HANDBOOK ON AGRICULTURAL FINANCE IN EAST AFRICA

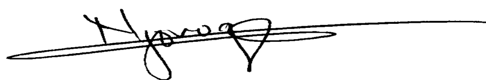
December, 2012

FORWARD

Similar to many other developing countries, agriculture remains an important sector for majority of the Sub-Saharan African economies. In the East African region, this sector remains the largest and the most important in terms of provision of livelihood support, food security, export earnings and employment opportunities. Despite all these, the sector continue to be faced by a myriad of challenges ranging from disintegrated production from many small holder farms, low use of technologies, under-capitalization, climate change related challenges, lack of support infrastructure, poor access to markets and low access to essential services such as finance, information, research and extension. Agricultural finance, including related support services, is a particularly important determinant of the productivity of the sector and the attainment of the eventual benefits to the various actors.

It is along these lines of thought that the agriculture finance and support forum was established and subsequently, the handbook on agriculture finance. The Forum emanated from having recognized the need for improved co-operation and collaboration amongst financial service providers and support partners in the three major countries of East Africa countries; particularly amongst those who are working in the agricultural sector. The idea to create a knowledge sharing forum rides on the fact that key learning and knowledge generated by interventions, and the development and delivery of successful business models in the agricultural financial sub-sector, are currently not being disseminated widely. In addition, neither are development efforts being coordinated effectively nor employing the most efficient use of resources. As a result, opportunities for the replication of successful business models, are being missed and the agricultural sub-sector remains financially excluded and basically subsistence.

Local practitioners offering agricultural financing and other support services such as research, training and extension represent an important source of information on business models, innovations and implementation experiences that should be shared. In essence therefore the Agricultural Finance and Support Forum was designed as an intervention to facilitate sustainable two-way interchange of knowledge and experiences. This would essentially ensure that relevant lessons from the forum translate into real and practical delivery of financial and support services in the agriculture sector and ultimately improved livelihoods.



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PREFACE

This hand book is an output of the one year Swisscontact's facilitated agricultural finance and support forum which was established in July 2011. The handbook details the various lessons gained from both financial services providers and support organizations in East Africa with particular interest on the agricultural sector in the three major countries of East Africa namely: Kenya, Uganda and Tanzania. This process was spearheaded by the Swisscontact East Africa, Nairobi office and supported by the Ford Foundation.

The overall purpose of the project was to provide a forum to share experiences and synchronize efforts among financial provider partners, donor organizations, government and research organizations in East Africa working in the agriculture sector, and improve the use and impact of knowledge generated. The main aim of this handbook was to document and communicate some of the key lessons that emerged from the forum in the period between July 2011 and December 2012.

The hand book is organized into four major parts. Part 1 sets the stage by giving an account of the status of agricultural finance in the three major counties of East Africa (Kenya, Uganda and Tanzania). This section also documents the role of agriculture in the economies, the roles of finance in agriculture and the role of stakeholders in agricultural finance and an account of the supply and demand for knowledge in agricultural finance and support services in the region.

Part 2 of the hand book documents some of the major and innovative ways and models through which the agricultural sub-sector in the region is being financed. Descriptions of how the models work, the various interactions, partners and their roles have been disused in addition to the major benefits, limitations and challenges faced. During the period of the forum, two innovative cases from each of the three countries that enhanced delivery of agricultural finance and other support services with an aim to increase agricultural productivity, reduce risks associated with agriculture, improve access to essential facilities and services, improve access to markets and/or increase farmers' incomes amongst others were documented. These case studies are discussed in Part 3 of the handbook.

The last part (Part 4) of the handbook documents the generic process of developing effective products in agricultural finance. The inclusion of this part was as a result of a training conducted during the third round of workshops in the three countries upon request by participants from the second round of workshops.

ACKNOWLEDEMENTS

The development of this handbook would not have been possible without the efforts support and collaborations made by various organizations and individuals. Swisscontact Financial Services, East Africa is grateful to the Ford Foundation for having provided the financial support to undertake the various activities comprising the Agricultural Finance and Support Forum. We are also grateful to the various workshop participants, contributors, organizers, government agencies, donor agencies and the private sector participants for their support and contribution during the three rounds of workshops in Kenya, Uganda and Tanzania. We also wish to thank all the contributors for the various case studies including The Hunger Project (THP) and the Housing Finance Bank both from Uganda, The Oiko credit and Youth Self Empowerment Organization (YOSEFO) both from Tanzania and the Juhudi KIlimo and Syngenta Foundation; both of Kenya. We are in addition, thankful to Mr John Njoroge, the team leader, Mr. Joel Maina, the agricultural economist and consultant who facilitated the Forum and Mr. Patrick Machibi, a financial consultant who trained participants on product development in agricultural finance. Further, we are grateful to the various staff members of Swisscontact in Nairobi and Kampala offices who were essential in providing organizational and logistical support.

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LIST OF ABBREVIATIONS AND ACCRONYMS

AMFI - Association of Microfinance Institutions (Kenya)

AMFIU -Association of Microfinance Institutions in Uganda

ASCAs- Accumulating Savings and Credit Associations

ATMs- Automated Teller Machines

BCPs- Basel Core Principles

BOT- Bank of Tanzania

BOU- Bank of Uganda

BRI- Bank Rakyat Indonesia

CBK- Central Bank of Kenya

CEMIDE- Centre for Microfinance and Enterprise Development

CRDB- Cooperative and Rural Development Bank

DTMs- Deposit-Taking MFI's

EAC-East African Community

FINCA- Foundation for International Community Assistance

FSAP- Financial Sector Assessment Plan

FSD- Financial Sector Deepening

GDP - Gross Domestic Product

GIZ- German International Cooperation

GOK- Government of Kenya

GOT- Government of Tanzania

GOU- Government of Uganda

KCB –Kenya Commercial Bank- Kenya

KCB- Kilimanjaro Commercial Bank- Tanzania

KFCB-Kagera Farmers' Co-operative Bank- Tanzania

K-REP-Kenya Rural Enterprise Programme

KUSCCO -Kenya Union of Savings and Credit Cooperatives

MDIs- Micro Deposit taking Institutions

MEDA- Mennonite Economic Development Associates- Tanzania

MFF - Microfinance Forum (Uganda)

MFIs- Micro Finance Institutions

MSME- Micro, Small and Medium Enterprise sector

NBC - National Bank of Commerce - Tanzania

NGOs-Non-Governmental Organizations

PRIDE- Promotion of Rural Initiative and Development Enterprises Limited- Tz

PTF- Presidential Trust Fund

RoK- Republic of Kenya

ROSCAs- Rotating Savings and Credit Associations

SACCOs-Savings and Credit Cooperative Societies

SCULT- Savings Cooperative Union League of Tanzania

SEDA–Small Enterprise Development Agency

SELF-Small Entrepreneurs Loan Facility

SELFINA- Sero Lease and Finance

SIDO- Small Industries Development Organisation

SLAs- Sustainable Livelihood Approaches

SSA- Sub-Saharan Africa

TAMFI-Tanzania Association of Microfinance Institutions

VICOBA- Village Community Banks

WDF- Women Development Fund

YDF- Youth Development Fund

YOSEFO-Youth Self Employment Foundation

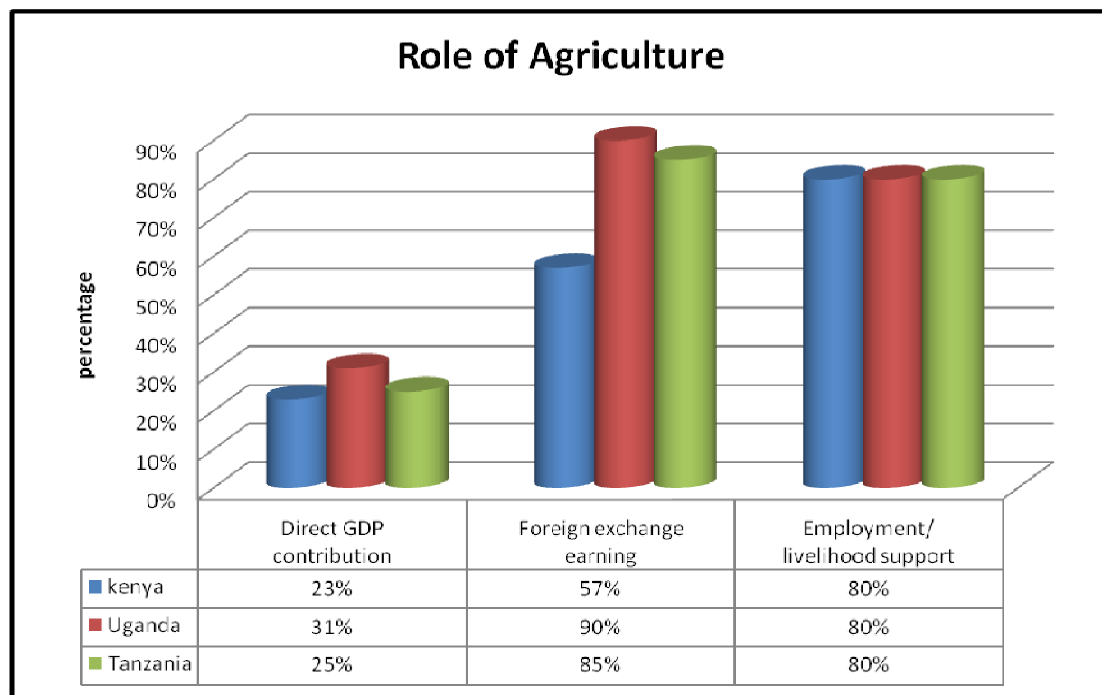
PART 1: STATUS OF AGRICULTURAL FINANCE IN EAST AFRICA

1 INTRODUCTION

The East Africa region comprises of 5 countries namely Kenya, Uganda, Tanzania, Rwanda and Burundi. However, the findings provided in this section relate to the three major countries i.e Kenya, Uganda and Tanzania.

1.1 Background (Agriculture Sector in East Africa)

Agriculture comprises the largest sector in each of the three major countries in East Africa in terms of employment, income generation, industrial raw material generation, export earnings, trade volumes and food provision (Figure 1).



	Direct GDP contribution	Foreign exchange earning	Employment/ livelihood support
kenya	23%	57%	80%
Uganda	31%	90%	80%
Tanzania	25%	85%	80%

Figure 1: The role of agriculture in the East African Economies

In Kenya, the sector contributes 23 percent of Kenya's Gross Domestic Product (GDP) and 57 percent of the total export earnings. Further, agriculture indirectly contributes 27 percent of the country's GDP through manufacturing, distribution and service-related sectors while 80 per cent of the population derives their livelihood from agriculture[1]. In the Vision 2030, the Kenyan government has identified agriculture as

[1] Agricultural Sector Development Strategy (ASDS), 2009

one of the six key economic sectors expected to drive the economy to a projected 10 percent economic growth annually over the next two decades through promotion of an innovative, commercially-oriented and modern agriculture. The government has also identified low availability of capital and access to affordable credit as a main cause for low productivity in agriculture amongst other challenges.

In Tanzania, agriculture is also the leading sector accounting for almost half (25% directly) of the GDP and export earnings. Over 80% of the poor are in the rural areas where livelihoods depend on agriculture. Moreover, a similar percentage (80%) earns their living in rural areas benefiting directly or indirectly from agricultural activities. Agriculture also contributes about 85% of the export earnings in Tanzania with products such as horticultural fruits and vegetables, coffee, tea, cashew nuts, coconuts and paddy rice being amongst the major exported crops.

The agriculture sector plays even a more vital role in Uganda where it employs 80% of the population and generates 90% of export earnings in addition to its 31% contribution to the GDP. Coffee is the main export crop, with tea and cotton completing the list of other important agricultural products. The livestock sub-sector particularly beef, piggery and bee keeping are also important economic activities for the Ugandan rural communities. The contribution of the agricultural sector through export earnings has continuously improved over the years given that mineral deposit of copper and cobalt, which contributed 30% of export earnings during the 1960s, has now shrunk to form only a minor contributor to the economy.

1.2 The Financial services sector in East Africa

1.2.1 The Kenyan financial sector

The Kenyan financial sector is one of the broadest and most developed in sub-Saharan Africa (SSA), with 44 commercial banks 2 mortgage finance companies over 5,000 SACCOs and over 27 Microfinance institutions (both deposit and non-deposit taking). The banks, along with the Kenya Post Office Savings Bank, make up Kenya's formal banking sector and serve 22.6 percent of Kenya's adult population, according to survey results published in early 2009[2]. Non-bank financial institutions, including microfinance institutions (MFIs), savings and credit cooperatives, and mobile phone service providers serve another 17.9 percent of the population, bringing the total served by formal financial services to 40.5 percent. Another 26.8 percent of Kenyans rely on the informal financial sector, including NGOs, self-help groups, and individual unlicensed

[2]FinAccess, 2009

money lenders, and 32.7 percent of the population does not use any form of financial services[3].

Technological innovations have further transformed the Kenyan financial sector landscape in the years since 2002, by helping to extend financial services to millions of poor people at relatively low cost. For example, expansion of areas of operation by main stream banks, use of ATM's in areas with no bank branches, bank agency services and mobile telephone money transfer services have all improved access to financial services. Examples include the world's largest mobile money transfer platform M-Pesa from Safaricom mobile phone operator, Airtel money services from Airtel company and Yu cash from YU mobile company. Agency banking in the country is dominated by Equity bank (Equity agent shops); Co-operative bank (*Co-op kwa Jirani*) and Kenya Commercial Bank's (*KCB Mtaani*).

Competition at the lower end of the market has clearly intensified also because of the expansion of microfinance into rural areas. Having realized that microfinance is a potentially profitable activity, a number of mainstream banks have continued to open branches in rural areas (in some cases, having closed them only a few years earlier) and to downscale the design of some products to provide microfinance services - either on their own account or by looking for strategic partnerships to do so.

Despite the presence of all these financial institutions, there is a widespread consensus that there is still limited access to financial services for the majority of Kenyans, though in reality the situation has improved markedly in recent years albeit with challenges. According to the FinAccess Survey, the proportion of adult Kenyans that depend primarily on informal financial service providers has declined from 35.2% in 2006 to 26.8% in 2009. Overall, the proportion of adult Kenyans that are excluded from accessing financial services and products shrank from 38.4% in 2006 to 32.7% in 2009[4]. These trends are expected to continue even as the economy opens up to more innovations, embraces greater economic development and from increased literacy levels amongst the youthful population that comprises the majority of the population.

Given the shallow reach of traditional forms of banking, microfinance has played a central role in the evolution of Kenyan financial services. Four of Kenya's major commercial banks have roots in microfinance: two as building societies (Family Bank and Equity Bank), one as an NGO (K-REP), and another as a cooperative society (Co-operative Bank). These commercial banks, along with a wide variety of registered

[3] FSD Kenya Impact Assessment Summary report January,2011

[4]FinAcess, 2009.

microfinance institutions, savings and credit co-operatives, and NGOs, make up Kenya’s microfinance industry.

The microfinance sub-sector was, until recently, regulated under several different acts of Parliament. The 2006 Microfinance Act has provided a much more comprehensive and consistent regulatory environment for MFI’s. It has been designed to promote the performance and sustainability of deposit-taking MFI’s (DTM’s) while, at the same time, better protecting depositors’ interests. The Act also enables MFI’s to provide more complete financial services to the Micro, Small and Medium Enterprise (MSME) sector. Savings and Credit Cooperative Societies (SACCO’s) are well established in Kenya.

The Ministry of Co-operative Development and Marketing (Kenya) estimates that there are some 13,000 registered cooperatives with membership of over 8 million and about 5,000 SACCOs, serving an estimated 6.19 million members. In the last 15 years, SACCO's have expanded their membership by expanding their common bonds and developed ‘front office’ services to offer flexible savings accounts to their members (and, in some cases, to non-members). For a time, their growth was largely due to their presence in rural markets when banks were becoming increasingly costly or closing their branches. Nevertheless, that growth has been inadequately regulated, especially given the lack of deposit protection in the past but more regulation is expected since the introduction of the Microfinance (Non-Deposit Taking Microfinance Institutions) Regulations, 2011.

The recent 2008 SACCO Society Act now offers an improved framework for the effective supervision of SACCO’s and especially those providing front office services - by the new SACCO Societies Regulatory Authority. Kenya also has many thousands of Rotating Savings and Credit Associations (ROSCA’s) and Accumulating Savings and Credit Associations (ASCA’s) that are a source of savings and credit services. Some 29% of the adult population use ROSCA’s, while some 5% use ASCA’s. These associations are found in both rural and urban areas, either as registered social welfare groups or as unregistered groups of friends and family members. These informal providers mobilise savings and offer credit while also providing important social networks and forms of support in times of difficulty or crisis.

Support institutions such as the co-operative training college and the Kenya School of Monetary Studies (KSMS) offer training to the financial service providers. In addition some universities and colleges offer degrees, diplomas and certificate courses in areas such as commerce, microfinance and financial services. Some commercial banks have in-house training facilities for their employees. The target consumers for the various financial service providers are not necessarily sector designed but both the mainstream

financial service providers and microfinance institutions have designed financial products targeting specific enterprises or sub-sectors of the economy; amongst them agriculture.

1.2.2 Ugandan financial sector

Uganda's financial sector has witnessed remarkable growth in recent years, and great progress has been made in its regulation. In March 2010, 28 regulated financial institutions were providing the country with financial services through 488 registered branch offices, compared with just 270 or so branches at the end of 2006. Despite the successes achieved, more than 70% of Ugandans (compared to 82% in 2007) have no access to formal financial services, with poor people and rural populations at a particular disadvantage[5].

The inadequate access to basic financial services, such as savings, loans and payment systems, is one of the major challenges to economic development and poverty reduction. Women and smallholder farmers in rural areas are especially hard hit. Informal microfinance institutions, particularly the savings and credit cooperatives, or SACCO's, which receive strong support from the Ugandan government, could play an important role in providing these population groups with alternatives. However, their potential remains limited due to low levels of training and the lack of regulation and supervision of the sector.

The financial organizations are categorised into four tiers namely:

- Tier 1: Comprising of banks e.g. Stanbic, Eco-bank, Equity,
- Tier 2: Credit institutions e.g. Housing finance
- Tier 3: Micro Deposit taking Institutions (MDI's)
- Tier 4: All other financial intermediaries including SACCO's, SLA's, women groups, NGO'setc.

Preliminary findings from census of MFI in Uganda in 2006 identified the following organizations:

- In phase I, a total of 3,360 Tier 4 MFI Outlets in Uganda were listed;
- • In phase II, a total of 1,248 Tier 4 MFI outlets were mapped; and
- • In phase III and part of phase IV, a total of 741 organizations and 1,064 MFI outlets have been found to be eligible MFI's and MFI outlets.

[5] Agricultural finance year book, 2010. Bank of Uganda and GIZ

1.2.3 *Tanzania financial sector*

The financial sector in Tanzania has undergone substantial structural change since the 2003 Financial Services Adjustment Program (FSAP). Financial sector assets have expanded rapidly, led by growth in private credit. This has enhanced financial intermediation, thereby increasingly supporting economic growth. The implementation of the Second Generation Financial Sector Reforms (SGFSR), drawing in part on recommendations from the 2003 FSAP, has underpinned these developments. The country has even attracted regional banks such as Equity Bank of Kenya.

However, the banking system remains small and relatively inefficient, and access to finance remains very low. Only one in six Tanzanians has access to financial services from formal institutions[6], which compares poorly to the country's peers. While efficiency is low, profitability remains strong as a result of wide interest margins. These persist as smaller banks have been unable to compete effectively with the larger banks, which are able, through their more extensive branch networks to raise funds at very low cost.

Microfinance institutions operating in Tanzania provide financial services to the SME's mainly in the form of micro-credit with an exception of cooperative based microfinance institutions, which are predominantly savings based. Currently, the major financial Services providers include:

- ✓ NGO MFIs;
- ✓ Limited Liability Companies;
- ✓ Microfinance Companies;
- ✓ Commercial and Community Banks;
- ✓ SACCOs;
- ✓ Informal financial services providers-Village Community Bank (VICOBA), ROSCA, ASCAs;
- ✓ Government programs/projects e.g. SELF; and
- ✓ Wholesale MFIs-e.g. OIKO Credit.

The major players in the NGO's category include PRIDE Tanzania, FINCA (Tanzania), Small Enterprise Development Agency (SEDA) and Presidential Trust for Self-Reliance (PTF). Other MFI's, which are relatively smaller in size, include Small Industries Development Organization (SIDO), Youth Self Employment Foundation (YOSEFO), Sero Lease and Finance(SELFINA), Tanzania Gatsby Trust, Poverty Africa and the Zanzibar based Women Development Trust Fund and *Mfuko*.

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[6] Tanzanian Association of Micro Finance Institutions, TAMFI

There rest consists of very tiny programmes scattered throughout the country mainly in the form of community based organizations (CBO's). Banks that are actively involved in microfinance services delivery include the National Microfinance Bank (NMB), CRDB bank (CRDB Microfinance), Akiba Commercial Bank (ACB) and a few Community/regional banks such as Dar es Salaam Community Bank, Mwanga Community Bank, Mufindi Community bank, Kilimanjaro Co-operative Bank, Mbinga Community Bank and Kagera Co-operative Bank.

A number of regulations in the financial sector exist and include:

- ✓ Microfinance Policy, 2001;
- ✓ Cooperative Development Policy, 2002;
- ✓ The Cooperative Act, 2003;
- ✓ Cooperative regulations Act, 2004; and
- ✓ Microfinance regulations, 2005.

The credit based institutions number between 80 and 100 out of which 46 are registered members of the Tanzania Association of Microfinance Institutions (TAMFI), the local microfinance network, cooperative societies belong to Savings Cooperative Union League of Tanzania (SCULT) while majority of community banks belong to the Community Banks Association (CBA(T)). Support institutions include Bank of Tanzania Training Institute-Mwanza which offers training on standard banking courses while Moshi University College of Cooperative and Business studies offers training to SACCO's. Majority of the Non-Governmental Organizations (NGO's) and Micro Finance Institutions (MFI's) rely on in-house training. Generally, lack of pool of experts in Microfinance and other human resource development is a major constraint to the industry dues to limited number of business development services providers that can provide training to staff and board of directors. It is however, notable that specialized microfinance institutions such as the Centre for Microfinance and Enterprise Development (CEMIDE) and Global Associates have started to emerge.

Although the financial sector currently comprises of 43 banks, only 12.9% of Tanzanians have access to a formal financial institutions[7]. This is however, an improvement when compared to 9% in 2006. Market shares are however, extremely distorted with only three banks controlling 48% of the market for deposits and loans while a total of 8 banks control 76% of the banking market. Mainstream banks currently operate in few, mostly urban, areas mainly Dar es-Salaam, Mwanza, Arusha, Mbeya and Moshi towns thereby encouraging establishment of the more than 1,700 SACCO's serving an estimated membership of 260,000. Despite the large number of MFI's, outreach in rural areas is less that 3% of the population while the potential demand is

[7]Finscope, 2009

between 10-15 million people meaning that on average less than one million people have been reached by MFI's.

A survey carried out by the Financial Sector Deepening (FSD) in 2006 noted the following:

- 54% of the Tanzanian adult population are financially excluded and do not use either formal or informal financial products;
- Only 9% of the population use formal services and 1% use formal other financial services;
- 11% of people have a bank account, which breaks down to 16% in urban areas and only 4% in rural areas;
- The semi-formal sector comprises 3%, made up of 1% using semi-formal MFIs and 2% using semi-formal SACCOS;
- 35% of the population use informal products (including friends and family);
- 15% of the population use friends and family as their sole source of financial access; and
- Only 26% of people interviewed had heard of interest on savings accounts, however, none understood how this worked.

Most microfinance institutions are concentrated in areas which have easy access to markets and high population density as there lacks an upright approach to reach the neediest rural masses. Areas of concern include provisioning of current loans, limit of loan size of individual borrower and stringent provisioning. Other challenges include over indebtedness of some borrowers caused by overcrowding of MFI's in few cities and towns and lack of a credit reference bureau. Access to capacity building funds is therefore very limited as most funds available are directed to debt finance. There is also lack of incentives for MFI's to extend services to the rural areas as it is very expensive to serve small isolated populations. In addition, the microfinance regulation of 2005 which was and still is expected to guide the industry has been termed as unfriendly to microfinance services providers in Tanzania.

2 THE ROLE OF FINANCE IN AGRICULTURE- THE CASE OF EAST AFRICA

Agricultural finance is a sub-set of rural finance which refers to the broad range of financial services, such as savings, credit, payment transfers, leasing, insurance, among others provided by either formal and/or informal financial services providers operating in rural financial markets. Access to rural financial services has a potential to make a difference in agricultural productivity, food security and poverty reduction. In spite of the importance of a savings account, the proportion of rural households who have never used a formal savings product is 40.6 per cent in Kenya[8] while in Tanzania, only about 5-6 percent of the population has access to the banking sector. This lack of access to financial services from the formal financial system is quite striking, when one considers that in many African countries the poor represent the largest share of the population and that the informal sector is an important part of the economy[9]. In Uganda, for example, the agricultural sector represents approximately 31- 40% of GDP, but is recipient of only about 7-10% of formal credit.

Although informal credit institutions have proved relatively successful in meeting needs of small enterprises in some countries e.g. Grameen Bank in Bangladesh, Bank Rakyat Indonesia (BRI) in Indonesia among others, their limited resources restrict the extent to which they can effectively and sustainably satisfy the credit needs of these enterprises[10]. This is attributed to the expansion of micro-enterprises where the characteristics of their credit requirements become increasingly difficult to be satisfied by the informal credit sources, while they still remain too small to attract the attention of the formal lenders[11].

Agriculture, with its non-uniform cash flows, rural bias, poorly capitalized and widely dispersed producers, seasonal cash flows, price and market risks differs substantially from businesses conventionally supported by traditional finance and microfinance. As a result, most financiers shy away from lending to the agricultural sector because of the covariant risks related to rain-fed agriculture.

8 Financial Sectr Deepening (FSD), 2009.
9 Basu, et al, 2004.
10 Nappon and Hudddlestone, 1993.
11 Aryeteey, 1996a.

Although promoting efficient, sustainable and widely accessible rural financial systems remains a major development challenge in most sub Sahara African countries, various research results have also shown that access to rural financial services has a potential to make a difference in agricultural productivity, food security and poverty reduction.

In particular, financing is critical to increasing efficiency, improving product quality, and raising the productivity and income of value chain actors. Without access to finance, small farmers will continue to make little investment, have low-return production systems, and be unable to use their farm resources optimally. Similarly, financial constraints may prevent small and medium-scale traders and processors from expanding their capacities, thus limiting the amount of produce they can buy from small farmers and other local raw material suppliers. Finance is therefore critical in the various stages of the value chain.

Access to credit increases the farmers' working capital enabling the farmers to buy productivity enhancing inputs such as good quality seeds, fertilizers and chemicals. Past studies pointed out that lack of working capital and low liquidity limit the farmer's ability to not only to purchase productivity enhancing inputs like seeds, fertilizers and pesticide, but to do so in sufficient quantities[12] . This in many cases results to increased agricultural productivity.

Apart from production activities, access to agricultural finance also enhances agricultural marketing, processing and access to agricultural leases. These in turn increases access to produce markets and market information, and access to capital assets for agro-processing which eventually results to commercialization, value addition and higher revenues to farmers and farm households. In a rural population that majorly depends on agriculture, commercialization of agricultural activities would more certainly result to general economic development of the area. It should however, be noted that provision of agricultural credit alone is not enough to spur economic development. Other related aspects such as requisite infrastructure, education, skills and capacity development and other support services are also major contributors to economic development in rural areas.

[12] Nyoro, 2002. Agriculture and Rural Growth in Kenya', Working Paper, Tegemeo Institute of Agricultural Policy and Development"

3 THE STATUS OF AGRICULTURAL FINANCE IN EAST AFRICA

3.1 Status of agricultural finance in Kenya

Although the agricultural sector is the mainstay of the Kenyan Economy, it has experienced low productivity, remained subsistence and experience low use of technologies over the years. Poor access to agricultural finance has been identified as one amongst other contributing factors to low crop productivity, commercialization and access to productive assets and markets. Despite the importance of the sector, systematic and prudent financing of smallholder agriculture has been and continues to be a difficult goal for the country in spite of remarkable progress in the microfinance over the past twenty years[13].

Although there existed a legal requirement that banks should lend between 17-20 percent of their loan portfolio to the agricultural sector[14] even in the credit control period after independence, the local banking system has remained conservative in lending to agriculture probably due to risks in agricultural production. The situation has been made worse by liberalization of interest rates. The total credit provided to agriculture on average is estimated at less than 10 percent of the total credit provided through the domestic financial system. This is despite Kenya being a signatory of the Maputo declaration which requires that at least 10% of governments budget be directed towards the agricultural sector.

According to Kibaara 2006, the majority of Kenyans are smallholder agricultural producers and fisher-folk and their wellbeing, the food security of the nation and the development of Kenya's national income depend on their continued and improved performance. There is a thus need for a rigorous, analysis based approach to identify and service financing opportunities on the basis of minimum risk and maximum return. In reaction to this realization, there are a number of emerging models of agricultural finance that have expanded the agricultural finance frontier to the smallholder farmers.

[13] Kibaara, 2006. Rural Financial Services in Kenya: What is Working and Why?

[14] Resource Allocation and Utilization in Kenya's Agriculture Sector: A Public Expenditure Review. Kenya Producers Coalition (KEPCO), 2010.

Key findings from Kibaara and Nyoro[15] indicate that demand for farming credit takes the highest proportion of the credit needs among the rural households, thus accentuating the importance of agricultural finance. Some of the models used in financing agriculture include state owned rural finance model, credit voucher system, private commercial bank led model (a case of emerging indigenous banks) stockists credit guarantee system, beach banking model (for fishermen and fish mongers), value chain financing, micro-leasing and community owned rural finance model. Indications are that although the state run model of agricultural financing has the lowest financial sustainability it serves fewer but wealthier clients. On the contrary, the community financing models are the most likely drivers of change in the rural finance landscape.

The contribution of government efforts in financing agricultural have also increased. Since 2003, the revival of the Agricultural Finance Cooperation (AFC) to offer loans to farmers has been received positively and the amount of loans given had increased from KShs. 109 million to KShs 1,857 million from 2003 to 2006. Besides, there has been entry of private sector (commercial banks and NGOs) into provision of financial services[16]. Banks such as Equity bank have been involved in giving credit facilities to dairy farmers in the country. The arrangement is made between the dairy processors and the bank with the Kenya Dairy Board acting as the guarantor and a signatory to the contract. Other banks which have been involved in funding farmers include K-Rep and Family Bank. Several NGOs actively participate in advancing financial and credit services to farmers in Kenya. These include the GIZ and *Faulu* Kenya.

The government has also partnered with AGRA, Equity Bank and IFAD to establish a cheap credit facility of 50 US$ dubbed *Kilimo Biashara* which offers credit facilities to farmers, agro-dealers and agro-processors and is intended to reach 2.5 million farmers. In addition, the *Njaa Marufuku* Programme initiated by the government in 2005 to fight hunger, has been also advancing grants to farmer groups in different parts of the country.

Although the Central bank estimates that the financing of agriculture in Kenya increased from USD 335 million in 2007 to USD 620 million in 201, market share for agricultural credit is dominated by commodity based credit providers. Thus the role of contracted farming in provision of embedded services such as credit for agricultural inputs has become increasingly important. The producer cooperatives and SACCOs remain a

[15]Expanding the Agricultural Finance Frontier: A Kenyan Case. AAAE Conference Proceedings (2007) 287-290

[16] Resource Allocation and Utilization in Kenya's Agriculture Sector: A Public Expenditure Review. Kenya Producers Coalition (KEPCO), 2010.

significant supplier of agricultural credit and especially in the Central Highlands and Western Transitional zones.

Private participation in agricultural financing has also been in the rise. For example provision of credit to smallholder by or through agribusiness companies , exporters and large offtakers of particularly export horticultural products, coffee, tea, seed maize, sugarcane, cotton, wheat and barley have thrived in the recent past. This has been achieved through financing models such as contract farming and outgrower schemes.

3.2 Status of agricultural finance in Uganda

It is increasingly being recognized, in Uganda, in Africa as a whole and worldwide, that adequate access to financial services is vital for those who build productivity and earn their livelihoods in agricultural commodity value chains. In 2011, agricultural lending by regulated institutions and MDI's (Tiers 1, 2 and 3 financial institutions), increased substantially by over 60% compared to 2010, almost hitting a total of UGX. 200 Billion (including leases). This resulted to a 2 percentage point increment in overall contribution of agricultural lending to total formal lending in Uganda from 7% in 2010 to 9% in 2011 (Figure 2).

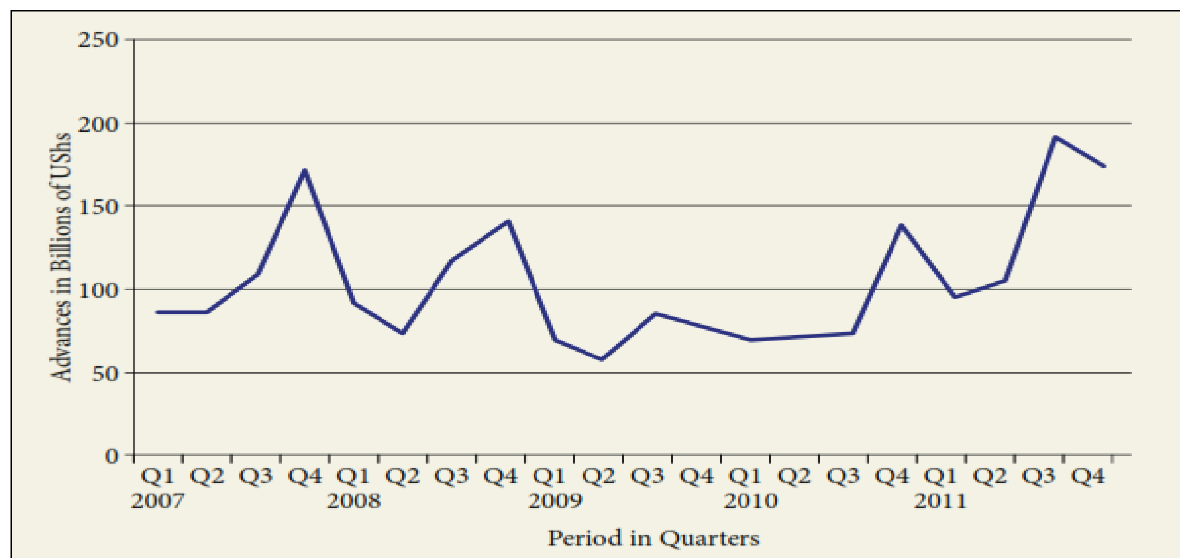


Figure 2: Total agricultural lending in Uganda

Source: Agriculture Finance year book, 2011.

In 2010 lending to the agricultural sector by regulated institutions and MDI's had re-bounded to approach the levels recorded in 2007 and 2008, after a major decline in

2009. Significant increase in agricultural lending from 2009 to 2011 was attributable to increased volume of warehouse receipt products especially coffee, more favourable agricultural seasons from a climate viewpoint, and some success on the policy front – for example the Government's Agricultural Credit Facility; which was operationalised in October 2009 and disbursements commenced in March, 2010. Another reason for the increase in lending to agriculture is due to a number of banks recognising business opportunities in the sector and developing products and approaches accordingly.

In Uganda, commercial banks (Tier 1) remain the biggest contributor to agricultural lending accounting as high as 95% of the amounts lent out in 2011, similar to all the years between 2007 and 2011). Tier 2 (MDI's) account for 3% while the remainder 2% is supplied by credit institutions (Tier 2).

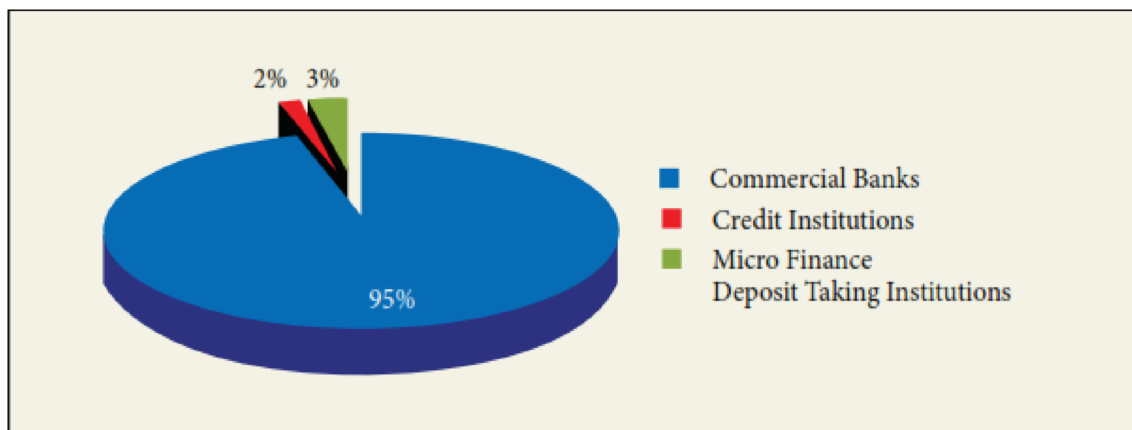


Figure 3: Agricultural lending by category of Institution

Source: Agriculture Finance year book, 2011.

Turning to Tier 4 institutions, a few SACCO's have recorded notable successes over the years; however, many have faced significant problems. It is interesting to note that while agriculture, fishing and forestry contribute some 31%to GDP, lending to the biggest of these, agriculture, as quoted above, is just 7% of total formal lending.

3.3 Status of agricultural finance in Tanzania

During the late 1960s and 1970s when the Tanzanian financial sector was mainly government-owned with pervasive government interference in the financial system, two institutions, the National Bank of Commerce (NBC) and the Cooperative and Rural Development Bank (CRDB) were dominant in providing rural financial services. NBC

provided working capital and other short term finance to agriculture and other rural activities while CRDB provided development finance to rural development activities. Without proper regulation, performance of the banks was dismal with high levels of non- payment particularly by the cooperatives.

Currently, rural finance in Tanzania is provided by four categories of institutions: i.e banks (e.g.CRDB, NMB, KCB, Exim Bank), member based organizations and associations such as cooperatives (especially SACCOS and some cooperative unions), NGO's (e.g. PRIDE, MEDA, SEDA and FINCA), privately owned organizations such as YOSEFO, large companies financing through contract farming, government and public sector institutions (e.g. SIDO, PTF, WDF, YDF, Local councils). A number of organizations such as Oiko credit- TZ and Small Enterprises Loan Facility (SELF) provide wholesale lending to microfinance institutions.

In Tanzania, out-grower schemes are found in rice and tobacco. These are usually private led initiatives although they are characterised by collaborations between a number of players. The Tanzanian government also provides rural based agricultural financial services through specialized programmes such as the Agricultural Inputs Trust Fund (AGITF), Small Enterprises Loan Facility (SELF) and Small Industries Development Organization (SIDO) and other development partner based programs such as Agricultural Systems Development Programme (ASDP) and Rural Financial Systems Development Programme (RFSDP) which are sponsored by IFAD.

4 THE ROLE OF STAKEHOLDERS IN AGRICULTURAL FINANCE

With regard to stakeholders roles, the role of governments in particular have changed considerably since the paradigm of financial liberalization has emerged, accompanied by the growth of microfinance. Governments have gradually been reinstated in their role as overseer of currency and financial institutions: legal and regulatory frameworks, control and supervision. Donor agencies have continually supported the agricultural financial sector by injecting financial resources into the sector while NGO's are providing finances as well as information, skills and facilitation services.

4.1 Governments' role in agricultural financing

The main problems impeding agricultural financial markets are poor macroeconomic policies, distorted financial policies, market rigidities, and legal and regulatory constraints (Yaron et al., 1997). All around the three East African countries, governments remain committed to supporting the growth and outreach of inclusive financial services; particularly in agriculture, although this has meant a de-emphasis of the purely market based outreach. Among governments roles in this regard are:

- ✓ **Provision of Legal and regulatory environment**. Governments have a key responsibility to establish and maintain the appropriate legal and regulatory framework, which is a pre-condition for making agricultural finance work including:
    - Clear property rights and transferability of collaterals and pledges;
    - Bankruptcy law;
    - Speedy and transparent conflict resolution through arbitration or commercial courts, as well as less-formal mechanisms, depending on the complexity of the case and amounts involved, including loan foreclosure;
    - Simple, speedy and low-cost procedures for registering, perfecting and repossessing collateral; and
    - International standards for product grading, weighing and measuring agricultural products.

Specific legal and regulatory initiatives suggested are the following:

- Land legislation, including easily obtaining and transferring land titles;
- Leasing law (or the appropriate clauses in the commercial code), as well as tax regulations that do not disadvantage leases over loans;
- Collateral laws. In Uganda for example, the government has established laws that govern the use of commodities as collateral for agricultural finance;
- Clarification of the legislation relating to collateral and pledges, allowing for a wide variety in the types of pledges, including crops in storage, and priority given to title/pledge holders; and
- Simultaneously, assisting banking supervisors (through central banks) to put in place advanced risk-weighted collateral evaluation.

✓ **Provision of sectoral regulatory framework** in which the private sector providers of agricultural financial services can thrive, in which the industry as a whole can develop and which ensures appropriate protection of public deposits. In a wider sense, governments must create an enabling environment, such as a legal framework for conducting financial operations, conflict settlement, law enforcement, infrastructure and social services. Governments also need to ensure prudential regulation and supervision of entities that act as custodians for somebody else's money or goods, such as (agricultural) banks, microfinance institutions, savings and credit associations, insurance and credit-guarantee providers, as well as public warehouses and weighing stations — or at least ensure that a properly qualified regulatory institution undertakes this supervision.

✓ **Ensure macro-economic and prices stability.** In the East African region this important activity is carried out by the governments through the respective central banks. The central banks are responsible for macroeconomic policies for avoiding high budget deficits, inflation and overvalued exchange rates. High budget deficits crowd out private credit provision. Inflation leads to high nominal interest rates beyond the reach of farmers, and uncertainty about the financial outcome of agricultural operations whose profitability is unclear to begin with. Overvalued exchange rates exclude farmers from export markets while benefitting importers. The goals of prudent fiscal and monetary policy should be price stability, and sound, well-aligned, exchange rates.

Central banks are also involved in price interventions in agricultural markets are which are designed to influence production decisions. Governments also are involved in public subsidization of farmer incomes, product prices or interest rates despite the fact that these policies may be fiscally sustainable and may have cross-border implications. High (officially set) minimum prices. In Kenya, for example, the government controls oil prices in a bid to control inflation while it highly subsidizes prices of agricultural inputs; particularly fertilizers. This has resulted to improvement in agricultural productivity and lower costs of production.

- ✓ **Direct subsidization of agriculture and agricultural finance**. Governments in the East African region have achieved this through activities such as establishing state-owned farms, parastatal processing plants, public warehouses, public market centres, state-owned agricultural development banks, marketing boards with associated legal monopolies along with all sorts of subsidies. These may however, cease to exist as governments plan to eventually, but gradually, privatize these services. Direct subsidization may however be justifiable if intended to correct market failures or create level playing ground.

- ✓ **Contract enforcement.** Contract enforcement and dispute settlement are vital in agricultural finance, beginning with the loan contract. Although these have been expected from the governments, contract enforcement has remained a big challenge for some of the practitioners in the industry. This has limited financing mechanisms and in particular contract farming and out-grower schemes.

Other major roles of government include the following:

- ✓ Active promotion of a "rural financial infrastructure". This is done through selected SACCO's or through programmes in relevant line ministries;
- ✓ In the past, supporting role of overall institutional capacity building in the microfinance industry with particular interest on rural finance; and
- ✓ Collaborating with other stakeholders, such as donors and NGO's to provide rural finance. In the East African agricultural sector, a number of government supported finance and support projects exist (Table 1).

Table 1: Selected Government Initiatives/Programmes in Microfinance

Country	**Uganda**
Programs	**Focus/ Status**
Rural Farmers' Scheme	A special credit scheme for rural farmers to increase production and thereby improve their household economies. Started in the mid-1980s; Failed in the early 1990s
NAADS	An executive arm of PMA tasked with helping farmers to develop their farm productivity and incomes
PEAP, PMA and MTCS	Economic growth, development and planning framework of the country with its main implementation strategies, all aimed \ and enhancing economic growth and reducing the incidence of poverty
PAP and RMSP	Government wholesale funding and capacity building. Heavy defaults and institutional failures checked progress and had to be redesigned
MSCL td	Government's MF wholesaling and capacity building company. Uses sound practices in lending though it is still unsustainable (funded by AfDB)
SUFFICE	EU funded microfinance wholesale funding and capacity building project. Had some success from 2000 to 2004 and then institutional challenges deteriorated its performance? Now closed.
MOP	Formerly the Government's systematic plan to assist outreach with market responsive microfinance services to rural and remote rural areas. Turned into RFSP, with a narrower focus on SACCOs, in 2007
MCAP	A component of MOP that was meant to provide matching grants for microfinance capacity building, focused on product development. Started June 2004; ended in October2007.
BCF	A component of MOP that was meant to provide training and technical assistance to rural enterprise groups to improve their aptitude and productivity in business. Stared May 2006;ended October 2007
RFSP	Creation and support of one SACCO per sub county, to ensure extensive "rural financial infrastructure" This was started in 2007 and its success and impact are yet to show. Ongoing
Country	**Tanzania**
Programs	**Focus/ Status**
Small Industries Development Organization (SIDO)	SIDO is a project of the Tanzanian government that aims to create and sustain an indigenous entrepreneurial base by providing small and medium enterprises (SME's) with business development services and specific financial services on demand.
Small Entrepreneurs Loan Facility Project (SELF)	The Small Entrepreneurs Loan Facility (SELF) project is a wholesale microfinance lending project jointly funded by the Tanzanian Government and the African Development Bank which provides funds to MFIs and similar organizations

Presidential Trust Fund for Self-Reliance (PTF	Was established at the initiative of the Government of Tanzania in 1984 and incorporated as a trust fund in 1988, with a mission to create employment and increase income of disadvantaged people, women and youth, who constituted majority of the active population of the country. The main program activities of PTF are provision of credit, savings mobilization and business skills training for sustainable development of poor communities. PTF has received both the startup and scaling up support from Grameen Trust.
Country	Kenya
Programs	**Focus/ Status**
Kenya Agricultural Productivity Project (KAPP)	A donor funded programme in collaboration with Ministry of agriculture and KARI. Responsible for commercialization of agriculture. Recently renamed KAPAP
Agricultural Finance Corporation (AFC).	The government agency responsible provision of formal agricultural credit at subsidized rates. Revived in 2003
Agricultural Sector Programme Support (ASPS)	A Danida funded programme that promotes business development in Agriculture. It also has a component of training and NRM.
National Agriculture and Livestock Extension Programme (NALEP)	An agricultural extension and support programme that is involves both the ministries of agriculture and livestock
Private Sector Development in Agriculture (PSDA)/GTZ	A GIZ funded programme under the Ministry of agriculture that enhances development of agricultural value chains in both crops and livestock subsector. It also has a component of extension, technical support, training and certification of small holder farmers in order to access foreign markets.
Eastern Province Horticulture and Traditional Food Crops Project (EPHTFCP)	Promotes and finances small holder horticultural farmers particularly on irrigation, technology transfer, market linkages and group development. Uses the contract farming model
Njaa Marufuku Kenya (NMK)	A long existing government project under the ministry of agriculture. Looks at wider aspects such as livelihood support, food security and provision of water for irrigation in selected Arid and semi-arid districts in the country.

4.2 Role of NGO's and donor agencies in agricultural financing

While governments have been supporting financial institutions and programmes aimed at smallholder farmers, NGO's, donor agencies and international development partners have often been called upon to aid the process. In the recent past, ssupport programmes have shifted away from direct provision of credit through agricultural banks to supporting commercial banks, MFIs and NGOs that design and implement innovative agricultural finance products. Assistance usually consists of preliminary market or feasibility studies, technical assistance, training, seed money or financial guarantees. Policy level support may be required if the legal and enabling environment is weak.

Development organizations use a variety of instruments in all three approaches, namely grants, seed capital, guarantees, direct loans, equity and technical assistance. A review of the rural finance support programmes by private Dutch development organizations revealed the following strategies (Athmer, 2008):

- ✓ Building financially sustainable (NGO-type, credit-led) MFIs and sometimes banks, whereby they are gradually prepared for commercial funding. Also, they are assisted in expanding to rural areas through product development.
- ✓ Support for member-owned MFIs, whose key source of funding is member equity (such as SACCOs and SCAs), including building good governance.
- ✓ Support for the provision of financial services to the actors in the value chain, based on a rural development perspective (producer organizations, buyers of produce, agro-processors, and input suppliers).

Within the East African region donor agencies and NGO's have been actively involved in microfinance activities. Although these activities have not been specific to the agricultural sector, rural finance and SME finance have been the biggest beneficiaries. Indeed, some of the MFI's in the region are associated either directly or indirectly with donors and /or NGO's. For example, K-REP; one of the oldest Kenyan MFI started as an NGO while Med-Net Uganda is a subsidiary of the world Vision.

Donor agencies such as GIZ, DFID, CordAid, Danida, IFAD and USAID have collaboration with MFI's and governments or government agencies in providing sustainable financial and support services to the agricultural sector. A number of government initiatives/ programmes are actually donor funded. Some of the observed activities of the development partners and donor agencies in the region involved the following:

- ✓ Design value chain finance models (external or internal finance), e.g. finance the buyers who can then channel credit to the farmers with whom they have contracted. International development partners could (initially) part-guarantee such actions, helping the bank gain experience and confidence in the process;
- ✓ Support banks through TA and training in product development. Train bank staff in agricultural lending, including analysis of the crop cycle and cash generating capacity, risk analysis and loan structuring. Banks that successfully finance agriculture generally rely on loan officers specialized in agriculture and agribusiness services;
- ✓ Developing cost-effective methods of loan delivery aimed at bringing down agricultural interest rates, hence removing the justification for subsidies.
- ✓ Link rural microfinance to banks and donor agencies (for refinancing), in some cases through a guarantee instrument.

- ✓ Policy advocacy and support for policy development procedures including lobbying of governments to develop or implement specific policies that will deepen financial access to the agricultural sector

NGO's on the other hand have been very active in providing support services such as vocational and technical training, skills development, organization development, facilitation services, farmer linkages, networking and extension services amongst others.

5 SUPPLY AND DEMAND FOR KNOWLEDGE IN THE AGRICULTURAL FINANCING AND SUPPORT SUB-SECTOR

5.1 Introduction

Over the years, the microfinance industry in East Africa and the world at large has experienced massive growth. The potential of microfinance to contribute to poverty alleviation was widely recognized some two decades ago; since then many developing countries have witnessed an explosion of organizations providing financial services to clients, including loans, saving plans, insurance and payment transfers. The number of scholarly research reports, project evaluations, guidelines, forums, platforms and organizational directories has proliferated with corresponding intensity. In order to keep up with the rapid evolution of the microfinance landscape, many of these resources are web-based and continuously updated.

In East Africa (Kenya, Uganda and Tanzania), a number of financial organizations, donor organizations, government institutions and other support institutions have come up with unique innovations and models for delivering microfinance to the agricultural sector amongst others. Challenges however, remain as the key learning and knowledge generated by interventions, and the development and delivery of successful business models in this sector are not being disseminated widely. Efforts are not being coordinated effectively nor employing the most efficient use of resources while opportunities for the replication of successful models are being missed. This was the basis for the Swisscontact's involvement in the Agricultural Finance and Support in East Africa.

Data and Information gathering and the eventual dissemination or sharing across the various practitioners in the industry forms an important prerequisite for meeting the goals and objectives of eradicating rural poverty and commercializing agriculture as outlined by the various country governments. This information has two sides i.e the supply and the demand side.

5.2 Information needs for industry practitioners

A number of actors are involved in the agricultural sub-sector and thus information needs to differ accordingly. Some of the actors include:

i. The core agricultural value chain actors or users of agricultural financial products (i.e producers, processors, transporters, traders e.t.c); and
ii. Other players that influence effective functioning (like input suppliers, extension service providers, research and development practitioners, retail financial service providers, wholesale lenders e.t.c).

Information demand for the core value chain actors revolves on issues such as the level of awareness (number of suitable products, features, providers etc); usage (agriculture financing needs of current users, reason for borrowing, actual usage, frequency and volume of usage, reasons behind first time usage, expected and derived benefits from the service); and perceptions about the current agricultural financing services in terms of relevance and quality.

There is need for users to understand financial products particularly on product features including collateral requirements; deposit/savings requirements; loan period; loan size; grace period; pricing (interest and other fees); repayment schedules; as well as application and disbursement processes. On the other hand, agricultural financial providers and other support institutions need to be informed on the agricultural sectors with potential for financing, the most appropriate features for the loan products and the best models for disbursing the financial product. Support institutions also need to learn the kind of information demanded by both the clients and the financial providers so as to determine the best entry points.

5.3 Major sources/suppliers of knowledge on agricultural financial sector development

Relevant knowledge includes supply problems and opportunities for new products, marketing strategies, or new suppliers, innovations and models for financing the agricultural sector. This kind of knowledge can be provided by government research organizations, training organizations, apex bodies and networks, practitioners, donor organizations or even microfinance clients.

The most valuable information includes new technologies, innovations and models of delivering finance to the agricultural microfinance clients and best practices which can

be adopted by practitioners for the common good of the industry. A number of innovations exist in the agri-finance sub-sectors in East Africa. In Kenya, *Juhudi Kilimo (*A fully fledged leasing Organization*)* is currently implementing a micro-leasing project for agricultural assets including livestock (dairy cows), bee hives and irrigation equipment. Other innovations include weather index insurance; dubbed *Kilimo salama* practiced by the Syngenta foundation and warehouse receipt systems widely practiced in Uganda by The housing finance bank in collaboration with several warehouses and the Uganda Commodity Exchange (UCE). There are also a number of financing models including value chain financing, contract farming and out grower schemes that are becoming popular (See Part 2). These innovations and models are designed to minimize the risk and the high transaction costs associated with agricultural financing therefore making the sector more attractive for financing.

Despite having all these innovations and models, their practice is low partly because practitioners in the industry are not aware or minimum knowledge exists. Sharing of knowledge on how such innovations work can go a long way in improving the delivery of appropriate and less costly financial services to the rural microfinance clients most of whom practice agricultural related activities.

5.4 Existing knowledge networks and their links to the global development community

One of the success factors for reaching rural populations is the establishment of alliances and networks to provide and disseminate information on these additional requirements. The most common financial knowledge networks in East Africa are based on microfinance. A microfinance network is commonly an umbrella organization for multiple microfinance institutions, providing an avenue for cooperation and support. Through these networks, network member MFI's can share ideas, experiences, and solutions to common challenges. In addition, networks help facilitate the MFI's funding and investing procedures by connecting their members with funders and investors. Many times, networks strengthen operational, technical, and financial capacity of MFI's by promoting MFI standards and best practices and training.

Some microfinance networks promote a particular methodology through technical assistance and may have a partial or whole equity stake in their members and partners. Country and regional microfinance networks have an additional focus on advocating local microfinance policies and help members transform into regulated deposit-taking financial intermediaries. In these networks, members are partial owners themselves of the network and govern the network through seats on the Board of Directors.

To enhance the performance of the microfinance and specifically agricultural financing in East Africa, cognisance have been made on the role of national and international actors in reinforcing cooperation and co-ordination among actors at all levels in the design, management, and assessment of microfinance initiatives. Collective organization has several advantages in microfinance initiatives, the foremost being that they pool together human and material resources. It is also increasingly recognised that microfinance initiatives are more likely to succeed in a supportive national, regional, and international environment.

There is a general agreement that mechanisms should be created for the exchange of knowledge and experience amongst microfinance practitioners in the region, including the use of the internet, dissemination of written material, field level practitioner exchanges, and best practice workshops. Regional coordinating committees and sub-regional conferences can bring together microfinance policy makers, leaders, and representatives from bilateral, multilateral and intergovernmental development partners to access and compare microfinance progress. Co-ordination among various microfinance actors also ensures complimentary rather than competing policies.

Microfinance networks enhance MFI co-ordination, monitoring, advocacy, and outreach. They also allow MFI's to integrate approaches and better consolidate, share, and disseminate human and productive resources, including technical, traditional, and cultural knowledge. Such collaboration widens the group of stakeholders involved in the microfinance dialogue, and provides a legitimate and accountable vehicle to lobby for State and international actors to channel assistance. Access to these support structures available in networking enables MFI's to benefit from economies of scale and scope thus they are able to provide certain services at lower institutional costs than otherwise possible.

Although little information is available on the existing knowledge networks in the East African Countries of Kenya, Uganda and Tanzania, there exists umbrella organizations for microfinance practitioners in each of the three countries. Kenya boasts of 3 major networks namely: the Kenya Association of Microfinance Institutions (AMFI Kenya), Kenya Union of Savings and Credit Cooperatives (KUSCCO) and the Association of Bankers in Kenya. AMFI has 43 members, including commercial banks and NGO's while KUSCCO supports a wide network of savings and credit cooperatives. The Association of Microfinance Institutions in Uganda (AMFIU) has approximately 136 members including 91 ordinary members (MFI's) and 45 associate members (other institutions and individuals supporting microfinance activities). A microfinance forum (MFF) exists

in Uganda. The MFF is an informal but highly organised and focussed microfinance discussion forum founded in 1998. The inaugural workshop in 2008 paved way for a baseline agreement on principles of good practices for the microfinance industry practitioners. A number of successes for existing microfinance networks in East Africa are given in Table 2.

Like Kenya, Tanzania also has 3 major umbrella organizations namely; Tanzanian Association of Microfinance Institutions (TAMFI) which is the umbrella organization for microfinance organizations working in Tanzania. The Tanzanian Association of Microfinance Institutions currently has 46 members. Several years of TAMFI's low performance led to the emergence of Savings Cooperative Union League of Tanzania(SCULT) which represents particularly SACCO's in microfinance. The Tanzanian Bankers Association (TBA) is an umbrella body for all the formal banks in the country.

The microfinance networks in the region have over the years registered mixed performances. The main characteristics and success are highlighted in Table 2 below.

MFF	***Country: Uganda*** ***Access***: Provides MFIs and donor projects with direct access to the Ministry of Finance and other stakeholders ***Authority***: Through its chairperson, a senior minister of finance, decisions of the MFF often become the decisions of the minister, even though the MFF has no formal mandate To make decisions ***Members***: Open to all who wish to attend, but does not require attendance ***Expertise***: Chairpersons and active members of most subcommittees are high caliber and often recognized experts(and champions)in the field, both local and expatriate ***Frequency:*** Meetings are held fairly regularly ***Information***: Provides most stakeholders with official information and orients newcomers to the sector. Preserves the continuity of initiatives, many of which have outlasted their original champions	✓ Serves as key forum for all stake-holders to address ✓ Provides a one- stop shop of "who is doing what," so all can be informed of what is happening and avoid duplication of efforts ✓ Acts as guardian of "good practices" for the industry ,e.g., the MFF held long discussions with IFAD about a planned rural finance project; these funds ultimately were redirected to support the MOP ✓ Creates subcommittees to deal with specific issues in more depth ✓ Played key role in advising the Ministry of ✓ Finance and BOU on the policy statement for microfinance and the MDI Act all stakeholders
AMFIU	***Country: Uganda*** ***Access***: Represents practitioners to parliament, the president, and the Ministry of Finance ***Authority***: Recognized as voice of all practitioners ***Activities***: Activities are clearly linked to an articulated mission and objectives ***Members***: Nearly 100 members, which include the largest MFIs, small MFIs, a bank, and SACCOs. Members pay dues and are therefore vocal in requiring results ***Oversight:*** Board is active and committed to overseeing AMFIU, plans for its future ***Expertise***: Professional, well-respected manager ***Flexibility***: Stable funding, including coverage	✓ Lobbies effectively on key microfinance issues, chairs the lobbying committee of the MFF ✓ Trains MFIs on performance monitoring ✓ Assists the MOP coordinating unit in developing district microfinance committees ✓ Works with Ugandan government to propose the best regulatory solution for tier4institutions ✓ Takes a pragmatic approach and opts out of certain

	Finance ***Authority***: Donors provide over 50% of the Ugandan government's budgetary resources ***Presence of Decision Makers:*** Representatives often have the power to make or guide decisions on policy and funding ***Instruments:*** Diverse and appropriate	✓ Brokers deals between donors to basket fund or jointly fund projects(e.g.,GTZ and Sida collaboration) ✓ Discusses respective strengths of donors and implications of how to support projects ✓ Monitors donor-funded
AMFI	***Country: Kenya*** Access: Represents practitioners to policy making bodies Authority: Recognized as voice of all practitioners Activities: To build capacity of the microfinance industry in Kenya ***Members***: AMFI presently has 52 member institutions serving more than 6,500,000 poor and middle class families with financial services throughout the country ***Oversight:*** Governed by a General Assembly and gets her leadership from a Board of Directors who are experienced practitioners who run some of the leading microfinance Institutions in Kenya	✓ AMFI is a member Institution that was registered in 1999 under the societies Act by the leading Microfinance Institutions in Kenya. AMFI core programs are: Advocacy and Lobbying, Capacity Building for members, Performance Monitoring of members, Networking and Linkages. ✓ Vital in advocating for appropriate policies in the industry
TAMFI	***Country: Tanzania*** ***Access***: Represents practitioners to policy making bodies ***Authority***: Recognized as voice of all practitioners ***Activities***: promoting cooperation and collaboration among its member organizations, providing training, conducting research and lobbying ***Members***: TAMFI presently has 46 member institutions either general or associate	✓ TAMFI is the umbrella organization for microfinance organizations working in Tanzania. TAMFI works to strengthen Tanzania's microfinance sector by promoting cooperation and collaboration among its member organizations, providing training, conducting research, and lobbying the
SCULT	***Country: Tanzania*** ***Access***: Represents particularly SACCO's in microfinance ***Authority***: Recognized as voice of SACCO's ***Activities***: ***Members***: TAMFI presently has 46 member institutions either general or associate members. ***Oversight:*** Governed by a Board of Directors who are experienced	

Currently, the East Africa Community (EAC) is in the process of establishing a microfinance forum through which stakeholders aim to align the national microfinance policy with the objectives of regional integration, enhance advocacy and as forums for sharing existing knowledge at the local, national and international levels. Networks are also important avenues for sharing global experiences and lessons such as those from Latin America and Asian countries that have well performing microfinance institutions and well established legal and regulatory policies. Some of the global networks include:

- ✓ **Agri pro-Focus (AFP)** which is a partnership that was founded in 2005 with the aim of rallying professionals, expertise and resources around a joint interest in farmer entrepreneurship. The Agri pro-focus Members include the Dutch ministries of Foreign Affairs and Economic Affairs, Agriculture & Innovation, Wageningen University, the Royal Tropical Institute (KIT), Agriterra and Rabobank but within the East African region, it has created localised units termed as Agri-hubs which are local networks that have been set up for this purpose in Benin, Mali, Kenya, Uganda, Mozambique, Zambia, Rwanda, Ethiopia and Niger.
- ✓ **The African Rural and agricultural credit association (AFRACA**) which is the association of Central Banks, Commercial Banks, and Agricultural Banks, Micro-finance Institutions and National Programmes dealing with agricultural and rural finance in Africa. The Vision of the Association is a rural Africa where people have access to sustainable financial services for economic development.
- ✓ **The Partnership for Making Finance Work for Africa (MFW4A**). This is an initiative to support the development of African Financial Sectors particularly dealing with donor coordination and stakeholder engagement and thus achieve coordinated financial sector development interventions across the continent, avoiding duplication and maximizing developmental impact. The MFW4A Secretariat, hosted at the African Development Bank, facilitates the Partnership's activities. MFW4A hosts the African Finance Forum (AFF) which is a blog for financial sector practitioners, experts and scholars to share their views on current financial sector issues. The list of AFF contributors ranges from central bank governors, to academics, bankers, and development practitioners.
- ✓ **Rural Finance Learning Center.** Rural Finance is about providing financial services for people living in rural areas. This Learning Centre aims to assist organizations in developing countries to build their capacity to deliver improved financial services which meet the needs of rural households and businesses. it offers amongst others an e-library for rural finance and related materials, organizes events and forums and offers training on rural finance, microfinance, agricultural finance and related aspects.

Apart from African based networks, other networks in the globe include:

- ✓ Microfinance Institutions Network India (MFIN-India);
- ✓ The Association of Community Development Finance Institutions Sa-Dhan;
- ✓ Association of MFI's in Karnataka (AKMI-Karnataka);
- ✓ International Association of Microfinance Investors (IAMFI);
- ✓ The Microfinance Association of UK ;
- ✓ Asian Microfinance Network Platform;
- ✓ Banking with the Poor Network – BWTP Network;
- ✓ Small Enterprise Education and Promotion Network (SEEP);
- ✓ South Asian Microfinance Network – SAMN;
- ✓ ACCION Network;
- ✓ Bangalore Microfinance Network;
- ✓ Microfinance Researchers Alliance in India – MRAP;
- ✓ Micro-Finance Network (MFN);and
- ✓ INAFI – International Network of Alternative Financial Institutions.

PART 2: INNOVATIVE MODELS FOR FINANCING AGRICULTURE IN EAST AFRICA

1 INNOVATIVE MODELS IN FINANCING AGRICULTURE

1.1 Description

To effectively innovations in agricultural finance, it is important to describe both rural finance and agricultural finance aspects; which are described as follows:

Rural Finance: Rural finance comprises the full range of financial services - loans, savings, insurance, and payment and money transfer services - needed, offered, or used in rural areas by household and enterprises. The term encompasses agricultural finance.

Agricultural finance: Agricultural finance refers to financial services ranging from short-, medium- and long-term loans, to leasing, to crop and livestock insurance, covering the entire agricultural value chain - input supply, production and distribution, wholesaling, processing and marketing. Rural and agricultural financial services are provided by formal and informal financial institutions as well as through financial arrangements within the agricultural value chain.

Innovative financial services- An innovative financial product is described as having the following characteristics:

- ✓ Relatively new in its current form and features;
- ✓ Has peculiar features;
- ✓ Practical, in that it has been tested and proven to be workable;
- ✓ Successful, in that it has been successfully implemented in one or more institutions; and
- ✓ Popular in that it has attracted considerable demand.

1.2 The need for innovations

Despite the presence of well-established financial institutions in the three major countries in East Africa, there are still challenges regarding financial inclusion particularly in the rural areas. Commercial banks and MFI's are concentrated in the more populated urbanized regions while the sparsely populated rural areas are grossly misrepresented. Even where rural financial products exist, these products are insensitive to the uniqueness of the rural areas and particularly agricultural sector.

However, a number of innovative ways for financing agricultural sector have emerged albeit with knowledge dissemination challenges. If widely used these innovations can reduce the associated risks and consequently increase supply of financial services to the agricultural sector. In truth, most "innovations" are not new, and some date back decades, centuries or even millennia. What is new, however, is agricultural financing in new situations and for farmer types that were un-bankable before – smallholder farmers in particular. Such innovations tend to combine several financing concepts, and are nearly always embedded in value chain development17.

It should be however, noted that agricultural finance will only be effective if is integrated into an active rural economy, supported by functional and functioning services such as input provision, commercialization alternatives, technical assistance, extension services and market information systems. Effectiveness is also tied to the supply of additional models and services that help optimize the use of financial resources and improve results.

1.3 Asset Financing Model

This model focuses on financing production assets, or specific agri-business assets that will ensure an increase in the medium and long-term productivity of smallholder farms. Asset Financing provides smallholder farmers with access to wealth-creating assets (such as irrigation systems, tractors, farm equipments, breeding stock etc) that generate the necessary additional income, some of which is utilised to repay small loans.

It is important that the repayment structure of the loan provided for the purchase of farm machinery and equipment should be on terms compatible with the agricultural production cycle. Specific features of the Asset Financing are:

- The loan is linked to a specific incoming-generating asset, as opposed to a general loan that could be used for other activities.
- Cost-effectiveness due to less administrative costs in following up loans – compared to the conventional loans. This leads to lower interest rates, facilitates staggered payments, and longer repayment periods that can align with the client's sales performance.
- Less risk because the actual asset is a tangible item that can be repossessed in case of a default, and resold to recover the loan balances.

[17] AFD, 2012. Creating Access to Agricultural Finance.

- Since all assets are tied to a specific production activity, this entails allows for regular cash flow that ensures regular loan repayments.
- Productive assets provide a clear growth opportunity thus impacting positively to the local economy.

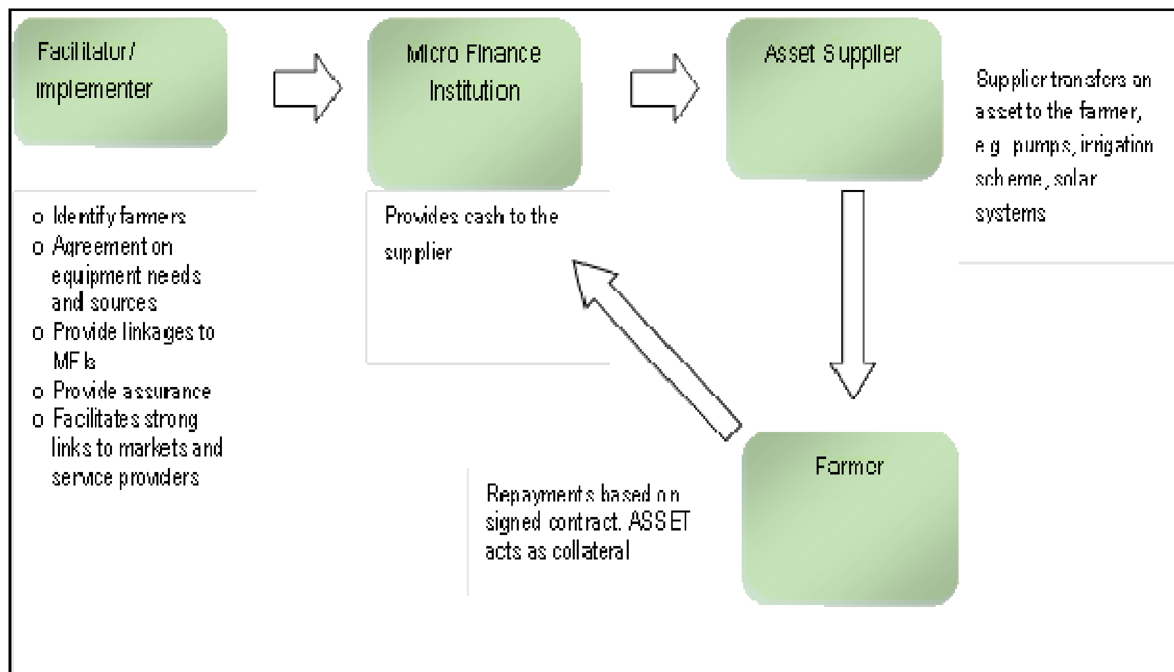


Figure 4:.Asset Financing Model

Commercial lending is characterized by 'real' interest rates, the need for conventional collateral to especially secure medium-term finance, and high degrees of uncertainty about business risks and returns. As a result commercial lending remains confined to medium and large companies.

1.4 Micro Leasing Model

This scheme is similar to asset financing or agricultural financial leasing, with the only difference being that at the end of the lease, the asset is transferred to the lessee. Leasing is an investment financing methodology, whereby legal ownership of the leased item only passes to the user upon the final payment (financial lease), or whereby the lease company retains ownership indefinitely (operational lease, essentially a long-term rental contract). In most lease contracts, no collateral is needed apart from the leased item. Lease contracts practiced in developing countries are nearly always financial leases, essentially hire purchase, implying that the lessee ensures maintenance and insurance.

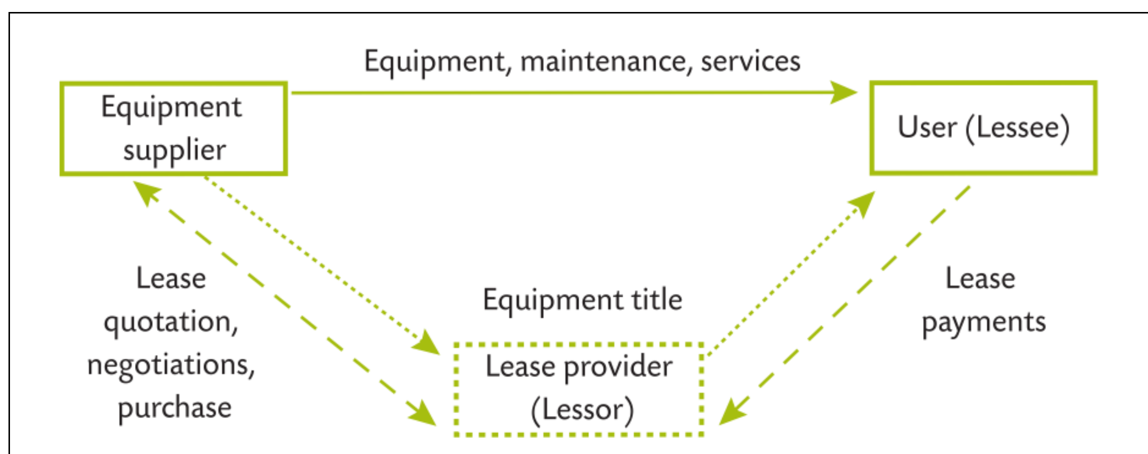


Figure 5: Normal Agricultural leasing
source: AFD, 2012. Creating Access to Agricultural Finance.

Micro-leasing works under the principle that the asset is leased to the farmer, who pays a regular lease fee, which also doubles up as an 'instalment fee' for the purchase of an asset. On the payment f the final disbursement ownership is transferred to the farmer. As a model of financing small enterprises, micro leasing has advantages over commercial lending to smaller enterprises in that: unlike other kinds of lending, security for the micro leasing transaction is provided by the asset itself. Capital leasing, in particular, enables entrepreneurs to ultimately acquire capital assets, and also reduces lessors exposure to misuse of leased equipment.

Different from a commercial lease, micro leasing transfers the role of maintenance of the asset to the lessee while ownership of the asset is transferred to the participating Financial Service Provider (FSP) who pays the whole costs of the asset (including insurance) to the Asset supplier. As such there are no cash transactions between the farmer or farmer group with the asset supplier nor with the insurance companies. The farmer (or farmer group) pays installments to the FSP as agreed. Once the last installment has been cleared, the ownership of the asset is transferred to the farmer or farmer group. If the farmer defaults, the FSP can reclaim the asset but the FSP have a co-guarantee agreement with the group and the asset is transferred to the group members who continues to pay the remaining installments plus charges, if any. Other players in the micro-leasing model includes agribusiness, group management and financial management trainers, relevant government departments, NGO's and CBO's which usually play mobilization and supportive roles.

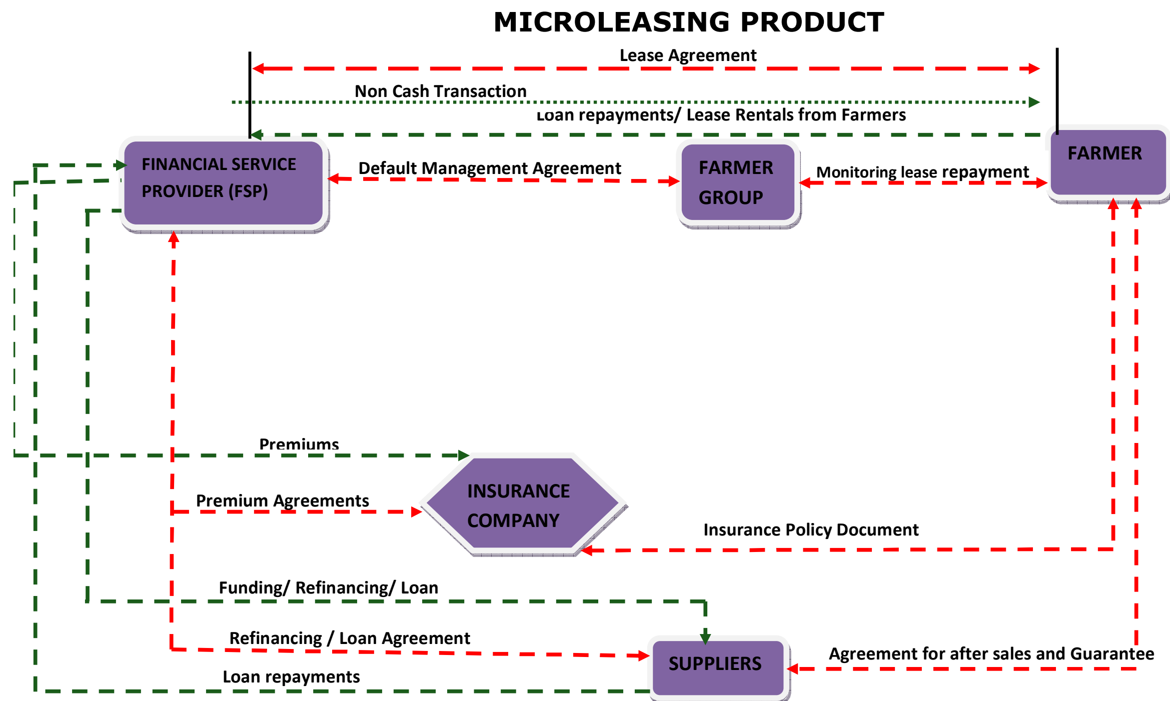


Figure 6: Agricultural Micro-leasing

Micro Leasing has several advantages, compared to purchasing with ordinary debt financing:

- The potential market for leasing is much larger than for ordinary loans, because the ability to make repayments derives from productive use of equipment to generate a new cash flow, rather than from credit history, accumulated capital or salaried earnings.
- The livelihood risks facing small-scale entrepreneurs are reduced by spreading investment costs and thus reducing cash-flow pressures.

- The investment risk is reduced because the lessor retains full ownership of the equipment, and has a less onerous route to recovery of assets in the event of default.
- Most significantly: Important tax benefits and incentives for capital investment can be extended to smaller enterprises (lessees) that are never normally eligible in practice. Recent clarifications to the Income Tax Act have emphasized these benefits relating to capital allowances and depreciation.

Thus leasing provides a potential escape route for smaller enterprises from the trap of low-capitalization, low-profitability and weak credit history.

1.5 Group Based/Member Based financing Models

In the agricultural sector, this model involves farmers coming together into groups or associations to be able to access credit, technical knowledge and markets. The models are driven and owned by small-scale producers, and it allows producers to market collectively despite widely differing farm assets. The important strategy for small scale producer organizations is collective action for increased participation in emerging modern markets. It is critical to improve the effectiveness of producer organizations in business-oriented services provision in order to improve their performance.

This model improves the members negotiating skills and results in enhanced access to service provision. As this develops, producer organizations vertically integrate to become co-owners of the supply chain or one of its segments in pursuit of added value. This model works effectively when built on a business-mindset. However, ownership and management of the Group Based Model may not always be in the best interests of the farmers when compared to models based on a network of specialized actors.

On many occasions group based lending in agriculture is initiated by an exporter who organizes farmers into contractual groups, through which they receive credit for seed, fertilizers and other inputs. Buyer-driven models affect smallholder farmers when stringent norms and standards are applied that do not necessarily match well with the local situation. A number of these relationships and agreements face the challenges of mismatched expectations, miscommunication and non-compliance by both partners, to the contractual agreements in place. The challenge in these agreements is achieving and respecting aspects related to price, quality, volume and consistency in supply and payments.

Major players in this model are the farmers who are usually organized into a group, the produce off-takers or exporters, a financial service provider and a facilitator who usually is involved in mobilization of farmers and group formation aspects as well as creating linkages to financial institutions, buyers, input suppliers, government agencies etc.

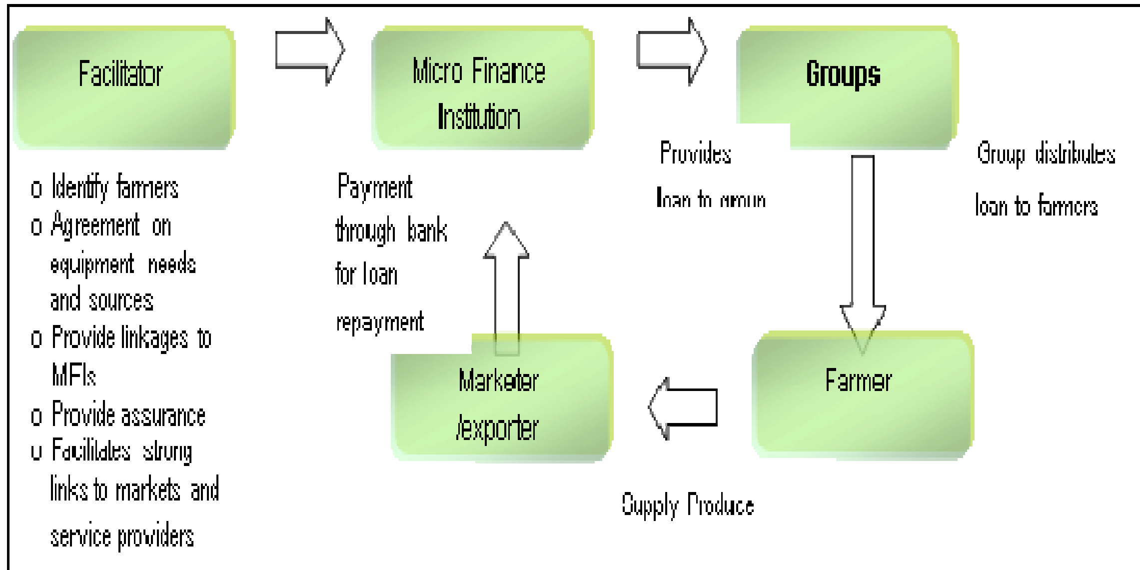


Figure 7: Group credit financing Model

Despite these challenges, the group based model provided clear incentives for market-driven product and process upgrading. There is need to ensure transparent assessments and sharing of gains between the farmers and buyers. Even when the buyer organizes a network of producers from a corporate responsibility ethic, there is the risk of paternalism and dependence which means the farmers do not develop the independence required for successful business management. There is thus a need to develop the capacity and build strong empowered groups that can negotiate for themselves, but also deliver volumes and quality.

1.6 Out grower Schemes/contract farming model

This is very similar to the above the major difference is that the Buyer acts as the MFI handling credit to farmers on behalf of the implementing agency. In contract farming, a trader, exporter or agro-processor establishes pre-harvest purchase contracts with selected farmers or their representatives (an association or cooperative). This involves forward contracting of the crop (the price or pricing formula is fixed). The main motivation is to secure a supply of produce, of a certain quality and at a specified time.

Technical support to ensure quality may be part of the contract. Product standards are agreed to beforehand. As part of the forward contract, farmers receive partial prepayment. A bank can also be involved through a triangular arrangement (the sales contract becomes the surety). This arrangement nearly always concerns seasonal credit only.

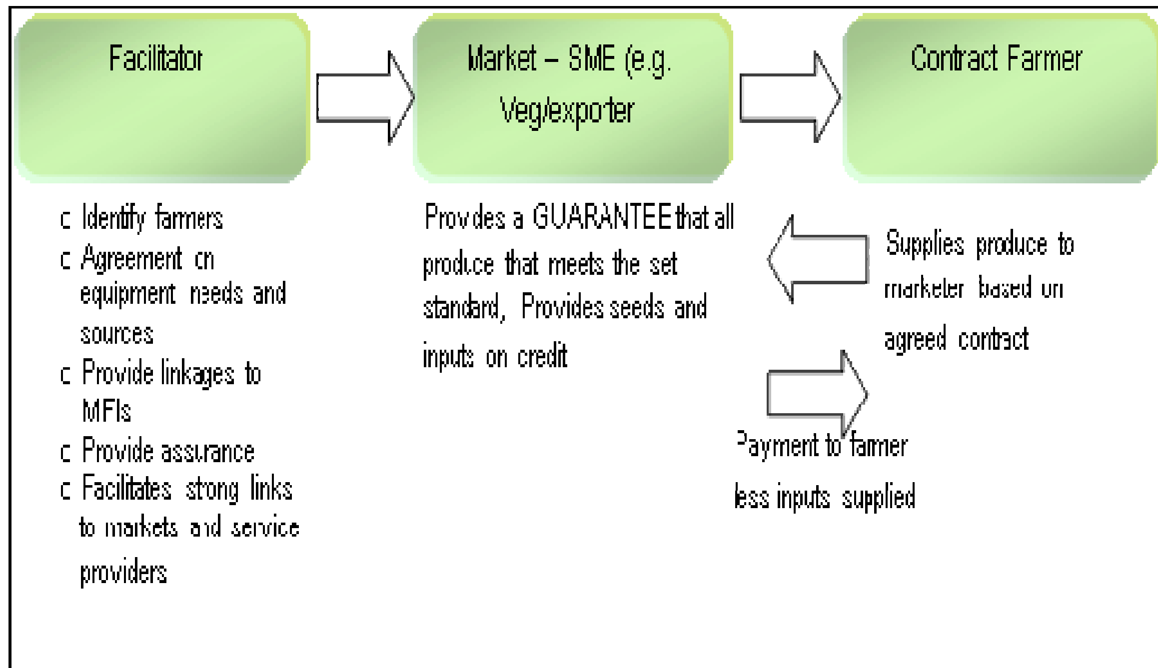


Figure 8: contract farming/ out growers model

Outgrower schemes are widely practiced in Kenya particularly by horticultural exporters and sugar companies. Although each of the sugar companies produce in own farms (nucleus farms), the companies enter into agreement with farmers in the surrounding area (outgrowers) who produce sugarcane for sale to the sugar milling companies. On its part, the sugar company provide ploughing services, cuttings, fertilizers, transport and weighing services to the farm as well as a market for their produce. The costs incurred by the company are deducted from the farmers proceeds upon payment for sugar cane supplied to the company.

There are a number of reasons why nucleus engage into outgrower schemes including:

- ✓ To meet demand or to expand especially where nucleus do not own enough land;
- ✓ To secure a regular and quality supply, by organizing and binding smallholders through a "package" of services (helping them to overcome technical problems in the upstream value chain);

- ✓ Expansion via outgrowers is faster (less need for capital investment);
- ✓ Downstream processing margins are better than with primary agriculture;
- ✓ Outgrowers work more cheaply than in-house hired labour and land thus costs of production are lower in outgrower schemes compared to nucleus farms;
- ✓ The need for and advantages of risk diversification; and
- ✓ Social development aims (e.g. Fair Trade products).

The advantages to the outgrowers are that they gain access to:

- ✓ New, better or more secure markets, often at good prices.
- ✓ Inputs of the right quality, on time and via credit.
- ✓ Practical technical advice.

The above factors help outgrowers increase production, productivity, quality, and often prices, hence their income. Major challenges for the contract farming/ outgrower models are dishonoring of contracts often characterized by side selling on the side of the farmers or non-payment or adjustments of prices on the side of off-takers/buyers.

1.7 Warehouse Receipt System

Warehouse receipt finance has long existed in grain-producing countries in Northern America and the former Soviet Union. It is applicable to agricultural commodities that can be stored, such as grains, coffee, cotton, wool or potatoes. This is a system of licensed warehouses by which warehouse owners hold goods in safe custody on behalf of depositors. The warehouse operator issues a "warehouse receipt" to the depositor and guarantees to deliver back the same quality and quantity of goods to the depositor or other legitimate holder of the receipt. The receipt is proof of ownership of the deposited produce and indicates the weight and grade of the goods at the time they were deposited. Only warehouses licensed by a Commodity Exchange may issue receipts under the scheme.

The use of the WRS reduces the time taken to source commodities as every such receipt is listed on the WRS electronic system (eWRS) and on the commodity exchange website. Once one is registered as a buyer, one gains access to these systems and can search and identify stocks available for sale. Stock can be bought on line. Payments for receipts (it is recommended) are paid for using the central banks Real Time Gross Settlement System. An additional advantage is that a holder of a receipt can use it to prove the existence of stock to a potential buyer or to a financial institution and used as collateral.

To access credit, the farmer subsequently hands the warehouse receipt to the bank as collateral for credit. The bank discounts the value of the produce in storage. by between 70%-80% which is given out as credit. Upon selling the product, the farmer notifies the bank, which obtains repayment from the buyer in return for the warehouse receipt. The buyer then presents the receipt to the warehouse to retrieve the product. The bank transfers the balance (minus the loan amount + interest) to the farmer.

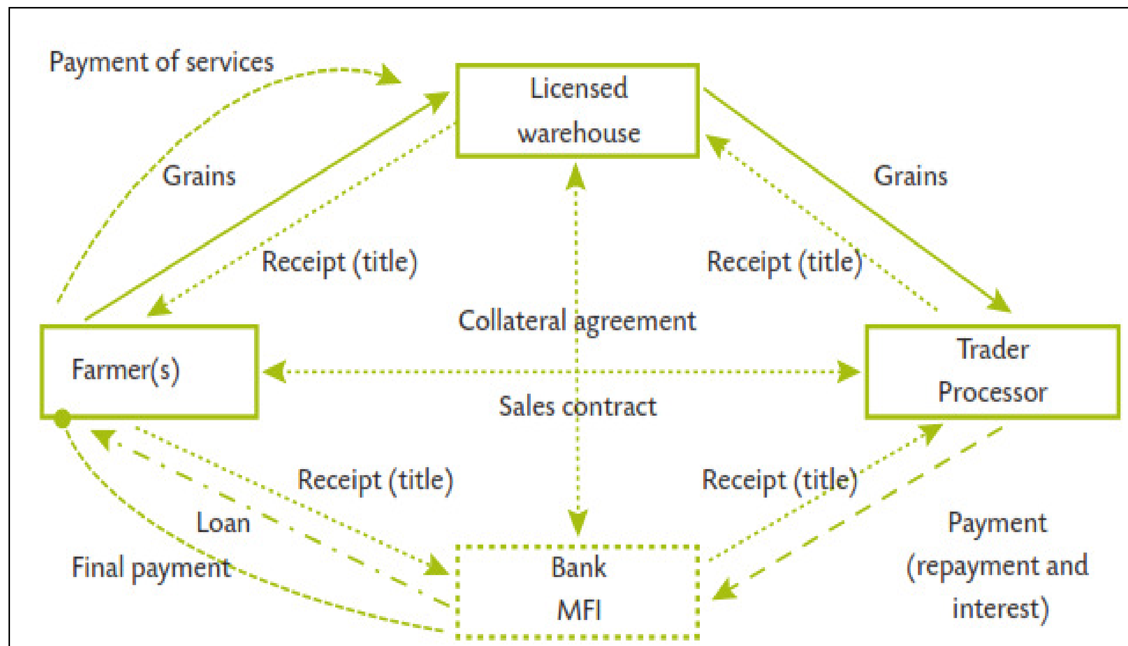


Figure 9: Warehouse receipt financing model
source: AFD, 2012. Creating Access to Agricultural Finance.

The key innovation in warehouse receipt finance is that it solves a financing and collateral problem for the farmers while it offers the bank a safe and liquid collateral asset, which is easy to monitor. Since the prices of the product are not indicated on the warehouse receipt, the farmers can be able to sell the produce when the supplies are low and thus achieve better prices. In addition, warehouse system transfers the responsibility of post harvest handling to more specialized and technically appropriate warehouse managers (at a cost) as opposed to farmers who usually lack the necessary infrastructures and technical knowhow. However, warehouse receipt finance is a post-harvest financial product, applicable only when the farmer has already completed a harvest cycle. Therefore, the initial harvest cycle must be financed with the farmer's own funds or other credit resources.

1.8 Value Chain Financing (VCF)

Value chain finance is described as the flow of funds to, and among, the various links within a value chain. This model makes use of the business relationships among the value chain partners (who are interdependent but share business information), and in this way reduces performance, market and credit risks. Thus, the partners that the farmers regularly do business with, such as input suppliers and buyers, provide or facilitate credit to the farmers. Value chain finance takes many forms and it is certainly (through the many forms) one of the most important sources of agricultural finance.

The term "value chain finance" covers many different concepts and modalities of financing, some of the forms that VCF takes include trade credit, contract farming, outgrower schemes and even warehouse receipt financing. As thus VCF is not a distinct and specific model but more or less of an approach or framework for financing agriculture and agricultural related aspects including agro-processing, value addition, transportation and even support services such as training and capacity development.

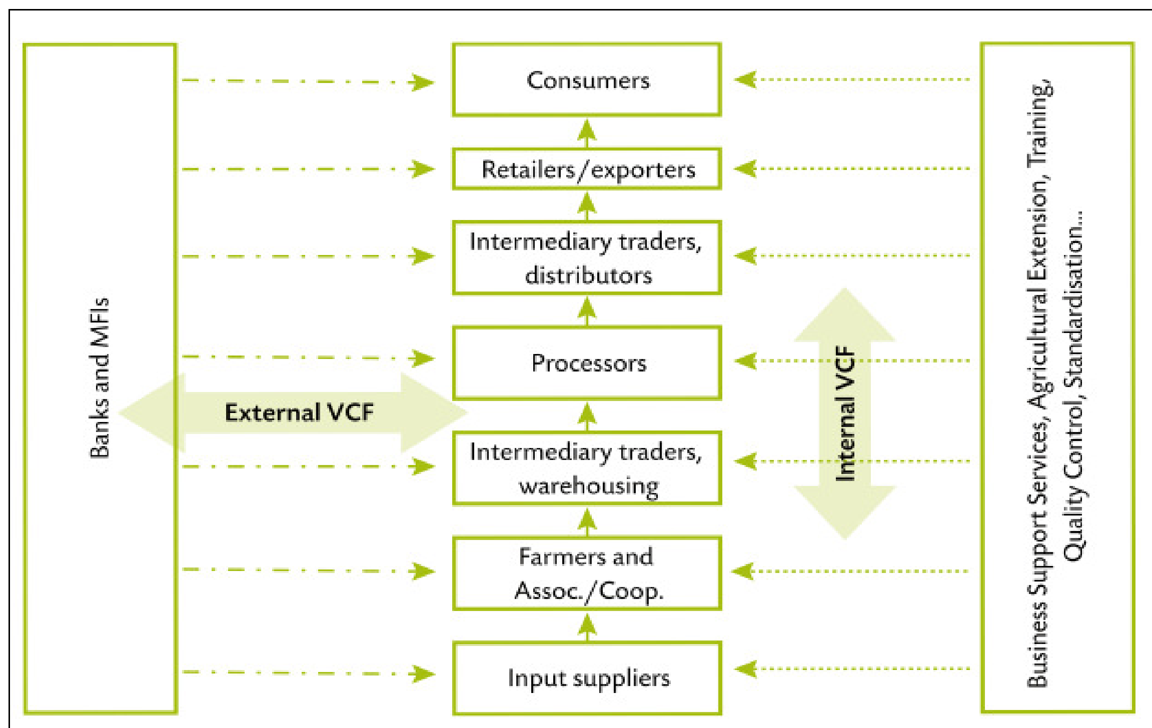


Figure 10: Value chain financing model

Source: AFD, 2012. Creating Access to Agricultural Finance.

Within the value chains, sources of financing can be internal or external. Credit is provided through the value chain, principally guaranteed by the anticipated sale of the crop in the future. Financial institutions can become involved when they finance one end of the value chain, which then channels funds to the other links (internal value chain finance), or they can finance value chain partners directly (external value chain finance).

1.9 Credit Voucher system:

This is a model of providing agricultural inputs on credit farmers using a combination of a staggered credit voucher and cash, thus reducing the likelihood of credit diversion to other life cycle needs. In a typical voucher system, 75% of the credit is disbursed via the credit vouchers and 25% through cash vouchers. The following actors are involved; Savings and Credit Cooperative where farmers are members through purchase of shares; a micro finance institution which manages the SACCO; input stockists from where the farmers redeem vouchers; government or a government agent where necessary; the donor who guarantee to repay the loaned amount in case of default and buyer of the agricultural output. In Kenya, the credit voucher system is being piloted in Ahero rice scheme since March 2005.

1.10 Index based insurance

Smallholder farmers are confronted with many exogenous risks. In addition to risks related to the weather and other acts of nature, farmers are exposed to market and price risks on their inputs and produce. Traditional risk-coping mechanisms for farmers which included enterprises diversification and supplementation through off-farm incomes have been found to be economically inefficient as they disperse the farmers' efforts, and make farmers less likely to adopt new technologies and to instead focus on subsistence based agriculture.

Generalized agricultural insurance that can cover major risks such as theft, death of animals, and destruction of crops etc is likely to be very expensive and has failed in many countries despite being highly subsidized. Index insurance is a recent innovation in the East African region. It is a "derivative" instrument where the pay-out to farmers is triggered when the threshold value for an underlying risk indicator (normally called "index") is breached. This is done without actually having to observe the damage done to the farmers' fields or livestock. This greatly reduces the transaction costs, the risk of moral hazard and adverse selection.

In many index insurance policies, multiple thresholds are defined, with increasing pay-outs as the risk event increases in severity. The index can be based on weather indicators such as the amount of rainfall (lack of or excess), humidity levels, arrival of locusts, water levels in a river, occurrence and strength of a hurricane, sea-surface temperature, frost, hailstones, etc. This requires highly capable and independent measurement tools, such as weather stations and remote sensing techniques. In essence therefore, meteorological data is an import input in the weather based index insurance. In some insurance systems, an estimate is made, via sampling, of the average crop yield in an agricultural region and farm losses are modeled with actuarial methods (given detailed and long-term data).

Weather based agricultural insurance addresses one of the key risks that push farmers back into poverty namely extreme weather events. Effective mitigation of weather risks for smallholder farmers can have a major impact on a farmer's livelihood since they can encourage investments in the farm that foster productivity, like fertilizer and improved seeds, and contribute to improved food security. The importance of index insurance is that it can be combined with credit products provided by banks, MFIs or input traders. Such is the case for a weather index insurance product that was launched by the Sygenta foundation for agricultural development in Kenya in 2005 dubbed *Kilimo salama (see Part 3- case studies)*.

1.11 Other innovations

In addition to those highlighted above, other models used in agricultural finance include:

1. Agricultural factoring and trade receivables finance: Factoring is a form of business financing where you sell your invoices to a factoring company in exchange for immediate payment. It eliminates the 30–90 days that your customers take to pay your invoices, and provides you with the working capital you need to run your business. Factoring, trade receivables finance, invoice discounting and forfaiting are of interest when (1) Payment terms are long (mostly due to shipping times), which is common with export commodities, (2) The product is (physically) secured and the buyer is considered creditworthy (3) The product is (ideally) non-perishable, (4) the legal and regulatory framework allows for this form of financing and covers the credit provider in case of default. DGV Capital Ltd (a micro-factoring company) has adapted this service for various commodities in Kenya: cotton (mainly in the semi-arid areas in Kenya), tea (in the Kericho area in Rift Valley province), fish (Lake Victoria), and horticulture, coffee and dairying (Central Kenya). The firm also partners with money transfer platforms as

well as with companies offering modern technology in farming and services to enable the production of timely, quality products.

2. **Credit guarantees**: Credit guarantees can be provided to banks and MFIs to encourage them to finance agriculture. In Tanzania, for example, AGRA and FSDT have established a credit guarantee scheme with National Microfinance Bank (NMB) to finance agricultural input suppliers on a 50/50 shared- risk basis. If input suppliers have access to seasonal credit, they will be able to stock up on seeds, fertilisers and pesticides to sell to farmers.

3. Price smoothing. This is a technique that aims at reducing the effect of annual or seasonal fluctuation of commodity prices. At the beginning of the season, the scheme sets a target for producer prices of a certain commodity based on a five-year moving average of world market prices. If the actual world market price after harvest exceeds this target price, the balance is deposited into a smoothing fund. If the actual world market price after harvest falls short of the target price, the shortfall is recovered from the fund. From the point of view of a finance provider, a smoothing fund may reduce the price risk of the crop, hence making the farmer more bankable. Technically, price smoothing is price risk insurance.

4. Value chain intermediation: It is a special type of value chain finance where an intermediary, which is not itself a value chain partner, facilitates the process for all parties. DrumNet Kenya has developed a technology platform allowing it to act as an intermediary between finance providers, farmers, input suppliers, and buyers. This is essentially contract financing, but with the innovation that an independent party sits in the middle, and manages the process through a master contract. The fact that farmers receive their loans in kind and that the loan repayment is withheld from harvest receipts reduces risk to the bank. Transaction costs are reduced via the independent party which aggregates financing, technical advice, input supply and marketing. Risk is also reduced due to technical advice and access to premium markets. Such is the case practiced by *DrumNet* Kenya.

PART 3: CASE STUDIES FROM EAST AFRICA

1 WARE HOUSE RECEIPT SYSTEM AND THE HOUSING FINANCE BANK-UGANDA EXPERIENCE

Housing Finance Bank, which is a full service retail bank that is primarily involved in mortgage banking, was incorporated as a private company under the Companies Act in December 1967. Through its contribution to the mortgage business and financing aspects, the Bank has become a household name having grown in leaps and bounds with a good track record as being amongst the pioneers of a mortgage lending. Although Housing Finance Bank is committed to maintaining its profitability and improving delivery of shelter by availing mortgage loan facilities, the bank also finances other sectors in the economy amongst them agriculture.

Amongst the Housing Finance Bank (UG) products in agriculture, warehouse receipt financing is most recognizable due to its uniqueness. A warehouse receipt system is a trade in commodities whereby a deposit of commodities in a designated and licensed warehouse upon which a receipt is issued by the warehouse management and posted in an online database where partner organizations can access it.

Warehouse receipt financing therefore refers to the utilization of the inventories presented in form of a receipt as collateral for loans. This arrangement solves the farmers' main problems including lack of storage, selling at the wrong time, earning very low prices and inability of farmers to access credit for their farming activities and other needs.

Parties and processes in Warehouse Receipt System

The regulator: In Uganda the licensed warehouses are regulated by the Uganda Commodity Exchange (UCE). which is the body mandated by government to regulate the warehouse receipt system under its Act of 2006. UCE operates an electronic receipting system (http://www.uce.co.ug).

commodity depositors: This is the person or institution that delivers to or deposits the produce/commodity with the Warehouse operator for safe custody. The depositor may be a farmer, a group of farmers, a co-operative, a trader or an exporter .

A warehouse operator: This is the person, a company or a cooperative that is licensed to set up a warehouse, receive and hold the commodity or produce delivered to it in safe custody for depositors. Upon reciept of the produce, the warehouse operator issues electronic warehouse receipts specifying the quality and quantity of produce deposited with it by the depositor. The operator carr ies out and charges for, grading, sorting, dring, storage and other handling services at prescribed rates.

Buyers: Any person or party willing to purchase the warehoused commodity at an agreed price and remove it as agreed.

Maize stock in the warehouse

Warehouse facilities: Currently there are about 9 warehouses owned and operated by different individuals or organizations, regulated by UCE and whose initial funding was supported by amongst others USAID,WFP, ASPS-Danida in addition to owners equity.

The warehouse receipt: A warehouse receipt is a document issued by a licensed warehouse operator certifying the quality and quantity of a specified commodity placed by a depositor into warehouse. It specifays the name and the Location of the warehouse; type of the commodity, qality and quantity of the commodity, name of depositor, date of delivery and storage charges.

The warehouse receipt issued to the depositor may be transferable or non transferable. If it is not transferable, it means that the depositor must keep it until the produce is sold and it is surrendered to the buyer to claim the goods purchased.

If the receipt is transferable, the depositor can go to any lender and get a short-term credit and pledge the commodity (the receipt) as security for the credit received. Usually the credit will be a fraction of the estimated current market value of the produce deposited with the warehouse operator. This normally ranges from 50% to 70%.

The housing finance bank experience in warehouse receipt financing

The housing finance bank was the first formal financial institution to enter into a memorandum of understanding with UCE to finance warehouse receipts in 2009.

Amongst the commodities considered for financing are maize, paddy rice, beans, coffee and beans. The bank finances deposits in licensed warehouses with a minimum tonnage of 3 metric tones.

Upon application of financing (by presenting the warehouse receipt), advances are made but discounted to about 60% of the value of the commodity held in the warehouse.

In determining the value of the commodity, prevailing prices at the time discounting is applied. This is because, the warehouse receipt which specifies the does not include the warehouse receipt.

The maximum facility period is 120 days or 4 months while a farmer is often required to trade through the UCE trading floor while repayment and settlement is made through a formal arrangement between UCE and the bank.

The housing finance bank feels that the warehousing has resulted to major benefits including:

- Enabling access to credit to farmers and small scale traders who ordinarily would not have qualified. Since the product was launched, the bank made loans of approximately UGX. 1. billion
- Linkage to markets. The banks loans disbursement coincided with an off-taker agreement between UCE and World Food Programme (WFP) licensed warehouses therefore providing a ready market.
- Lowering costs and losses: participation of farmers and traders in WRs have reduced need for them to incur costs related to post harvest investments and processes.

According to the Agricultural Finance year book 2011, there was a very rapid growth of loans and advances to agriculture by supervised financial institutions (banks, credit institutions and deposit taking microfinance institutions). New advances to agriculture grew by 60 percent in 2011, albeit from a relatively small base much of which was a result of a substantial expansion in post –harvest lending by commercial banks, with loans secured by warehouse receipts, which is testament to the fact that the efforts made in recent years to reform policy and legislation related to warehouse receipts and to undertake capacity building in this area have begun to bear fruit.

The major challenges for the banks initiative in the warehouse receipt financing include:

- A narrow branch network- The ban has 15 branches and lacks branches in areas where warehouses currently exist;

- significant transaction costs as branch network is located in urban areas as opposed to rural areas where most farmers are located
- General lack of awareness of the location of licensed warehouses and the processes involved as well as lack of enough warehouse facilities ; and
- Infrequent trading at the UCE trading floor forcing the bank to use direct payments.

2 THE HUNGER PROJECT (THP)-UGANDA AND EXPERIENCES WITH AN ALL INCLUSIVE EPICENTER MODEL

Who are the Hunger project

The Hunger Project (THP) which is a global, non-profit, strategic organization is committed to the sustainable end of world hunger particularly in Africa, South Asia and Latin America. THP seeks to end hunger and poverty by empowering people to lead lives of self-reliance, meet their own basic needs and build better futures for their children.

In Africa, The Hunger Project's methodology is implemented through **epicenters**. These are clusters of rural villages where women and men are mobilized to create and run their own programs to meet basic needs. After several phases over a five to eight year period, an epicenter becomes self-reliant, meaning it is able to fund its own activities and no longer requires further investment from The Hunger Project.

The Hunger Project has been working in Uganda since 1999 where it started with Mpigi epicenter and is currently empowering partners in 11 epicenter communities located in 9 districts to end their own hunger and poverty. In Uganda, a typical epicenter covers a radius of 10 kms with a population of about 10,000 to 20,000 beneficiaries. The roles of the THP in the epicenter include provision of seed capital, linkages to partners, advocacy and monitoring and evaluation.

The Hunger Project is working with partners to successfully access the basic services needed to achieve the Millennium Development Goals (MDGs) and lead lives of self-reliance. The partners include other NGOs and CBOs , district and local governments and the beneficiary communities. The epicenter model has received accolades even within the government and was recently adopted in the national development plan of 2011-2016.

The drivers of the epicenters

The epicenters are based on the peoples (beneficiaries) definition of hunger. it is basically based on three pillars: social mobilization for self-reliant action, empowering women as key change agents for development, and partnership with local government. Partnerships with local government are important particularly for sustainability purposes while beneficiaries are involved to create ownership of the project activities as well as for impacts.

The Epicenter Strategy in Uganda involves 8 components that works together to achieve the MDGs. The components include the following:

- Vision, Commitment and Action Workshops;
- Food production and food security programs;
- Health care provision;
- HIV/AIDS and Gender inequality workshops;
- Microfinance program;
- Women's empowerment trainings;
- Functional Adult Literacy (FAL) classes and early childhood education programs;
- Environmental awareness building training.

Beneficiaries being expected to become self reliant by the 8th year after which sustainability is guaranteed by the physical infrastructure and the social synergies

created. Basically the epicenter model is implemented in 4 phases namely:

Phase 1: Community mobilization phase- This takes between 1-2 years and involves selection of leaders, training in group formation, identification of locally available resources amongst others.

Phase 2: this phase involves construction of the epicenter building within 1 to 2 years. During this phase partnerships between THP, the local government and the beneficiary communities is key. Land, most of construction materials, unskilled labour and other services are mainly provided for by the local community.

Phase 3: Phase 3 involves rolling out of all the 8 components of the epicenter.

Phase 4: This phase usually starts from the 8th year onwards. It is supposed to be a self reliance phase during which THP exits the operations of the epicenter including financing.

The Microfinance/ rural bank Program

The Microfinance Program is one of the core components of the epicenters. This programme is implemented through two phases:

(1) Direct Credit (approximately four to five years); and

(2) Rural Bank (After the 4th or 5th year).

The ultimate object of the Microfinance Program in each epicenter is to have the facility gain government recognition to operate as a licensed rural bank, owned entirely by community members and managed by a majority female board. The rural bank then provides the entire epicenter community with sustainable access to savings and credit facilities.

The program has the following components:

Training Component: Trainings build the capacity of rural partners to increase and manage income. Anyone interested in participating in the Microfinance Program must first attend THP's Vision, Commitment and Action Workshop to learn about THP's principles and methodology. They must attend the required training sessions before receiving credit (group dynamics, project identification, basic business management, credit management and functional literacy classes). Either before accessing their loan or during repayment, partners must also participate in health trainings, on topics such as nutrition, hygiene, HIV/AIDS prevention and family planning.

Savings Component: Partners are required to save in order to participate in the program. This sensitizes them to the importance and benefits of savings and instills a savings' culture in the community. When partners save, they mitigate risk and create a more secure future. A minimum savings deposit of 10 percent of the applied loan principal is required as savings prior to accessing credit.

Credit Component: Credit provides partners with the capital to realize their business aspirations and generate income. Loans are only disbursed to solidarity groups of 5-15 people, relying on the concept of group solidarity to mitigate risk. Group meetings become forums where members can voice and address common concerns and make decisions toward collective action on issues from education to clean water. All credit obligations elsewhere must be repaid before applying for a loan with The Hunger Project. Another precondition is that all partners must enroll their children, girls as well as boys, in school.

The community, in collaboration with the local Hunger Project team, determines the country-specific annual rate of interest for loans. The annual interest rate, which ranges between 10 and 36 percent, is always well below commercial rates. While partners may take out increasingly higher loans after repaying their initial loan, the program prioritizes small loan applications from the poorest, rather than larger loan requests. Loan terms are for one year or less. All loans must be used for income-

generating activities, such as farming, food processing, animal husbandry, handcrafts and small business and trade ventures.

Other components: In addition to the microfinance component, the epicenters which comprises of a n L-shaped building also houses establishments meant for the following purposes:

a) **Health, water and sanitation**

b) **Education**

c) **Food security& nutrition-**

The THP signs Memorandum of Understanding (MOUs) with local governments for provision of staff and medical supplies, education materials and staff and other requirements for sustainability purposes.

The Iganga Epicenter:

The Iganga epicenter is located along the Iganga -Mbale road, approximately two kilometers from the main Jinja -Tororo Road.

This epicenter was started in 2004 with the first phase running between 2004 and 2007.

During the phase 1 THP provided USD. 30,000 as seed money. Phase 2 started in 2008 during which the epicenter building was established. The epicenter is housed in an L shaped building which is a symbol of collaborations and has the following:

a). A meeting hall; part of which serves as an early childhood class;

b). A food bank/ store where farmers deposit their produce (particularly cereals) after harvests. Initially, the group members were given 10 kgs of seed planting and THP provided seed money for inputs. At harvest, farmers are expected to deliver 1 (90 kg) bag of produce to the epicenter. To curb on the low prices during harvesting periods, produce is sold during off-season. Farmers are also allowed to bulk their produce and sell to large off takers and have once tried to market using the agro-ways warehouse receipt system.

c). A microfinance/ rural bank unit. This has 2 staffs and is used as the loaning credit and record maintenance facility. Notable is that the epicenter also has satellite kiosks within the 10 km radius where loan recoveries are made. This lowers transaction costs for many beneficiaries. The current rural bank has 1655 members with 1215 females and 440 males. The portfolios as at November 2012 stood at UGX. 322.2 million with UGX.209.48 million being held by females and UGX.112.65 million being held by males. The savings for the same period stood at UGX. 80.75 with UGX. 61.30 million being for saved by women and 19.45 being for men;

d). A health Unit comprising of staff from the Ministry of health, a maternity facility, a drug store, a pharmacy/ drug dispensing room, a laboratory, an injection room and a doctors room;

e). A board room for officers/ leaders meetings

Separate from the L-shaped building the epicenter also has the following:

a). A community bakery- This have been sublet to a community member who is running it. rent proceeds goes to the epicenter;

b). Health Staff houses for accommodation purposes;

c). A shallow well and water storage tanks that were supported by the local government;

d). A community garden where various crops are grown including maize, pineapples, sweet potatoes, cassava etc. This also serves as a demonstration farm.

The L- shaped Building that houses Iganga Epicenter

Part of meeting hall that is used as a class hall

Micro credit facility and meeting

The Health Unit

The Food bank

Challenges and lessons from the epicenter model

The epicenter model is based on the many interrelated needs of a community. Although the outstanding component is the provision of agri-finance, the model recognizes that effective use of the financial products is affected by other household needs such as food, education and health. The provision of these facilities is thus equally important as the provision of financial services.

The THP project categories the impacts from its project in Uganda in terms of deep, tangible and significant but overall it is believed that over 650,000 people have benefited directly and indirectly from the project. In addition to access to financial services the communities have access to water, health services, education services as well as stronger social bonding. These are some of the life cycle shocks that have been proved to increase the rates of loan defaults. As a result the THP epicenters have experienced almost 100% loan recovery rates.

THP has however encountered a number of challenges. key among them is the fact that issues of hunger are dynamic and thus preferences for action will change over time. The programme operates in rural settings characterized by low literacy levels and low adoption and use of technologies which implies that thorough and systematic ideological change is a prerequisite while adopting the groups. Most important, some issues such as provision of rural physical infrastructure, services and policies go beyond THP and thus the project have limited control. Finally, the threat of climate change has continued to affect the epicenter groups most of which are rural farmers.

Against the many challenges, the hunger project has witnessed major changes in the mindsets of the participating groups particularly with regard to resource mobilization and believes in self reliance as opposed to dependency. According to the THP, the community is made to believe that "it is you who has hunger and it is you who can end hunger". in future, THP aims at scaling up the epicenter model as it has proved to be highly successful as well as replicable to many other rural areas.

3 OIKO CREDIT TANZANIA AND WHOLESALE LENDING EXPERIENCE

Oikocredit is a private global development financing institution that has operated for more than 30 years. The organization's motto is "investing in people" and responds to the needs of businesses that create income for financially disadvantage people and contribute to the local community development. services are focused on sustainability, flexibility, latitude and sincerity.

Oiko credit has been working in the East African region since 1990's . It is a wholesale lender that finances microfinance institutions, SACCOs, Fair Trade Organizations, Small and Medium sized enterprises and other institutions with proven social relevance. Financial products offered include the following:

- Loans in hard currencies;
- Loans in local currencies;
- Credit lines;
- Guarantees; and
- Equity participation

The Tanzanian, under its current leadership of Mr. Deus Manyenye has rapidly grown from over the last 3 years from 6 projects in 2009 to 44 projects in 2012. During the same period, the portfolio has grown from Tshs. 6 billion to approximately Tshs. 40 billion.

Different from other wholesale lenders, oik credit are a discriminative lending institution with a preference for social impact. To qualify for wholesale loans an organization needs to prove that its activities have a social bearing that allows the target community to tap on the benefits. The organization is also unique in the following ways:

1. Borrowers are treated as partners and not clients. Oiko shares with its partners in terms of capacity building
2. Packaging of products- loan recovery is organized in such a way that payments are made on quarterly basis and not monthly basis. This allows for mobilization and reduces transaction costs for both Oiko and the partners. In addition, Oiko allows for adjustable grace periods ranging from 3 to 12 months based on the borrower's specific needs.
3. Review of loan terms is done after every six months. This allows for review of terms such as interest rates and repayment periods. In some cases interest rates are capped and therefore less variable and predictable.

Lending Criteria:

- Your organization should have at least 50 registered members and have been in existence for at least three years;
- Project must be economically viable, with appropriate management and technical leadership, and become self-sufficient within a reasonable period of time;
- The enterprise supported must benefit disadvantaged people;
- There must be a clear need for the type of financial service (s) requested from Oiko credit;
- Financial benefits must be widely distributed and not result in the enrichment of a few;
- The enterprise must contribute to the social and/or economic advancement of the larger community in which it is located;
- Preference is given to enterprises in which women are direct beneficiaries and where they participate in decision-making structures and procedures;
- Special attention is paid to the ecological impact and the protection of animals and species. The project should meet the environmental criteria adopted by Oiko credit.

General terms of Oiko credit loans:

- Loan size: From Euro 50,000 to Euro 2,000,000 or the equivalent in Shillings (Kenya, Tanzania or Uganda);
- Loan funds: Have to be utilized for an income generating project;
- Term of the loan: From 1 to 6 years for a local currency loan and up to 10 years for a loan in Euros or US Dollars;
- Grace period: A grace period of 3 to 12 months of capital payments can be offered based on the needs of the borrower;
- Interest rate: Reasonable and variable considering the market rates for comparable transactions as well as the risks and development relevance of the project;
- Securities: Suitable securities are required from the borrowing institution and its representatives to ensure serious
- commitment to the success of the undertaking;
- Arrangement fee: Oiko credit charges a standard arrangement fee of 1% of the total loan amount.

Procedure for getting a loan

- The project should fill out a form provided by Oiko credit's office and submit it together with financial statements for the past three years;
- Oiko credit will conduct one or more field visits for appraisal and if satisfied will take the proposal forward for approval to the Credit Committee of the International Office in the Netherlands;
- Once approved, the legal process will start. When all the legal papers are found adequate, the loan amount will be released. Thus in more or less 12 weeks credits can be disbursed.

4 YOUTH SELF EMPLOYMENT FOUNDATION (YOSEFO) AND ITS EXPERIENCE IN SUPPORTING CONTRACT FARMING IN TANZANIA

Youth Self Employment Foundation (YOSEFO) is a Non-Governmental Organization (NGO) based in Dar es Salaam, Tanzania which was established in 1996. The founders of YOSEFO are professionals in microfinance, business management and employment issues and work in the private and public sector. Their mission is to support self-employment creation for youth and women through provision of financial services and facilitating access to training in business and technical support. YOSEFO's customers are enterprising youth, women and men who have already started a business. Their clients include rural and urban poor Tanzanians: Over 70% of their clients are women. Services offered by YOSEFO include the following:

- **Group Lending**

YOSEFO uses a solidarity group lending methodology which was adopted from Grameen Bank. This methodology, which helped earn Grameen Bank the 2006 Nobel Peace Prize, has been modified to fit Tanzania. YOSEFO gives loans to individual Tanzanian entrepreneurs, who organize themselves into 5-person groups. The groups take primary responsibility for supporting and aiding its members as they develop their business. Every week, eight groups from a community (a "center") will come together to repay loan installments, appraisal and conduct group business.

- **Individual Loans**

Following the recent trend in microfinance finance, YOSEFO has begun offering loans to individuals who are clients graduated from business loan under group lending methodology.

- **Education Loans**

School fees are major financial strain on countless Tanzanians. YOSEFO provides education loans to ensure that Tanzanians are able to send their children to school.

- **M-pesa Services**

YOSEFO has changed its disbursement system from direct cash disbursement through its officers to disbursement through M-pesa-disbursement account where the loans are disbursed to clients through their mobile phone. This is the effort of the organization towards application of mobile banking technology.

- **Agricultural loan Product**

The new product is meant for agricultural activities especially in the rural areas. The product benefits farmers from Minepa, Kivukoni, Mavimba, Milala, Igumburo, Lupiro and Kichangani Villages in Ulanga District in Morogoro.

Village Savings and Credit Associations

YOSEFO have introduced a linkage program with Village Savings and Credit Associations (VSCA) called Benki Jamii, which means "community bank" in Swahili. The VSCAs are formed by up to 40 individuals who save regularly and can borrow through a fund they create with their own savings. The VSCAs are linked with YOSEFO for additional funds in case the self-created savings are not sufficient to meet the

demand for loans. This program has been introduced in three locations: Tumbatu (Zanzibar), Kilwa and Ifakara.

Many residents of Kilombelo district have for a long time being rice farmers. However, the System Rice Intensification (SRI) technology have resulted to increased productivity for many farm households and therefore necessitating the need for reliable markets and agricultural finances to cover production costs. In 2011, YOSEFO entered into an agreement with KPL (A large rice farm) for a contract farming scheme with several outgrowers. In this arrangement, Yosefo finances KPL which trains on SRI technology.

To access agricultural loans, farmers were encouraged to form groups. Initially the total number of individuals was 250 out of which 148 got loans. In addition to clients

YOSEFO's Experience in contract farming in Kilombelo

registering themselves as groups, they also register collateral in terms of land. The land registered as collateral is however, only known to the client, the group leaders and their families. This is a unique model where YOSEFO field officers do not know the land registered as collateral.

Through KPL, YOSEFO provides farmers with inputs but repayment of these inputs are deducted from members proceeds once they have delivered rice to KPL as KPL also acts as an offtaker of farmers produce. From this initiative, YOSEFO believes that it has been able to finance thousands of small holder farmers who otherwise would not have accessed credit services.

JUHUDI KILIMO'S EXPERIENCE IN MICROLEASING IN KENYA

Micro-leasing is defined as leasing and acquisition of productive assets of small value to the bottom poor that gives them additional and diverse income. Based on the fact that there are a few appropriate credit products for rural smallholder farmers and small & medium enterprises, the Micro-leasing project aims to fill this gap by providing full finance lease for the acquisition of these business assets.

Juhudi Kilimo Company Limited is a for-profit social enterprise that addresses rural economic development in Kenya by providing innovative, agriculture-based, micro-asset financing loans. These specialized loans assist the smallholder farmers in acquiring productive assets such as dairy cows, chicken, bee hives, chuff cutters, milk coolers and irrigation equipment amongst others.

Juhudi's product lines bring added value to agriculture, the largest economic field in rural Kenya, by financing assets that offer long-term gains in productivity and provide sustainable wealth creation. Spun off in April 2009, Juhudi first established a five-year track record of success as an asset financing program within the K-Rep Development Agency (KDA), an antipoverty NGO that performs research and product development for the microfinance sector.

Juhudi Kilimo is changing the way farmers do business. They finance targeted agricultural assets for smallholder farmers and rural enterprises across Kenya. Operating exclusively in very rural areas, they give smallholder farmers access to the tools they need to scale up and succeed.

The Micro leasing Model

Unlike traditional microfinance, which primarily provides loans for working capital to informal businesses, Juhudi finances specific agricultural assets that offer immediate and sustainable income for farmers.

This product eliminates the need for individuals to commit capital to purchase equipment by either borrowing, or having to commit their resources up front. Smallholder farmers access leasing finance more easily than bank loans due to the simpler security arrangements, lighter regulations and more flexible requirements. Leasing can be arranged more quickly and simply than conventional bank loans as security does not have to be established and leasing contracts can be structured to meet the cash flow needs of the lessee.

One of the most distinct feature of micro-leasing is that the assets act as an alternative form of collateral in case of default, reducing the farmers' risk of greater poverty through indebtedness, and assets are insured to protect clients from harsh business losses. This comprehensive approach creates long-term gains in productivity and local engines of economic growth.

Registered as a fully fledged micro-leasing organization, Juhudi maximizes the benefit of asset financing by providing both technical assistance and business training. Prior to each loan, officers visit the client's farm; who are often registered in a group to perform a business assessment and advice on improvements. The first four meetings of a new group are then devoted to training clients on basic finance and business. After a loan is approved officers give continued support, working with partners and local government ministries to offer targeted technical assistance on assets. To best serve rural clients, Juhudi also uses mobile technology to collect payments and feedback and thus reduce the burden on clients and loan officers in these remote areas.

Juhudi's clients support each other through solidarity loan groups, and co-guarantee their loans. Led by client representatives, (a chairperson, secretary, and treasurer but have strong support and oversight from a Juhudi loan officer) groups function independently but with strong support and oversight from loan officers. Loan groups serve as a central meeting place for farmers to share ideas and encouragement, learn about new products and services, and organize for access to better pricing and markets. Groups meet monthly to make loan repayments, pick up checks, and discuss business challenges and ideas. They are also often a forum for product demonstrations, technical training, internal merry-go-round loans, and any other useful activity.

How the model works

The model is essentially made up of three elements: the lease or pre-finance of assets, insurance of both the lessee and the asset and training of the lessee in the use and maintenance of the asset in order to achieve optimal results.

The lease is characterized by numerous advantages such as zero collateral as the leased asset serves as security (group guarantees are also often the norm) and the lessor retains ownership allowing easy repossession in the event of default. Importantly no cash is given to the farmer at the beginning of the transaction period, monthly installments can be paid with cash-flow resulting from the leased asset. Ownership of the asset is transferred to the farmer after full payment at the end of the transaction period.

Up-front deposit payments are minimal and the funds go directly to purchase the asset eliminating the risk of fund diversion. The terms and conditions developed include a leasing interest rate of 16% p.a -which is within the average interest rates on loans in Kenya; a maximum repayment period of three years; and a grace period of two months. In addition to the interest rate, a lease application fee of 1% and lease insurance fee of 1% are charged often with an additional 5% saving requirement.

This project has ultimately demonstrated that Microleasing offers viable opportunities to provide a wide variety of productive assets to subsistence farmers and is most successful when a multi-dimensional approach is adopted that addresses the key challenges facing smallholder farmers - such as building the capacity of communities to manage credit, tying credit products to savings and linking farmers to support services such as training in animal husbandry.

5 THE SYGENTA FOUNDATION AND WEATHER BASED INSURANCE IN KENYA

Sygenta Foundation is a non-profit organization established by Syngenta under Swiss law. Since 2009 the Syngenta Foundation and Syngenta East Africa Limited have worked together to improve crop yields and income levels of resource-poor Kenyan smallholders. The work has focused on modern agriculture knowledge, conservation agriculture practices, and facilitating access to market.

The Foundation supports partners who work in agriculture in resource-poor settings in developing countries and emerging markets. The purpose is to help small farmers become more professional growers by extending science-based know-how, facilitating access to quality inputs, and linking them to markets in profitable ways. Small farmers are the key group requiring attention in agricultural and rural development.

Sygenta foundation in Kenya

The organization began its activities in Kenya in June 2009 working with farmers in the Arid and Semi-Arid areas of Laikipia in Kenya. The project "scaling up Laikipia" was a combination of conservation agriculture aimed to :

- Increase productivity and income of pre-commercial farmers-extension services and value chain integration;

In Kenya Kilimo Salama ("Safe Agriculture") in Kiswahili is a partnership between the Syngenta Foundation for Sustainable Agriculture, the Kenyan insurance company UAP, and Swiss Re

- Reach more farmers-10,000 farmers by 2011;
- Provide a complete on-farm solution-food and cash crops.

The *Kilimo Salama* Product

Farmers in Kenya generally do not have access to insurance for their farms since traditional agricultural insurance relies on on-farm monitoring of losses, evaluated through farm inspections. And since the transaction costs to insure one acre are similar to insuring a 200 acre farm, the premiums from the one acre farm would never cover the related transaction costs. To cover these costs insurance companies will often be forced to charge very high premiums even to the very smallholder farmers who are the majority in the country.

This product is based is based on the weather conditions and is thus termed as weather index based insurance. Weather index based insurance offers a method to insure farms as small as one acre as well as big farms by replacing costly farm visits with measurements from weather stations as the indicator of drought conditions. The weather stations measure the rainfall and these measurements are compared to an agronomic model specifying crops' rainfall needs. If the needs are not met, all farmers insured under that station receive a payout. If the needs are met, none of the farmers receive a payout.

Corporate Solutions. The initiative develops and offers insurance for Kenyan farmers so that they can feel confident investing in their farms and can produce enough food to feed their communities. The partnership

has developed a range of products, and insured over 53,000 farmers in 2012.

How the model works

Farmers learn about Kilimo Salama through vernacular radio, their agro input dealer or local Kilimo Salama trainers. In 2012, over 7700 farmers have been reached. Kilimo Salama Plus insurance provides insurance coverage for maize (corn), beans, sorghum and wheat against drought and excess rain. Farmers insure their seeds and crop protection products at their local input dealer and register by sending a text message on their mobile phone. Text messaging is also used to inform farmers of any payouts which can be picked up at the input dealer.

it is believed that although the Kilimo Salama innovation have been able to deliver micro insurance to many farmers in Kenya, it has been faced with amongst others the following challenges:

- **Affordability**: insurance products need to be affordable for farmers, without reverting to subsidies. This product have shown that agricultural insurance can be affordable.
- **Distribution**s **network**: distribution channels relevant to smallholder farmers have been identified and developed. This have created convenience as well as lowered transaction coats
- **Administrative costs**: Providing agricultural insurance to more often widely dispersed and small holder farmers will definitely result to high administrative processes. With the Kilimo salama product, these processes have been streamlined in a way that costs are minimized while widley-dispersed farmers are served.
- **Trust**: Micro-insurance is a completely new type of financial service to most of the farmers, not comparable to mircro-credit. This needs addressing farmers concerns.
- **Weather infrastructure**: investment in renovating automated weather stations that can monitor the local weather patterns and the related insurance contracts is needed.

PART 4: DEVELOPING EFFECTIVE PRODUCTS IN AGRICULTURAL FINANCE

1 PRODUCT DEVELOPMENT STRATEGIES FOR AGRICULTURE FINANCING

1.1 Background

As in many other developing countries, agriculture is the leading sector in terms of its contribution to the economies throughout East Africa. In essence therefore, efforts to improve and sustain the sector's productivity remain crucial to economic development and people's welfare[18]. However, financial institutions are yet to develop products suitable for key potential agriculture sub-sectors to exploit their potential in food security and income generation amongst the poor.

At each stage of the value chain i.e. from inputs to consumption, there are needs for finance to cover for various requirements ranging from inputs procurement to loans for crops stocking for traders, processing activities and marketing activities. In each segment in the chain there are different needs and capacities to access finance. Therefore financial institutions need to develop specific products and services that are tailored into serving players in each segment of the value chain.

In order to fulfil the financing needs in the agricultural sub-sector, financial organizations need to address the shortcomings of delivering financial services to the poor. This will entail conducting feasibility studies to assess needs, developing the right products, being sensitive to the unique nature of agricultural sector and developing business models and innovations that reduce risks without necessarily resulting to high costs to microfinance clients.

An agricultural financial product is any form of loan or credit that is given for the generation of income and supporting of expenses related to an agricultural enterprise. The agricultural enterprises include value chain actors in crops, forestry and livestock (including fisheries and apiary). Considering the peculiarity of agriculture, agricultural financial products need to have special features including those highlighted below:

- **Loan term:** Should match the maturity of the specific agriculture enterprise being funded;
- **Grace period**: The institution should allow for an appropriate period between loan disbursement and repayment of the first installment;

[18]Owuor, 2009.

- **Repayment**: Should match cash streams of the specific agriculture enterprise; and
- **Flexibility:** In loan period, grace period and repayment frequency to accommodate various agriculture enterprises.

1.2 The process of developing financing products

The process of developing a finance product can be expensive and time consuming and therefore should only be done if necessary. However, to strike a balance between supply and demand the process of developing a financial product is very essential. Agriculture as a sector is unique in a number of ways key amongst them the long periods between planting and harvesting and irregular cash flows. This implies that a suitable agricultural financial product must take into consideration this uniqueness.

The development of a financial product generally involves the following major activities. This is a general or generic description of the process that a financial service producer developing any new product will have to go through. Initially one has to generate ideas, screen the products that come from the first step after which one have to decide whether to proceed any further with the process. A simple and not so expensive way of screening a product is to test the concept using for example focus groups. After a product is deemed appropriate the developer needs to look at whether these products make any business and if they do then the developer can go ahead and incur the expenditure associated with product development. Once the product is developed, it can then be tested in actual market conditions and if this phase is successful the product can then be rolled out into the market.

This section however covers the generic process of developing a financial product which can be summarized in to the following 8 steps:

- Idea Generation
- Product Screening
- Concept Testing
- Business & Financial Analysis
- Product Development
- Test Marketing
- Commercialization

Each of the above steps is further expounded in the sections that follow.

1.2.1 Idea Generation

How do we go about generating ideas?. This can be a difficult process to undertake for any business but three ways in which this can be done. One way is to look at the issues affecting our clients, in this case the players in the agricultural sector and their financing needs. This is a procedure that would involve "problem analysis" or in other words a "needs assessment" which basically looks at the challenges facing our clients by asking the following questions:

- Are they in need of capital to help bring their produce to market?
- Is the harvest so large that additional labour is required to harvest it?

The second method is to analyze the benefits that clients are looking for. For example, are they looking for a product that provides them a grace period on repayments until the harvest is over? Are they looking for a product that allows them to provide non-traditional collateral e.g. if a farmer does not own land which he can offer as collateral, can we create a product that allows him/her to offer his produce as collateral?.

The third method is to look at different scenarios. Here we look at the issues that can have a positive or negative effect on the client. For instance, many governments are now insisting on certain levels of trace pesticides on market produce, how will this affect the horticultural farmer who may be reliant on pesticides to bring in good harvest?. Can we create a product that takes into consideration this risk to the farmers earnings?. We are also experiencing many large produce buyers signing contracts with farmers that more or less guarantee the farmers returns up to a certain percentage. Can we create a product that utilizes these contracts to give farmers needed financing at reduced costs due to the reduced repayment risk?. Answering these questions will help one not only to develop an idea but also to identify the target market and the right entry point in the value chain. More than one ideas are possibly generated after this process.

1.2.2 Product Screening

Once product ideas have been generated it may not be useful or feasible to work on all of them and so it is useful to have method to determine which products merit further attention and which do not. A standard Strengths, Weaknesses, Opportunities and Threat (SWOT) analysis is conducted. Many financial service providers (FSPs) will develop "Kill/Go" checklists where a product is evaluated against a fixed set of parameters such as profitability, alignment with overall company goals, legal issues etc.

Products that do not meet these parameters are "killed" at an early stage before too many resources have been wasted on them.

1.2.3 Concept Testing

Once products that are in line with company policies have been identified, they can be evaluated easily and cheaply using concept testing methods. These are cost effective methods which do not involve the production of an actual product but simply a description of the product. This description is shared with a focus group of potential clients and their reactions and suggestions are recorded. The company then incorporates these views into the overall product development. Since this process is not expensive in terms of time or monetary resources it can be repeated over and over until a clearer understanding of the client need and objections is achieved.

1.2.4 Business and Financial Analysis

At the same time as the concept is being tested the company can engage in a parallel process of "number crunching". Here the financial implication of the product are measured and decisions are made on which products can proceed to the next stage which is the actual development of the product. Projections and scenario testing on costs, demand, competition, required investments and profitability is conducted.

1.2.5 Actual Product Development

Products that are acceptable in terms of profitability and other benefits to the company and which have been accepted by the clients sampled in the focus group discussions proceed to actual development. Development comprises all aspects involved in bringing the product to market including the branding and other marketing issues involved with communicating with clients on the various aspects of the product. It involves converting idea into actual product through branding, market positioning and usage testing. It also involves crafting a basic marketing strategy which must answer questions/problems identified in "Idea Generation"

1.2.6 Test Marketing

In test marketing all aspects of the product including client reactions and actual profitability are measured. During this process, the company or FSP is able to see and gauge the reactions of its competitors since the product will no longer be some secret project but will be visible in the market. Here also it is important to observe and document the effects of the product on the entire value chain since it could affect the clients adversely or it could have the positive effect of creating opportunities for new products for other players along the value chain. Minor changes may be made to product in first few months based on market reactions

1.2.7 Roll Out

The final step in the process is to bring the product to the full market marking the first stage in the product life-cycle. Here the marketing strategy has been sharpened and the message is clearly brought to potential clients of the products ability to help mitigate the issues/ challenges that that they face.

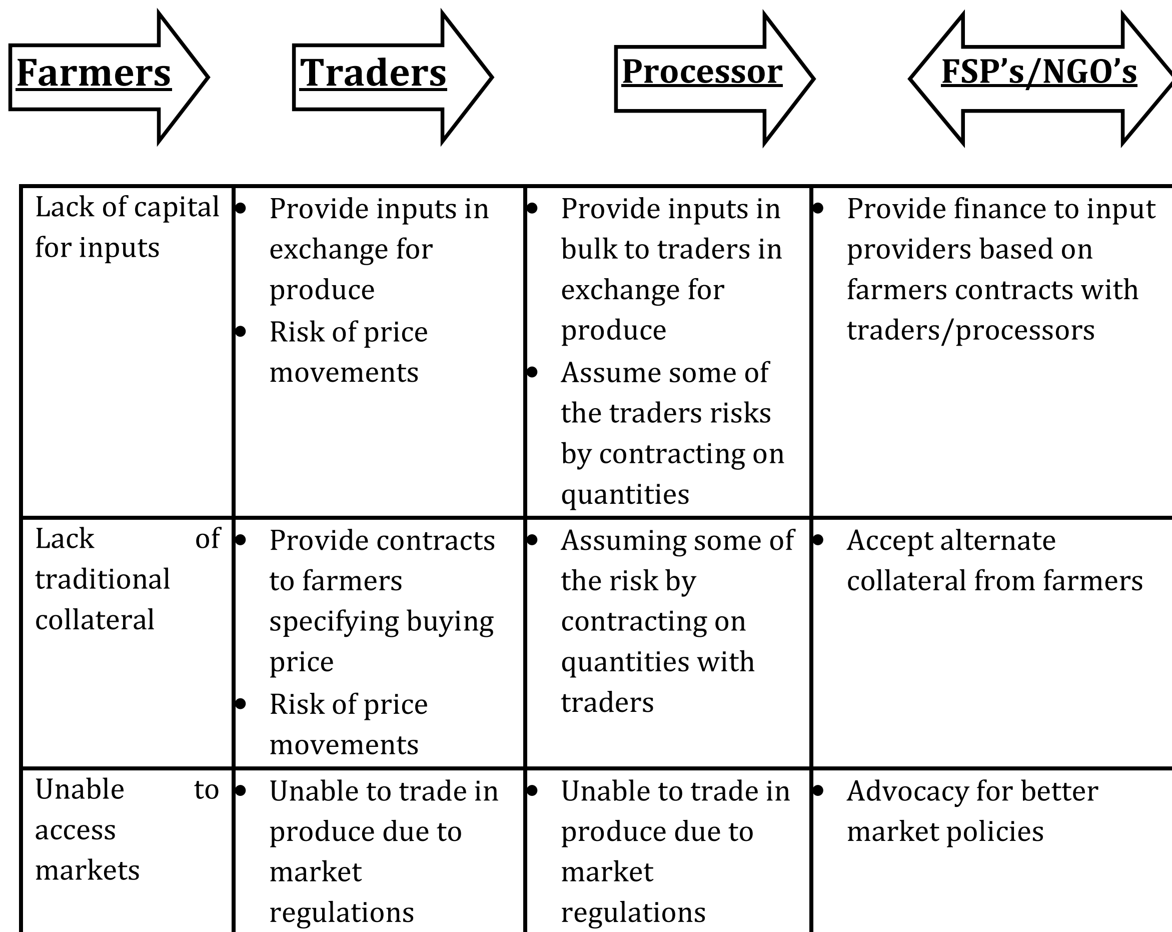
1.3 An application in the Agriculture Value Chain

The value chain is basically a mapping tool that allows us to look at the steps and players involved in the process of adding value to raw materials and resources such as labour and land and converting these materials and resources into a finished consumer product. Value chains can be used to map just about anything from geographic areas where certain products are found to cash-flows coming to the various players in the chain and so are useful in understanding not only the individual players but also the interconnections between them.

In a generic agriculture value chain such as the one shown there, the main players are farmers, traders and processors. Of course the chain also includes the final consumers but we shall concern ourselves with these three for now. This example shown in Figure 11 is a simplified one just to convey the idea but value chains can get very complex e.g. farmers can sell directly to the end consumers, farmers can be traders at the same time, processors can buy directly from farmers and so many other variations.

With regard to agricultural financing, the concentration is the various interactions, activities and identification of financing needs of each of these players. For the farmers,

financing needs are mainly in the first two links of the chain: How do they plant a successful crop and get it out to the traders profitably? . For the traders their financing needs are mainly on buying the produce from the farmers, storing and transporting the produce to the processors or the market. For the processors their financing needs are mainly how to buy the produce from the traders, transport it, process it and get it out to the final consumers.



Farmers	Traders	Processor	FSP's/NGO's
Lack of capital for inputs	• Provide inputs in exchange for produce • Risk of price movements	• Provide inputs in bulk to traders in exchange for produce • Assume some of the traders risks by contracting on quantities	• Provide finance to input providers based on farmers contracts with traders/processors
Lack of traditional collateral	• Provide contracts to farmers specifying buying price • Risk of price movements	• Assuming some of the risk by contracting on quantities with traders	• Accept alternate collateral from farmers
Unable to access markets	• Unable to trade in produce due to market regulations	• Unable to trade in produce due to market regulations	• Advocacy for better market policies

Figure 11: Financing along Agriculture Value Chains