

9.41 Projects, aimed at regional rural development and without a particular sub-sector focus might be better equipped to support financial institution building. However, there might still be some inevitable frictions between the project’s objectives to support poor farmers as target groups and the need for autonomy for successful financial institution building. If these different objectives cannot be reconciled or the regional conditions for sustainable financial institution building are too hostile, kick-starting measures might be required.

E. KICK STARTING ARRANGEMENTS IN CASES WHERE A MORE PRO-ACTIVE APPROACH IS NEEDED

9.42 The analysis of the provision of cost-covering term finance products in rural areas has revealed several limitations. Financial institutions focus on high potential, high population density areas with a high level of infrastructure. Further, they restrict their financing to experienced and well established clients, and can seldom offer long-term loans for investments with long gestation periods. Portfolio management, asset liability management or collateral requirements may further lead to situations in which potentially profitable and financially viable projects cannot be financed despite the existence of financial institutions. These situations may require a more pro-active approach.

9.43 The term “kick-starters” has been used in this report for a range of devices involving the temporary use of public seed funds to support viable and/or justifiable capital investments which do not find support in the financial marketplace. This may be either in areas without

suitable financial infrastructure or in cases where projects create a reasonable financial rate of return before financing, but a much lower rate of return after financing, when market interest rates are applied to the estimate. There are also situations when certain term investments might be deemed necessary primarily on **social grounds**. These might not achieve a positive rate of return using strictly financial criteria, but convey other benefits to specific disadvantaged communities and therefore to the economy as a whole. Examples are tools, equipment or irrigation for food insufficient and extremely vulnerable households or HIV infected rural dwellers, or other investments with a clear public good character. These situations are not discussed in this report. They are simply noted as warranting attention and possible consideration in the discussion of term investments in agriculture.

9.44 Examples which are discussed in the report and which are covered by case studies, include:

- Infrastructure such as small scale irrigation systems in areas where systemic risks related to rainfall are the major constraint to agricultural production and sufficient marketing/processing opportunities exist.
- Introduction of high yielding tree crop varieties in areas with few alternative options for economic diversification and value adding.
- Special assistance where specific situations prevail, such as historical imbalances in the ownership of land and other productive assets, leading to land reform programmes.

9.45 Kick-starting interventions have important dynamic objectives beyond the financing of specific investments, such as i) integrating poor people into financial markets; ii) stimulating increasing volumes of complementary commercial finance; iii) enhancing the scope for economic diversification through upstream and downstream linkages; and iv) fostering the emergence of sound, efficient financial institutions, e.g. by reducing the risks related to clients or to agricultural activities.

9.46 The principal mechanisms considered here are **grants**; temporary and declining **interest rate subsidies** for long-term loans; and **concessionary equity finance**. In practice these mechanisms are often combined. Their use depends in part of the nature of the investment financed, in part on institutional considerations.

- Matching grants may be used for individual farmers and for lumpy investments without gestation periods. Their strength is the matching requirement, which stimulates an ‘own contribution’ in cash or kind from the farmer. They may also be linked with the provision of long-term loans from commercial banks. This increases the funds available for investments and ensures sound investment decisions, if the bank assumes the credit risk.
- Declining interest rate subsidies might be appropriate for investments with a gestation period and in environments with modest inflation rates. However, any type of term loan – with or without a subsidy – should only be considered if the repayment can be assured. This may be the case in financing tree crops which possess a direct link between production and processing, or for other term

investments which can be recovered through the marketing system of the agricultural produce (e.g. dairy).

- Concessionary equity finance is more suitable for larger scale investments and to support the establishment of joint ventures between farmers or rural workers and commercial investors.

9.47 All these measures involve a subsidy, since they reduce the cost of an input or service. As such, they introduce distortions. Their use is justified when they correct an existing distortion in a given community or industry, so that the aggregate benefit after the action has been taken is greater (and less distorting) than before.

9.48 Virtually all of the problems with the use of kick-starters have their origins in the usual difficulties with subsidies. These include: distortion of markets, allocation difficulties, and the tricky trade-off between the effective use of subsidy funding (usually by concentration on more productive farmers) and equity considerations. In view of the qualifications made earlier in regard to the “old paradigm”, the use of subsidised and targeted kick starters has to be assessed with a lot of care. The need has to be examined on a case by case basis, and the resulting trade-offs weighed carefully.

9.49 Distortions of investment behaviour and the financial system can be minimised by limiting kick-starting measures to the extent possible and through sound institutional design. This includes the use of a time bound interventions which are closely monitored and which can be phased out easily. Existing distortions and imperfections in rural financial, products and insurance markets will require more powerful interventions than some kick-starting assistance with term finance. However, it is important that such kick-starters push in harmony with policy changes and other corrective measures being taken. This refers also to the selection of enterprises for investment. The greatest care must be taken to ensure that supply is geared to demand, or farm gate prices may collapse, and existing producers affected.

9.50 When grants, subsidized interest rates or similar forms of cheap assistance are available, then the authorities assume an important task of designing procedures to ensure fairness of access, with a clear focus on the target groups. This can mean an additional administrative burden, but self-selection procedures, such as compulsory, prior participation in training on the part of applicants can ease the process in a useful manner.

9.51 Inevitably the use of scarce public funds for kick-starters will mean that demand will exceed supply. Rationing is therefore necessary, which in turn will throw a spotlight on the competing aims of productivity in the use of the resources (which will steer funding towards larger and more successful farmers) and equity considerations (spreading the assistance as widely as possible).

F. RECOMMENDATIONS FOR GOVERNMENT AND DONOR SUPPORT

9.52 The case studies show that in several cases the role played by governments and donors has been instrumental in the development of viable and sustainable rural financial institutions and in improving their ability to provide suitable term finance products. The support has been most crucial in terms of technical assistance in developing a financial technology, the

provision of seed funds for capitalising young institutions or supporting the pilot testing and introduction of financial innovations. Some institutions were established by donors or governments with the particular mission to provide rural and agricultural finance, and then gradually transformed into viable financial intermediaries (e.g. Caja Los Andes, BASIX, Agrocapital). Others received ongoing support in the development of new products, such as ANED, CECAM and FECECAM. Reformed agricultural banks (BAAC, BRI) could capitalise on earlier public investments in branch networks, trained staff and higher rating in capital markets due to the implicit guarantee of government ownership. It is critical to maintain a balance between the mission of lending to rural and agricultural sectors and adhering to prudential norms and standards.

9.53 Another major finding is that it is not possible to draw a sharp distinction between the respective roles of government and donors. Both aim at development. The main point of difference is that governments shoulder the primary responsibility for introducing necessary economic reforms and promoting the development of financial institutions, while they may seek donor support in terms of technical and financial assistance to fulfil their responsibilities.

Agenda for Government/Donor Support

9.54 The objective of this study is to come up with strategies which will enlarge the financing of agricultural term investments, in particular, by smaller farmers, taking into account the difficult business environment and specific circumstances that prevail in SSA countries. In fact, there are several areas in which an appropriate role of governments and donors is decisive and which may facilitate the promotion of a viable and sustainable rural financial system. These are discussed below.

Establishing an Enabling Environment

9.55 The first and foremost task of governments and donors is to promulgate the right policies that establish an enabling macroeconomic and business environment and which would reduce agricultural sectoral risks and uncertainties. A main goal would be to enhance the effective demand for term finance by farmers and to facilitate competition and efficiency among financial institutions. It is also vital that governments and donors act in close coordination with and complement each other in order to ensure the consistency of their interventions, for instance with regard to the use of loans versus grants. With this purpose in mind donors may decide to support governments who are committed to introduce economic reforms with well-designed action plans, while at the same time underling that their assistance will be time-bound. Such a process of policy reform may form part of an overall structural adjustment programme, sectoral economic reforms and/or assistance to specific activities such as the identification/preparation and implementation of tree-crops, rural finance and institutional development projects or programmes.

Improving the legal, regulatory and supervisory framework

9.56 While the validity of prudential external regulation and supervision of financial institutions⁷⁰ cannot be disputed, it is important that the existing regulatory framework takes into account the specific circumstances in which rural financial institutions operate to avoid discouraging them from providing financial services to rural clients. First of all, the loan loss provisioning norms for RFIs should not be over-rigid and they must be distinct from those applicable to financial institutions attending urban clients.⁷¹ RFIs may also be subjected to relatively liberal minimum reserve requirements, especially if they have access to existing central bank refinance facilities or other external support to face situations of temporary liquidity shortages. The same applies for the limitations on the volume of unsecured lending or the mismatches between the maturity of assets and liabilities, as too strict controls may seriously inhibit term lending.

9.57 The availability and the quality of loan collateral from farmers is another important key issue. Measures to improve the situation include: (i) broadening the range of assets which can be used as collateral,⁷² (ii) strengthening contract enforcement mechanisms and making foreclosure easier and less costly by removing several procedural delays and permitting also non-judicial foreclosure, and (iii) the creation of modern and up-to-date property registry systems to facilitate the creation and recording of charges on borrower assets by financial institutions.

Development and Strengthening of financial institutions

9.58 Provision of term finance by a financial institution requires good management, effective operational procedures and appropriate funding sources. Donor and government assistance to financial institutions may be given in the form of technical assistance and the provision of seed capital grants and concessional loans in the following areas:

- Carrying out a thorough analysis of the potential demand for term finance taking into account: (i) the potential for profitable agricultural investment opportunities for farmers and their specific funding requirements; (ii) the availability of interested farmer investors who are willing and able to repay term loans at cost-covering interest rates; and (iii) alternative sources of farm income.
- Developing and pilot testing of suitable financial products and technologies which are geared to address specific high lending risks and transaction costs, in particular those related with the financing of farm investments as well as with regard to the special circumstances and the specific problems of resource-poor small farmers for whom the provision of essential support services is crucial.

⁷⁰ Protection of the interests of savers by ensuring sound operations of financial institutions and maintaining the efficiency and stability of the financial system as a whole.

⁷¹ This is because a default in the timely repayment of an agricultural loan may not necessarily mean that it becomes a bad or doubtful loan. Payment delay may be due to weather-related late harvesting or marketing problems arising from the availability of irregular transportation facilities or a weak market infrastructure. Also, external shocks such as drought, floods or pests beyond the control of the farmer may justify the rescheduling of agricultural term loans.

⁷² Broadening the legal base of loan collateral assets by including, for example, moveable assets such as agricultural equipment, livestock, crops, inventories and receivables.

- Training of loan officers and staff of credit committees in the proper appraisal of loan applications, training in accounting, financial management and internal control to ensure a professional management and efficient operations of rural financial institutions during their start-up and consolidation phases.
- Introducing or upgrading the use of Management Information Systems in order to improve individual loan tracking and overall loan portfolio management.
- Opening of new branches with suitable office facilities, introducing mobile banking units, streamlining operational procedures and operating branches as profit centres, thus enhancing the outreach potential of financial institutions in rural areas.

Mobilization of Long-Term Funds

9.59 As already noted, the ability of rural financial institutions to support agricultural term investments depends to a large extent on the availability of long-term funds mobilized at affordable costs. Direct government or donor financial support will be especially important for young promising financial institutions during their consolidation phase. Smaller institutions can be also assisted in establishing common liquidity pools, for instance by constituting associations or federations of similar institutions. More experienced and larger institutions could be assisted in enlarging and diversifying their funding sources. Support to fund mobilization can take also the form of technical assistance coupled with guarantee mechanisms for developing and providing term savings deposit products, receiving credit lines from commercial banks or accessing capital markets through the issue of debentures and bonds. Through equity investments donors may strengthen the capital base of financial institutions together with the provision of technical assistance in specific areas.

Management of Investment Portfolio Risks

9.60 Apart from providing technical assistance for the development of new financial products and technologies and promoting loan portfolio diversification across sectors, regions and clients, government and donor assistance is also important for the development of appropriate risk tools to share and manage systemic risks. These may include credit guarantee schemes and agricultural insurance and commodity price risk management.

Access to Non-Financial Support Services

9.61 Government and donor support should aim at strengthening farm management, business development and financial management skills of farmers by coordinating the provision of financial services by financial institution with essential non-financial support services. These non-financial services include the provision of technical and business guidance to farmers by (i) agricultural extension and business development service providers; (ii) the supply of agricultural production inputs and equipment (seeds or seedlings, fertilizers, pesticides, farm equipment with related spare parts and after-sale services) through the promotion of private sector supply chains; and (iii) the provision of agro-processing and marketing services by traders and agribusiness companies.

Rural Infrastructure

9.62 Government and donor support to the development and upgrading of basic rural infrastructure is essential to ensure the timely supply of appropriate production inputs to farmers, even in remote locations, and to facilitate the commercialization and the post-harvest movement of agricultural commodities to different markets and agribusiness companies. An enabling and competitive business environment will increase the profitability of farming and thus enhance the returns from farm investments.

Kick-Starting Arrangements

9.63 Governments and donors need to assess carefully the need for a more pro-active support to farmers in case there are serious market imperfections. They may decide to provide transparent, well-targeted and temporary subsidies that ensure an effective allocation of scarce public funds, while at the same time minimizing possible market distortions. Kick-starting mechanisms such as matching grants need to be designed in such a way that they encourage the leverage of public resources with commercial funds as well as with mobilized local savings.

Caveats Associated with Government and Donor Support

9.64 The difficult challenge of providing appropriate government and donor support must be recognized. While public ownership or equity participation by donors in financial institutions can be an important driving force for the development and provision of new financial services and products to farmers and rural households, it is crucial that sound financial and banking procedures and the management autonomy of the supported financial institutions are respected. In particular, rural financial institutions should not be pushed into providing sub-standard agricultural financing products, including term lending, for instance by governments stipulating mandatory agricultural lending quotas. The current study demonstrates that only a few public agricultural development banks have managed to maintain an appropriate balance between their mandate of supporting rural development and maintaining a good performance record as viable and sustainable rural financial institutions. Due care must be also taken to ensure that government and donor support are not imposing conditionalities on financial institutions which infringe on their operational and financial autonomy.

9.65 Financial assistance in the form of grants and subsidies should be used with extreme care in order to minimize possible distortions in rural financial markets and they should be only used to overcome specific difficult situations and market failures. In the long term, however, only financial institutions that operate on market-based terms will be able to maintain a viable and sustainable performance.

APPENDIX: MATRIX SUMMARY OF ISSUES AND OPTIONS

9.66 Any strategies and measures to expand the “financial frontier of term finance” have to be adjusted to the specific country and regional conditions, such as the economic, legal and policy environment and the institutional, agro-ecological and socio-cultural factors determining the supply and demand side for term finance. A general strategy might therefore be of limited use. Instead, this matrix summarises a number of critical issues which have been identified during the research and proposes various options and corrective measures that can be used to deal with these issues.

I. Enhancing the Environment for Promoting Agricultural Term Investments		
A. Managing systemic risks		
Issues	Options	Examples
Co-variance of risks	Encourage portfolio diversification of FIs.	<ul style="list-style-type: none"> • Include different clientele with farm and non-farm activities (production, processing and trade). • Target rural and urban areas. • Offer different financial products.
	Strengthen FI's access to refinance facilities.	<ul style="list-style-type: none"> • Provide access for RFIs to refinance facilities to provide liquidity in case of a major external shock • Facilitate credit lines between RFIs and commercial banks.
Weather related risks	Promote irrigated farm production.	<ul style="list-style-type: none"> • Accord priority to rehabilitation/ expansion of irrigation systems, e.g. within CDD approaches. • Target existing irrigated areas.
	Develop risk coverage tools.	<ul style="list-style-type: none"> • Replicate innovative approaches such as index or area based crop insurance.
Market related risks	Address risks arising from volatility in agricultural commodity prices.	<ul style="list-style-type: none"> • Introduce forward contracting and put options to protect commodity producers against seasonal price declines.
	Resolve constraints arising from a lack of access to post-harvest marketing/processing facilities.	<ul style="list-style-type: none"> • Promote contract farming. • Evolve suitable tri-partite arrangements, including producers, processors and FIs. • Develop market information systems, commodity grading and warehousing.
Policy related Risks	Maintain macroeconomic stability.	<ul style="list-style-type: none"> • Maintain low and stable inflation and interest rates. • Avoid over-valued exchange rates.
Political risks	Insist on the autonomy of FIs under the overall regulation and supervision of the Central Bank.	<ul style="list-style-type: none"> • Refrain from debt forgiveness programmes and other interferences in lending decisions. • Separate FIs from agriculture ministries.
B. Increasing the overall profitability of agricultural term investments		
Issues	Options	Examples
High transaction costs related with rural economic activities	Enhance the basic rural infrastructure.	<ul style="list-style-type: none"> • Improve roads, marketing infrastructure, energy and water supply and communications and ensure an active community participation in their planning and maintenance.

I. Enhancing the Environment for Promoting Agricultural Term Investments		
Low profitability of agriculture	Reduce distortions induced by wrong policies.	<ul style="list-style-type: none"> Remove agricultural price controls and heavy export duties on agricultural products. Promote the provision of effective support services (input supply, marketing and extension).
C. Addressing legal constraints		
Issues	Options	Examples
Inflexible banking regulations	Adapt existing banking regulations by taking into account the special circumstances in which RFIs operate in order to avoid any undue biases against rural/agricultural lending.	<ul style="list-style-type: none"> Stipulate flexible prudential regulations (loan loss provisioning, maintenance of cash reserves / liquidity, etc.) consistent with the nature of the operation of RFIs. Remove legal restrictions on the use of non-conventional collateral. Introduce specific reporting formats adjusted to the type of business operations handled by RFIs.
	Improve the creation of charges on rural assets.	<ul style="list-style-type: none"> Remove the legal constraints for using farm land as collateral (exemption clauses, etc.). Enable the use of moveable assets such as equipment, livestock, standing crops, inventories and receivables, etc. as collateral for term loans.
Use of rural assets as collateral	Improve the perfection of charges on rural assets.	<ul style="list-style-type: none"> Create modern and up-to-date property registration systems to facilitate the recording of charges by lending institutions.
	Improve the enforcement of collateral charges.	<ul style="list-style-type: none"> Improve existing regulations and procedures and allow also non-judicial collateral foreclosure.
Poor loan collateral enforcement procedures	Promote leasing as an alternative financing mechanism.	<ul style="list-style-type: none"> Streamline the legal and fiscal environment for leasing. Take steps for training and awareness raising of all stakeholders (farmers, RFIs, local courts, policy makers). Strengthen second-hand markets for used equipment.

II. Strengthening the Effective Demand for Agricultural Term Investment Finance		
A. Enhancing smallholder investment opportunities		
Issues	Options	Examples
Increase the profitability of term investments and reduce the risks of technical failures	Promote agricultural term investments both profitable and suitable for smallholders.	<ul style="list-style-type: none"> Target areas for development of perennial crops which are labour intensive and suitable for production by small holders and in areas where there are few other development options which can generate income.
	Ensure the availability of appropriate low-cost technology as well as inputs and technical support services.	<ul style="list-style-type: none"> Promote hand and animal-powered technologies, use Asian low-cost irrigation pumps, etc. Develop the establishment of private nurseries for the production of high quality planting material. Promote appropriate supply chains for equipment, spare parts, repair facilities, production inputs, etc. and encourage to that end partnerships between FIs and the private sector.
	Promote the active participation of smallholders in larger-scale agricultural term investments.	<ul style="list-style-type: none"> Establish direct links between producers and processors, e.g. through outgrower schemes and other forms of farm-agribusiness linkages. Promote joint ventures between farmers and agri-business.

II. Strengthening the Effective Demand for Agricultural Term Investment Finance		
B. Managing idiosyncratic risks (at client level)		
Issues	Options	Examples
Limited management skills of farmer investors	Adopt a gradual approach towards financing of term investments.	<ul style="list-style-type: none"> • Focus on investments based on local technologies and knowledge. • Use low-cost and simple technologies as 'stepping stones' to motorized equipment. • Promote first the use of savings and short term loans before offering term finance. • Base access to term finance upon successful records in loan repayment and savings.
	Combine financial services with non-financial support services, e.g. technical advice and training in business development.	<ul style="list-style-type: none"> • Encourage partnerships between FIs and NGOs to strengthen farmer level managerial and financial skills. • Encourage farm/agribusiness linkages, e.g. in the forms of joint ventures or outgrower schemes. • Involve private sector e.g. machinery dealers in training of farmers. Promote the use of savings and short-term loans before offering term finance.
	Avoid over-specialization in profitable but risky investments.	<ul style="list-style-type: none"> • Spread risks through farm household diversification comprising farm and non-farm activities.
Risk of technical failure of investments	Ensure the availability of appropriate technologies, inputs and after-sales support services.	<ul style="list-style-type: none"> • Pilot test new equipment and provide market information to farmers. • Assist farmers in negotiating improved guarantees/after-sales services from dealers. • Promote private certified nurseries which provides high quality planting material. • Promote a demand-driven provision of agricultural extension services.
Moral hazard problems	Develop appropriate credit culture amongst small farmer borrowers.	<ul style="list-style-type: none"> • Build long-term relationships between FI and farmers, based on trust and future expectations by building sustainable RFIs offering a wide range of financial products. • Use microfinance best practices such as peer pressure to complement conventional collateral, client graduation to access larger term loans based on previous good repayment records, etc. • Insist on minimum equity contributions from farmer investors in total investment costs. • Provide incentives for timely loan repayments (interest rate rebates, access to future larger loans). • Cooperation with local authorities to enforce loan repayments. • Adopt a strict and credible policy against wilful default (denial of future loans and seizure of collateral).

III. Strengthening the Suppliers of Agricultural Term Finance		
A. Building financial infrastructure		
Issues	Options	Examples
Situations where retail RFIs are already in place, but do not offer term finance	Provide support for market research and introduction of financial innovations.	<ul style="list-style-type: none"> Assess the effective demand for term finance and the strengths and weaknesses of existing financial institutions. Provide support (seed capital) for designing and introducing term savings, savings-cum loan and term loan products. Pilot test alternative financing techniques such as leasing finance for farm equipment.
	Provide support for market research and introduction of financial innovations.	<ul style="list-style-type: none"> Assess the feasibility of using equity finance to capitalize processing enterprises with close links to production, preferably as joint ventures between local farmers and agribusiness.
	Support training and capacity building of FIs.	<ul style="list-style-type: none"> Strengthen asset/ liability management skills. Improve skills and procedures for term loan appraisal and monitoring of a term loan portfolio Promote the creation of apex institutions.
	Support the expansion of outreach of RFIs.	<ul style="list-style-type: none"> Support the establishment of new branches in underserved rural areas. Encourage partnerships with NGOs to cover resource-poor small farmers. Access to refinance facilities on the basis of good performance. Establish linkages between commercial/agriculture banks and local RFIs.
	Providing incentives for term lending.	<ul style="list-style-type: none"> Complement technical assistance support with risk sharing arrangements e.g. guarantee mechanisms.
Situations in which a rural financial infrastructure is not yet in place	Support the establishment of new RFIs.	<ul style="list-style-type: none"> Support an initial capitalization using long-term funds at concessionary terms (e.g. equity, subordinated loans). Gradual approach: RFIs and their clients should first master short-term finance. Support staff training and capacity building of both RFIs and their clients. Increase the access to long-term refinance at stable, market-based interest rates according to performance.
Market imperfections	Kick-starting arrangements to co-finance term investments with high social and economic rates of return and positive spill-over effects on the deepening of rural financial markets.	<ul style="list-style-type: none"> Matching grant funding for the construction / expansion of community level irrigation and storage systems. Capitalization of joint ventures and equity share schemes for on-farm and downstream activities (e.g. production and processing of tree crops) and to strengthen farm/ agribusiness linkages in an equitable way. Public funding of basic infrastructure such as roads and communication systems.

III. Strengthening the Suppliers of Agricultural Term Finance		
B. Improving financing products and procedures		
Issues	Options	Examples
Develop skills of RFIs	Develop appropriate lending procedures.	<ul style="list-style-type: none"> • Base loan appraisal on assessment of farm household cash flows. • Adjust loan sizes and repayment schedule to the farm household cash flow and investment type. • Use flexible collateral requirements and introduce collateral substitutes. • Structure investment finance to smallholders in a way so that RFI loans complement rather than substitute farmers' own financing strategies.
Low population density in remote areas	Wholesale lending.	<ul style="list-style-type: none"> • Link RFIs with village-based financial organizations. • Use group approaches for the screening and supervision of borrowers.
	Linking with non FIs.	<ul style="list-style-type: none"> • Cooperate with NGOs and CBOs as facilitators and for the provision of non-financial services. • Promote partnerships with traders/processors for in-kind loans and loan repayment (outgrower schemes).
High operational costs of FIs	Use collateral substitutes.	<ul style="list-style-type: none"> • Use joint liability groups and accept pledging of rural assets.
	Automate banking operations and MIS.	<ul style="list-style-type: none"> • Improve MIS and banking software.
	Staff incentive systems.	<ul style="list-style-type: none"> • Offer staff bonuses based on the performance of branches and individual loan officers.
	Embark on other cost-cutting measures.	<ul style="list-style-type: none"> • Cut down excessive paperwork and bureaucratic delays and controls.
C. Promoting the mobilization of long-term funds for agricultural term finance		
Issues	Options	Examples
Support to Individual RFIs	Strengthen the equity base.	<ul style="list-style-type: none"> • Provide equity contributions and subordinated loans to RFIs in their early stage of development.
	Encourage deposit mobilization.	<ul style="list-style-type: none"> • Provide technical assistance to introduce term deposit and savings cum loan products. • Establish a deposit insurance scheme.
	Strengthen liquidity management skills for the funding of short and medium-term loans	<ul style="list-style-type: none"> • Strengthen the skills of RFIs to use core deposits as a funding source. • Building networks of RFIs, facilitating horizontal and vertical liquidity exchange.
	Access to refinance for funding long-term loans.	<ul style="list-style-type: none"> • Explore possibilities of refinance support to retail RFIs through second-tier apex or wholesale banks for financing specific long-term investments (tree crops, land purchase).
Capital market development	Improve the access of RFIs to capital markets.	<ul style="list-style-type: none"> • Enhance the skills of RFIs to mobilise long-term funds on capital markets, e.g. through the issue of certificates of deposits, bonds and debentures. • Provide guarantee mechanisms, enabling well-performing RFIs to access capital markets.

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