

Making rural finance count for the poor

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Executive summary

Making improvements in the financial sectors of developing countries will contribute significantly to achieving global development priorities, particularly the Millennium Development Goals (MDGs) of halving poverty and hunger by 2015. A significant body of research shows that development of a viable financial sector is vital for both economic growth and poverty reduction (World Bank, 2004; DFID, 2004a). However, a number of studies show that the financial needs of agriculture-dependent rural communities remain largely unmet despite new approaches and expansion of the microfinance sector (Zeller and Sharma, 1998; Buchenau, 2003). Such studies imply that the positive impact of rural finance on growth, poverty and livelihoods is limited by the weakness of rural financial markets.

This working paper defines rural finance as encompassing all savings, lending, financing and risk minimising opportunities (formal and informal) and related norms and institutions in rural areas. An established body of research shows that in many of the least developed countries (LDCs) the rural financial market is often fragmented (Besley, 1994; Yaron et al., 1997) and unable to meet the finance needs of the rural population, especially for investing in agriculture, the predominant sector. This is not only because of weaknesses in the financial institutions, but more critically because of constraints in the rural financial environment. These include disparities in ability to access information¹ (between lenders/banks and farmers/businessmen) and high and covariant risks in rural areas, especially in agriculture. Rural households often lack the resources they need to mitigate risk. Rural borrowers therefore present a high credit risk and this, combined with the high administrative costs of service delivery, make the rural market unattractive to formal financial intermediaries. The rural financial sector is therefore dominated by informal service providers, but they undertake minimum intermediation and often specialise in either deposit-taking or lending. The few who intermediate do so within group-based systems with little or no access to external resources. Consequently, the informal sub-sector lacks the capacity to meet the requirements of the rural population.

The approach adopted by most developing country governments during the 1950s–1970s failed to address the constraints impeding rural financial intermediation. Instead, they focused on reducing the effects (defined narrowly in terms of lack of access to credit) through various targeted credit programmes and controls over interest rates and sectoral allocation of credit by banks. By the end of the 1970s, it had become very evident that these interventions had failed to improve rural productivity and livelihoods. Consequently, since the 1980s, there has been a shift to a financial systems approach to rural finance. This involves removing market distortions (focusing in particular on the withdrawal of the state from direct provision of financial and other economic services), deregulation of interest rates and abolition of credit controls. Considerable resources have been invested in strengthening financial institutions and improving the regulatory environment to ensure financial institutions are sustainable. An important development is the expansion of microfinance institutions (MFIs) in many developing countries, and the success of leading MFIs indicates that institutional sustainability can be achieved.

¹ Frequently referred to as 'information asymmetries'.

Despite this shift, the financial services needs of rural households remain largely unmet. This paper makes the case that the problem is not only a supply-side challenge (in terms of extending the provision of financial services) but also, primarily, one of reducing risks and operating costs to make rural clients more attractive to financial intermediaries. Examples of suitable interventions are discussed in Section 3.

A World Bank pilot project in India (Hess, et. al., 2003) is one example of a risk reduction strategy. This demonstrates the potential of microinsurance to help rural borrowers leverage agricultural finance, through reducing the risk of default arising from adverse weather. It is uncertain, however, whether this scheme can be replicated in Africa. Similarly, successful pilot initiatives have promoted widely accessible and sustainable warehouse receipt systems that allow agricultural inventories to be used as collateral. Major implementation challenges (e.g. a disabling policy environment) have made it difficult to address the problem of lack of collateral. Systems like this one not only address this problem but also help improve produce marketing, thereby providing an increased and more predictable household income, which, in turn, makes rural borrowers a better credit risk. Such interventions are often not regarded as essential when promoting financial sector development and tend to be marginalised by policymakers and donors when designing financial sector policies and programmes.

Agribusinesses play an important role in providing input credit and financing commodity trade in rural areas, but their operations tend to be hampered by unfavourable market conditions. These are sometimes attributable to government interventions and weak contract enforcement, especially when side-selling (where a farmer sells produce to a buyer other than the provider of input credit with whom s/he has a sales agreement) is widespread. Attempts by MFIs to provide medium- to long-term agricultural finance are hampered, not only by production risks, but also by an uncertain policy environment and weak contract enforcement. A lack of infrastructure and supportive legal framework have constrained similar efforts to promote competitive and reliable provision of fund transfer services and to adopt technology that lowers the cost and improves the efficiency of financial services delivery to the rural population.

Based on these observations, this paper identifies a significant gap in donor and government focus – the development and promotion of systems and instruments that reduce the risks inherent in much rural finance. Risks are primarily related to agriculture and arise from agricultural prices, weather and political factors, as well as the more 'standard' risks associated with providing financial services to poor people (such as those arising from information asymmetry and a lack of client financial service histories). Continued support for development of new products and systems that mitigate risk and increase availability of collateral, especially agricultural inventories, will therefore be required.

The paper also explores ways to overcome the implementation challenges that have impeded the replication of viable rural financial models. Particular attention should be paid to the role of the state and donors in promoting new systems, while governments need to maintain a stable macroeconomy, an essential factor for the development of efficient financial markets. Specific areas of attention include:

- exploring the feasibility of financial products that combine input credit with weather-indexed insurance and produce marketing using warehouse receipt systems (as suggested by Bryla, 2003); this is being piloted on a very small scale in Zambia with funding from DFID and the World Bank;
- promoting regulatory systems that engender confidence in the role of MFIs and other non-bank financial institutions in rural savings mobilisation and as channels for rural payments and transfer of remittances;
- promoting links between the informal, semi-formal and formal sub-sectors of rural financial markets; and
- encouraging developing country governments to reorient their support towards creating an improved policy and enabling environment for rural finance and away from more direct interventions and subsidies.

1. What is the issue and why is it important?

The problem of rural finance, which includes supplying finance for agriculture, is re-emerging on the development agenda as a pressing issue. Agencies like the World Bank and the Inter-American Development Bank have developed new rural finance strategies during the past two years, while the Food and Agriculture Organisation of the United Nations (FAO) and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) cooperated to produce the *Agricultural Finance Revisited* series of publications in 1999. Most developing countries abandoned subsidised rural and/or agricultural credit programmes in the 1980s, partly because the programmes had met with little success globally, and partly due to the influence of the financial systems approach adopted as part of the liberalisation of the financial sector (Yaron et al., 1997). During financial liberalisation, the state withdrew from providing rural finance and the microfinance sector expanded (Zeller and Sharma, 1998). However, growing evidence indicates that the financial needs of agriculture-dependent rural communities remain unmet (e.g. Zeller and Sharma, 1998; Murdoch, 2000) and developing efficient, sustainable and accessible rural finance systems continues to present a significant challenge.

This paper examines the issues that need to be considered and/or addressed in pursuing policies to make rural finance more readily available and beneficial to the poor in developing countries. Improving rural finance systems will help to raise household incomes and reduce poverty, and will contribute to the first Millennium Development Goal (MDG) on the eradication of extreme poverty.

1.1 The role of rural financial systems

The Consultative Group to Assist the Poor (CGAP) defines rural finance as 'financial services offered and used in rural areas by people of all income levels', and agricultural finance as 'a sub-set of rural finance dedicated to financing agriculture-related activities, such as input supply, production, distribution and wholesaling, and marketing' (Pearce, 2003). Consistent with these definitions, and that of Schmidt and Kropp (1987), rural finance is treated in this paper as encompassing all the savings, lending, financing and risk minimising opportunities

(formal and informal) and related norms and institutions in rural areas. This definition recognises that rural financial markets are part of the domestic financial system and are therefore affected by government and central bank policies. Rural financial markets tend to be fragmented (Germidis, 1990; Besley, 1994) and consist of formal, semi-formal and informal financial intermediaries. The definition also acknowledges that the rural population requires a range of financial services, including the following:

- *intermediation*, which involves mobilising and transferring savings from surplus to deficit units and provides safe, liquid and convenient savings (deposit) facilities and access to credit facilities tailored to the needs of the rural population (World Bank, 2004);
- *savings facilities*, which allow wealth to be kept in a form that preserves its value and is liquid and readily accessible;
- *credit* for consumption smoothing and investment in agricultural production, marketing, processing and input supplies (Gonzalez-Vega, 2003);
- systems for effecting *payments* and transfer of *remittances* (Orozco, 2003; Sanders, 2003); and
- general *insurance* and cover against variability in output (especially as agriculture is largely weather-dependent), price and marketing uncertainty (Skees, 2003; Von Pischke, 2003).

1.2 The importance of rural financial systems to economic development

Financial sector development promotes economic growth and can also reduce poverty (DFID, 2004a and 2004b). Demirguc-Kunt and Levine (2004) conducted a study of 150 countries and noted that a well-functioning financial system is critical to long-term growth. Empirical evidence from additional studies confirms the strong, positive link between national savings (aggregate income less total expenditure) and economic growth (World Bank, 2004). Correlation between the level of financial savings (savings held in liquid form in the formal financial sector) and growth is even stronger (Fry, 1995). Savings are important as they allow households to maintain precautionary balances against shocks. Households can also build up cash collateral and a track record of saving will allow them easier access to credit (Marr and Onumah, 2004). Most rural communities lack secure and accessible deposit facilities and, consequently, savings are held as cash or assets (e.g. livestock and building materials). Such savings are harder to mobilise and do not increase availability of loanable funds. Rural entrepreneurs therefore find it difficult to access funds and have to rely largely on self-financing when they want to invest.

The need for credit to support development of agriculture-based livelihoods has been stressed, particularly as a justification for the state and donor supported subsidised credit programmes of the 1950s–1970s (World Bank, 2004). However, the rural economy is financially very fragile. Lack of credit is a significant and sometimes binding constraint, limiting investment in productivity-enhancing technology and inputs. Finance is also required for commodity marketing, sometimes through inventory-backed financing, which offers rural producers, traders and processors the opportunity to improve household income through adopting better produce marketing and raw material procurement strategies (Coulter and Onumah, 2002).

Access to payment systems offered by financial institutions allows rural producers and traders to participate in modern, efficient commodity trading systems that offer better prices. Financial institutions should ideally provide low-cost and accessible channels for transfer of remittances (e.g. migrant wages), which are crucial to the coping strategies of many rural households (Orozco, 2003).

Rural finance plays a critical role in household strategies to reduce vulnerability. It assists the poor to smooth consumption and to build up assets greater than the value of the liability (Gonzalez-Vega, 2003). This is particularly important for the rural poor, since agricultural incomes and rural health fluctuate widely and could destabilise consumption if households have no savings or credit to fall back on (IFAD, 2003; World Bank, 2004). Furthermore, rural households lack sufficient access to formal insurance, relying instead primarily on informal safety nets. Improved access to insurance could reduce enterprise and household risks, and make investment in the rural economy more attractive, contributing to growth and poverty reduction (Skees, 2003; Von Pischke, 2003).

2. Current evidence: what we know

2.1 Challenges to rural financial intermediation

Hoff and Stiglitz (1990) and Besley (1994) have identified three major constraints to financial market development: a) information asymmetries between market participants; b) lack of suitable collateral; and c) high transaction costs. Risk related to agriculture, and to government and donor policies towards agriculture, should be added as a fourth major constraint to rural finance 'counting for the poor'. Demirguc-Kunt and Levine (2004) noted that efficient contract enforcement, related to a supportive legal framework and robust internal operating systems in formal financial intermediaries (FFIs), is very important in the development of the financial sector and the economy as a whole. Constraints to the development of rural financial markets are discussed in more detail below.

Information asymmetry

This occurs when borrowers have more information about the out-turn of their investment and greater capacity to repay loans than lenders (Stiglitz and Weiss, 1981). FFIs usually attempt to reduce this problem by screening out high-risk borrowers from their track record (including credit performance, transactions on deposit accounts, cash flow statements and other accounts). However, in the case of most rural customers, this is not possible, because many keep no record of their transactions and/or do not use payment facilities of banks. In addition, access to borrower information is impeded by a lack of efficient transport, communications infrastructure and well-functioning asset registries and databases.

Risk

High, and often covariant, risks in the rural economy are related to the dominance of agriculture, which accounts for a high percentage of Gross Domestic Product (GDP) (one third in the case of Africa) and employment (two-thirds in Africa) (Human Development

Report, 2000). The long gestation period for many agricultural investments and the seasonality of output usually lead to uneven cash flow and variable demand for savings and credit. Agricultural production is largely dependent on the weather and the use of productivity-enhancing inputs is very low (both leading to 'yield' or 'production' risk), especially in sub-Saharan Africa where the average consumption of fertiliser is only 10–15 kg per hectare, compared to about four times that on the Indian sub-continent (Pinstrup-Andersen et al., 1999). African yields are therefore very low and have risen only slightly since the 1980s (Badiane et al., 1997). Lack of credit is a major factor limiting the ability of smallholders to procure and use inputs. However, as noted by Yaron and McDonald (1997), sustainable provision of agricultural credit depends on the profitability of agricultural production and the extent to which yield, marketing and price risks faced by farmers can be managed (Onumah, 2003).

Crop marketing systems in many developing countries are inefficient and small-scale farmers have been exposed to even greater uncertainty regarding the marketing of their output as a result of the liberalisation of agricultural markets since the 1990s (Coulter and Poulton, 2001; Hubbard, 2003). Most small-scale farmers sell the bulk of their output at harvest when prices are low, and household income in rural areas is, consequently, usually low and variable. Small-scale farmers usually cannot defer sale of outputs as they lack storage facilities and they cannot access finance for consumption smoothing. On the other hand, traders in agricultural commodities, especially the rural assemblers who are the main link between producers and wholesale markets, tend to be under-capitalised. While they often cannot access trade finance from financial institutions, they are usually required to offer trade credit to wholesalers and processors. This creates a liquidity problem and limits their ability to absorb (and store) the substantial surplus available during the harvest season. The consequent glut depresses farmgate prices (Onumah, 2002) and, in most developing countries, market instruments to manage price risks are not available (Coulter and Onumah, 2002).

The yield, marketing and price risks discussed here are usually covariant in rural areas, that is, large groups of farmers throughout a region face common shocks to their incomes as a result of fluctuations in the weather or unfavourable market conditions (Besley, 1994). This is a particular problem when agricultural activities are not diversified, but concentrated on a few crops or livestock activities.

Lack of collateral

Lack of collateral limits access to rural credit and is related to poorly defined property and land-use rights and weak land and property markets (see also the World Development Report, 2001).

Enforcement problems

Enforcement problems are common in many developing economies. That is, even when borrowers have assets that can be used as collateral, they are often not acceptable to banks because of the high cost and long delays in using judicial enforcement mechanisms (Fafchamps, 1996). FFIs in rural areas also have difficulty complying with systems and

procedures intended to limit their exposure. This is due largely to weak institutional capacity (see below).

High operating costs

High operating costs are due to the small size of most rural people's accounts in relation to the cost of service delivery. A low level of economic activity, low rural population density and poor infrastructure will also increase operating costs.

Formal banking procedures and physical access difficulties

These factors constitute major barriers to the rural population. Procedures instituted by FFIs to reduce lending risks often constitute 'social' access barriers to the rural population because of the predominance of illiteracy and the need for formal documentation (Goodland et al., 1999). To ensure sustainability in the face of high operating costs, banks often concentrate their branch network in urban communities, thus increasing physical access costs to rural clients.

Weak institutional capacity

Weak institutional capacity of rural finance providers is related to the limited availability of educated and well-trained people in smaller rural communities. This is a particular issue for community-based institutions.

Enabling policy environment

During the 1980s, the debate on the role of the state in rural financial development centred on how policy interventions (e.g. interest rates and sectoral lending controls) contributed to the underdevelopment of financial markets and the supply of rural finance (Fry, 1995). Another topical issue was the crowding-out effects of directed credit from state-owned banks. Recent literature suggests that macroeconomic policies can adversely affect the development of rural financial markets (Gonzalez-Vega, 2003), albeit in a less direct manner. Macroeconomic instability, often in the form of high inflation, is known to impede financial development (Khan, 2002) as it discourages saving in financial form. Monetary policy interventions to contain inflationary pressures – usually through the sale of government debt instruments like treasury bills – tend to reduce the volume of credit available to the private sector as well as raising the cost of borrowing (lending rates are linked to returns on the 'low-risk' debt instruments such as government papers). The same effects are observed when public sector borrowing rises as a result of increasing budget deficits and/or increased credit requirements from state-owned enterprises.

Gonzalez-Vega (2003) argues that the state can play a supporting role in promoting financial sector development by making the enforcement of prudential regulations more robust, thereby engendering trust in financial intermediaries and encouraging savings. He adds that policies to promote competition and lower entry barriers to the rural financial markets will reduce fragmentation of the sector and contribute to its development.

Coulter and Onumah (2002) also note that policies affecting agricultural input and output markets affect rural financial markets. *Ad hoc* policies, often intended to manage food

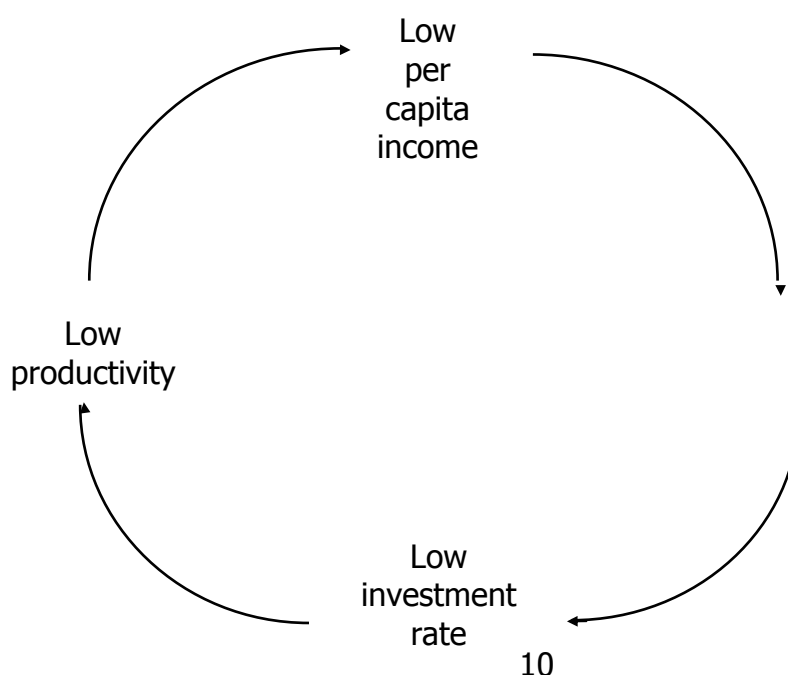
deficits, tend to lead to the unintended outcome of deepening market uncertainty, which results in a decline in real producer prices (Jayne et al., 1999). The uncertainty also makes inventory-backed finance for producers and traders unattractive to FFIs (Coulter and Onumah, 2002).

2.2 The traditional approach to rural finance

The traditional approach to rural finance, which was the dominant paradigm in the 1950s–1970s, involved the supply of credit by governments and donors to the agricultural sector at concessional interest rates (often negative in real terms) through cooperatives and state-run institutions. The traditional approach did little to reduce the constraints on the rural financial environment (discussed in Section 2.1). Instead, the focus was on addressing the effects of the constraints (i.e. the ‘inadequate’ supply of finance to the rural sector, particularly for crop production). Based on the vicious circle of capital formation (see Figure 1), the traditional approach assumed that the savings potential in rural areas was so low that it was not worthwhile to mobilise savings or to offer savings facilities in rural areas. The vicious circle could only be broken by channelling external funds into rural areas to help raise the low investment rate (Zeller et. al., 1997; World Bank, 2004). For this reason, specialised agricultural credit institutions were established to extend credit to specifically targeted agricultural investments. Usually, the consumption credit needs of the rural households were ignored.

As noted by Yaron et al. (1997), Heidhues and Schrieder (1997) and the World Bank (2004), subsidised credit programmes contributed little to growth in agricultural output or productivity. Only a small percentage of farmers had access to credit and they were usually the larger-scale farmers and wealthier members of the rural population. The poor had to rely on the informal sector for their financial needs. Fry (1995) and others, including Gonzalez-Vega (2003), point out that these programmes also contributed to market distortions which hampered financial deepening in many developing countries.

Figure 1: The vicious circle of capital formation



2.3 The 'financial systems approach' to rural finance and the growth of microfinance

Failure of more traditional methods led to a new financial systems approach being adopted during the 1980s (Yaron et. al., 1997). This emphasises the creation of enabling legislation and establishment of appropriate institutions (Von Pischke, 1996) and it views financing for agriculture as part of the wider rural finance market. The approach involves removing market distortions (focusing in particular on the withdrawal of the state from direct provision of financial and other economic services), deregulation of interest rates and abolition of credit controls. Considerable resources have been invested in strengthening financial institutions and improving the regulatory environment to ensure sustainability of the institutions. An important development associated with this shift is the significant expansion of microfinance institutions (MFIs) in many developing countries.

The financial systems approach is based on the supposition that the institutions adhering to commercial principles are the ones most likely to achieve outreach and sustainability. At the same time, the public sector should focus on ensuring the environment is conducive to the emergence and growth of such institutions (World Bank, 2004). Donors and government have increasingly recognised that financial institutions and programmes should satisfy the demands of clients on a sustainable and flexible basis, and not engage in unsustainable disbursement-focused credit operations. During the 1980s and 1990s, emerging empirical evidence showed the importance of savings, and a number of major development organisations consequently revised their financial development strategies to emphasise savings mobilisation as an adjunct to credit programmes (Buchenau, 2003).

Implementing the financial systems approach has eliminated many severe policy distortions (e.g. interest rate ceilings, credit allocation quotas, multi-tiered reserve requirements), promoted greater competition (allowed foreign firms to enter domestic financial markets) and strengthened prudential norms and supervisory authorities (through improved capital adequacy standards, tighter limits on related lending and increased provisions) in a number of countries. Accounting procedures have become more standardised and supervisory bodies have become politically and institutionally independent, while their decisions are strictly enforced.

Macroeconomic stability has been shown to be essential for efficient functioning of the financial system. Experience from East Asia, Europe and Latin America has shown that financial crises are invariably associated with macroeconomic instability. In particular, rapid appreciation in the value of the local currency in real terms and rapid increases in monetary growth can destabilise the financial sector (Kaminsky and Reinhart, 1999; Gonzalez-Vega, 2003). At the systems level, just as at the organisation level, there is a need for institution building and training for policy makers (especially in central banks).

Financial product and delivery mechanism innovations have been promoted within the financial systems approach, particularly by microfinance institutions. Product innovations have played a critical role in rural financial engineering that attempts to accelerate economic growth (Schrieder, 1996; Zeller et al., 1997). For example, introducing flexible and more accessible savings facilities (for poor clients) reduces the risk of seasonal income

shortfalls, since stress periods can be bridged through saving. Microfinance delivery mechanism innovations include the use of technology to lower costs and extend the outreach of rural financial services (e.g. cash machines, palm-top computers and mobile phones). Institutional innovations include making use of community structures through village bank-type models.

The changes and innovations adopted under the financial systems approach have, in many developing countries, led to improved health and performance of the financial sector. For example, Wenner and Arias (2003) note that in Latin America and the Caribbean, financial depth increased for 20 out of 25 Inter-American Development Bank (IADB) borrowing member countries during 1990–1997 as a result of adopting the financial systems approach. However, there is growing evidence that banks tend to become more risk averse as a result of the reforms, leading to a decline in lending to agriculture and the rural sector (Shepherd and Onumah, 2003). The inability of both private- and state-sponsored banks to meet the financial service needs of rural and micro entrepreneurs has encouraged an increased role for non-governmental organisations (NGOs) in the provision of rural finance (Cohen and Sebstad, 2003).

The most successful microfinance NGOs have developed large-scale, sustainable financial service operations. A number have become banks or other formal financial institutions but retain their focus on the rural population and urban poor (Hulme and Mosley, 1996). They build on their historical success in achieving extensive outreach and provide welfare plus credit services. More commercial MFIs are increasingly emphasising deposit mobilisation and subsidy independence (Bennett and Cuevas, 1996; Von Pischke, 1996) and they concentrate on financial rather than social intermediation. Licensed as formal financial intermediaries, they are subject to tight financial regulations. Examples include Banco Solidario (BancoSol) in Bolivia and Kenya Rural Enterprise Program (KREP) in Kenya.

Microfinance institutions have developed techniques to overcome constraints such as high transaction costs, information asymmetry and high client risk, although many MFIs have avoided agricultural finance, which is often perceived as unprofitable and risky. Exposure to agricultural risk can be reduced by portfolio diversification, whereby institutions finance both agricultural and non-agricultural activities. A number of rural MFIs lend only to clients who have an income from non-farm activities as well as from agriculture. MFIs have tended to increase loan terms and sizes gradually, based on client repayment performance, thus reducing loan defaults. But the application of relatively strict loan methodologies means agricultural production has become harder to finance, since it often requires more flexible arrangements tailored to particular crops or livestock activities. Credit culture and discipline have been promoted through client education, use of 'social' collateral (e.g. group guarantees), and close and regular monitoring of clients by loan officers. The high transaction costs of providing financial services in rural areas have been reduced by recruiting mobile loan officers or branches and by collaborating with local organisations and extension services (GTZ, 2003).

2.4 The informal sub-sector

Before introduction of the financial systems approach in the 1980s, the informal rural financial 'sub-sector' was perceived negatively, mainly because of the high interest rates

charged by moneylenders. According to Soyibo (1997), this changed when the financial systems approach was adopted and the informal sub-sector was perceived more as a robust parallel market response to extensive government controls. The expectation was that liberalisation and expansion of the formal financial sector would cause the informal sub-sector to decline.

However, decades after liberalisation, the informal sub-sector has remained robust, mainly because the formal sector is still unable to meet all the financial needs of the urban and rural poor. Steel et al. (1997) attribute the existence of the informal alongside the formal sub-sectors to their different capacities to deal with problems of imperfect information and weaknesses of contract enforcement. The implication of their argument is that improving the supply of rural finance should not be based on supplanting one sub-sector with another, but should focus on reducing the overall constraints on the rural financial environment. The strength of informal financial intermediaries lies in their ability to access and use local information, thereby reducing the problem of information asymmetry and reducing transaction costs through lower overheads. Default risk is also low because they can apply social sanctions in enforcing loan covenants (Navajas and Gonzalez-Vega, 2003; Zeller et al. 1997). Despite these advantages, the scale of their operations is usually very limited and most of them specialise in one activity (e.g. Susu collectors in West Africa mainly provide savings facilities while moneylenders only provide credit).

Membership-based financial institutions, while not all informal (their formality relates to the degree to which they are regulated and whether they are regulated as a financial institution), are a significant source of rural financial services. The definition of membership-based financial institutions is broad, and includes cooperatives, credit unions, village banks and low-level rotating savings and credit associations (ROSCAs). Their performance, in terms of the quality of service provided, sustainability and scale, has been highly variable. A number of farmer cooperative systems also exist, such as (SICREDI) in Brazil, which is composed of 129 credit unions, and has over US\$ 300 million in its loan portfolio. Village-based savings and credit organisations (CVECAs) are common in parts of West Africa, and operate in quite remote agricultural areas (World Bank, 2004).

3. Rural finance challenges: what we don't know

3.1 Managing and reducing risk

Chapter 2 examined the reforms and innovations that have improved the health and performance of the financial sectors of many developing countries. Despite these improvements, a gap in the supply of financial services to the rural population remains, especially regarding investing in the agricultural sector. One of the main reasons is that governments, financial intermediaries and donors have concentrated on supply-side interventions when undertaking reforms and innovations. They have paid insufficient attention to improving access to rural finance through reducing risks in the rural financial environment. Rural borrowers are not attractive to FFIs because they are perceived as high

risk. However, their chances of accessing finance can be improved by giving them the opportunity to manage and reduce the risks to which they are exposed.

Microinsurance and supply of rural finance

Rural households are highly vulnerable to the income shocks that occur when unreliable weather causes large differences in yields from year to year. Cohen and Sebstad (2003) note that several pre-emptive measures may be taken to minimise the chance and impact of income shocks. At the same time, various *ex-post* strategies can be relied upon to help households recover from shocks. Because the rural poor depend largely on agriculture, pre-emptive and *ex-post* strategies alone are insufficient to mitigate risk, particularly since risks in agriculture are mainly covariant, i.e. they affect a region rather than individual households. Skees (2003) and von Pischke (2003) have argued that insuring against risk can improve rural financial markets and reduce the problems of providing finance to individuals. However, the options for mitigating agricultural risks are very limited in most developing countries, especially for smallholders in rural areas (Cohen and Sebstad, 2003).

Bryla (2003) observed that farmers can manage factors such as labour shortage, diseased and aging plants and poor farming practices by improving farm husbandry, but they have very limited ability to control the effects of the weather. These are difficult to predict and can severely hamper farmers' ability to repay loans. As a result, banks tend to be hesitant in lending to farmers (Hess et al., 2002). In some developed countries, farmers can mitigate crop yield risk by means of crop insurance, where claims can be made if the yield is below a pre-determined average (Bryla, 2003). However, traditional insurance is not feasible in most rural communities because the high cost of intensive monitoring to avoid the moral hazard problem implies high premiums (to ensure sustainability) and most farmers cannot afford them. Only high-risk farmers, who may need insurance to access credit, will have sufficient incentive to buy insurance, implying that adverse selection becomes a major problem (Skees et al., 1999). Thus, crop insurance has, in the past, been promoted as part of government credit programmes and cases of success are few and far between.

The World Bank's Commodity Risk Management Group is currently promoting a 'weather-indexed' insurance product as a means of avoiding the problems associated with traditional crop insurance. The weather-indexed insurance is easy to manage because it does not involve monitoring individual farmers. Instead, it is based on rainfall through making independent observation of weather events that correlate with yields in particular areas (Bryla, 2003). The system does not require individual contracts or on-filed inspections and loss adjustments. Commercial supply of microinsurance is being piloted in India and has shown potential to increase access to agricultural finance (Hess, 2003). The insurance is seen by banks as a 'liquid' collateral, which enables farmers to repay loans even in the event of a yield catastrophe (Bryla, 2003). It is, however, uncertain whether the scheme can be replicated in Africa, particularly on a wide scale.

Creating collateral through warehouse receipt systems

Coulter and Onumah (2002) define warehouse receipts (WR) as documents issued by warehouse operators as evidence that specified commodities (of stated quantity and

quality) have been deposited at particular locations by named depositors. The depositor may be a producer, farmer group, trader, exporter, processor or indeed any individual or corporate body. The commodity remains the property of the depositor until sold at market, while the warehouse operator can extend credit in the form of cash to people who deposit commodities in his warehouse. Whilst accepting the cost of warehouse space for rural producers, the benefits of the system (as noted by Coulter and Onumah) include the following:

- Lenders can mitigate credit risk by using the stored commodity as collateral. This form of collateral is more readily available to rural producers and may be easier to liquidate than the type of asset traditionally accepted by banks as collateral.
- WR systems reduce transaction costs and encourage commercial lending to the rural sector. Lenders do not have to monitor a large number of small borrowers since a few warehouse operators guarantee loan performance. WR systems help formalise trade transactions by farmers and provide a vehicle for data collection, thereby resolving the problem of a lack of track record. Rural borrowers can then be screened by more formal financial systems, such as banks.
- Farmers can market their crops and get a better price; for example, through deferring sale of produce until prices rise after the traditional harvest season. They can use inventory credit to satisfy their immediate consumption needs. This will raise and stabilise their household income, which, in turn, improves their chances of obtaining formal credit.
- The guarantee of the warehouse operator to deliver stored commodities to the market removes two major sources of uncertainty in many African agricultural markets. These are the quality/quantity of the commodity and the ability of the seller to deliver on schedule. The WR system therefore facilitates trade by providing buyers with a reliable source and by reducing problems of cheating by weight and quality.
- Most African smallholder households lose income due to substantial post-harvest losses. When commodities are stored in well run warehouses or silos, post-harvest losses will be minimised and income increased.
- The WR system contributes to the development of commodity exchanges, which are used by farmers and others for purposes of price discovery and selling commodities. They can also be used for mitigating price risks. Varangis and Larson (1996) observed a growing interest in establishing commodity exchanges in developing countries. However, the exchanges are often promoted without first putting in place systems to guarantee contract performance, something that can be done with warehouse receipt systems.

Collateralisation of agricultural commodities is a new concept in many African and South Asian countries. In the most common model, local subsidiaries of international inspection companies set up tripartite collateral management agreements (CMAs) involving a bank, the borrower and the collateral manager (i.e. the inspection company acting as warehouse operator), through whom depositors can secure bank credit. The main limitation of this system is that it tends to exclude smallholders and small-scale traders. It is accessible mainly to large borrowers who own or can lease substantial warehouse space and can afford the substantial collateral management fees. In addition, lack of regulatory oversight of the collateral managers has sometimes led to cases of fraud, which have discouraged inventory-backed financing by banks (Coulter and Onumah, 2002).

Some NGOs have tried to establish inventory credit systems for smallholder groups, for example the 'TechnoServe' system pioneered in Ghana. Although it brought immediate benefits to participating farmers, the system has not proved economically sustainable because of the small volumes of grain involved (Kwadjo, 2000). In addition, the scheme needs intensive supervision (as with CMAs) to make the banks feel secure. This case and other experiences suggest that, to be sustainable, warehousing schemes must appeal to a wide clientele, not just smallholders, and build large volumes, reduce unit costs and improve overall system efficiency.

A widely accessible system, regulated by an 'arms-length' agency and controlled by stakeholders was successfully piloted in Zambia during the 2003/04 maize harvest season. The project was implemented by the Natural Resources Institute (NRI) with funding from the Common Fund for Commodities (CFC), DFID, the United States Agency for International Development (USAID), the government of the Netherlands and the International Fund for Agricultural Development (IFAD). During the pilot, about 6,600 tonnes of maize was stored under the receipt system. The stocks were fully financed by a local bank on highly competitive terms. The finance provided was fully repaid and depositors made net gains of over US\$ 35 per tonne, after meeting storage and finance costs. This success has sparked a good deal of interest and the programme's certified storage space is expected to rise from 8,000 tonnes in the 2003/04 season to just under 85,000 tonnes in the 2004/05 season.

As observed by Coulter and Onumah (2002), there are several challenges to overcome when promoting a regulated WR system in Africa. These include a lack of supportive legal framework and opposition from business interests who are keen to preserve existing collateral management systems. Pressure from governments and donors to focus on smallholder access to the system can sometimes put sustainability at risk. However, disabling policies, especially *ad hoc* interventions in agricultural markets, are the main bottleneck to progress. They are also the most intractable problem. Despite growing interest in developing WR systems in Africa and other developing countries, there is still a need to overcome these challenges, particularly policy-related constraints.

Broadening the range of financial services offered by market intermediaries

IFAD (2003), Pearce (2003) and Gordon (2000) note that credit provided by agrimarketing companies (suppliers, processors and traders) is an important source of funding for smallholder producers in rural areas. This includes interlocking arrangements such as contract farming and out-grower schemes (IFAD, 2003). In contract farming, the processing or marketing company provides inputs on credit, tied to a product purchase agreement. The initial repayment for the inputs is by means of produce supplied by the farmer at a predetermined price, with the rest being sold in the market or as specified in the contract. Out-grower schemes are a more integrated form of contract farming where the agribusiness has greater control. The farmers generally offer their land and labour in return for a package of inputs, extension services and an assured market. Crucially, interlocking arrangements reduce the risk of default to the credit provider, as farmers receive a range of non-credit inputs, advice and, in many cases, markets for their produce, thus reducing price and production risk (Pearce, 2003).

The input credit enables farmers to increase the quantity and quality of their produce, while providing a guaranteed supply of product to the lending companies. The system also offers smallholder farmers an opportunity to participate in the production of high-value crops, providing valuable links to international markets. These arrangements should, therefore, represent a win-win formula for both parties. However, their sustainability has often been undermined by failure of the contracting companies to procure the crop supplied by the farmers. This may be due to variable quality or difficulties in marketing the produce, especially when adverse conditions affect international markets. There have also been instances of 'side-selling'. For example, in Zambia, farmers sold their cotton crop to a competing company and then failed to repay their input credit. When companies face problems, it is often due to a weak culture of contract enforcement, and they have little or no scope to enforce repayment.

While acknowledging that credit delivery by suppliers and traders is no substitute for formal financial services, this service has been a lifeline for some developing countries. There is significant potential for financial institutions to build on the client (farmer) knowledge held by agribusiness companies and traders, and on the risk reduction effects produced when farmers receive a range of services and inputs from agribusiness credit suppliers (Pearce, 2003). There are few cases of financial institutions linking with agribusiness, but current pilot funding by DFID, CGAP and the Ford Foundation should indicate whether this is worth pursuing.

3.2 Providing term finance

Medium- to long-term financing is critical for enhancing investment in agriculture, especially for bringing virgin land under cultivation, providing irrigation infrastructure and developing new storage, marketing and processing facilities. Term finance for agriculture is difficult to obtain; it is more risky than shorter-term financing, and the financial institutions themselves must have long-term sources of funding (World Bank, 2004; FAO, 2003). Financial institutions that operate at scale, intermediate deposits and other sources of funding, and that serve small-scale farmers, may merit technical assistance to develop term financing products, and for asset-liability management.

3.3 Remittances

Remittances, both domestic and from abroad, are becoming more important to the livelihoods of rural households. The World Bank and International Monetary Fund (IMF) estimate that migrants transfer over US\$ 90 billion to their home countries in a year, with significantly more going through informal channels. The funds remitted supplement household income and help to offset income shocks. In addition, they are not affected by seasonality in local agricultural production cycles. Remittances sometimes represent 40% of household income, and tend to range between US\$ 100 and 1,000 per year (Wimaladharmasiri et al., 2003). People spend the majority of remittance monies (e.g. over 75% for El Salvador, Mexico and Nicaragua) on food, clothing and health care, with the remainder being saved for housing needs or microenterprise. (Orozco, 2003)

Individuals tend to select a system of transfer of remittances on the basis of cost and reliability. Orozco (2003) notes that the cost of formal money transfer is in the range of 4–20% of the value sent, and that the price depends on informal networks, aggregate volume and competition as well as on the availability of banking institutions and technology. A competitive market for transfer services tends to develop in areas where there are large immigrant populations, reducing transaction and transfer costs. The cost of formal international transfers to rural areas tends to be high (Orozco, 2003) and access to remittance outlets can present a problem for rural residents.

Accessible and low-cost internal money transfer mechanisms are also needed for domestic remittances from cities, towns or other agricultural areas (Wimaladharmasiri et al., 2003). In Vietnam, it was found that seven out of every eight transfers are domestic, although they make up only half the value of international remittances (Sanders, 2003). Since the majority of international out-migration occurs amongst more educated people (Carrington and Detragiache, 1998, quoted in Faini, 2003) and international travel can be expensive, domestic remittances are particularly relevant to the rural poor.

Green (2003) notes that the Inter-American Development Bank has promoted savings and investments in poor rural areas of Latin America and the Caribbean, based on remittances received mainly from the United States. The approach is designed to generate savings, realise development potential and spur investments in rural areas.

The potential benefits of remittances would be maximised if governments and donors could address transaction costs and access issues related to monetary transfers. One way to do this is to launch initiatives with bilateral and multilateral partners to address any physical and regulatory barriers. In addition, there is a need to promote competition among remittance service providers (Orozco, 2003). Microfinance institutions and credit unions are likely to be a key link in channelling remittances to rural communities and facilitating financial intermediation. However, promoting competition raises regulatory issues, primarily to ensure the reliability and integrity of the transfer systems and to avoid the system being abused (e.g. for money laundering). For this reason, some countries allow only regulated financial service entities to provide remittance services. This limits competition and suggests that policy makers face a challenge in striking the right balance between promoting competition and maintaining supportive regulations.

3.4 Technology to promote rural finance

Technological advances have contributed to major improvements in the quality of financial service delivery and have lowered transaction costs. Use of computers has reduced the time and cost of dealing with transactions, clearing of cheques and screening of loan applicants. The benefits are beginning to reach developing countries, but many rural communities remain excluded. Buchenau (2003) reports that some MFIs are experimenting with technical innovations to reduce operating costs and improve the quality of service in rural areas. Examples include automated teller machines (ATMs) linked to 'smart' cards and palm-top computers for rural loan officers. DFID has supported the Equity Building Society in Kenya through its 'Financial Deepening Challenge Fund' to extend access to banking services to 29 remote rural villages through satellite technology and mobile banking units.

CGAP has produced a series of case studies on the use of technology to improve access to financial services such as ATMs, smart cards, biometrics and other technologies. CGAP (2003) advises a careful cost-benefit analysis of any technological innovation and an assessment of an institutions' information systems prior to commitment. The feasibility of such innovations, especially in rural Africa, will be influenced to a large extent by the availability of supporting infrastructure (e.g. telecommunications). At the same time, socio-cultural factors (e.g. high illiteracy) may limit the effects of new technology.

A number of MFIs have used innovations in product design to extend their services into agricultural finance. Caja los Andes and PRODEM in Bolivia adapted their loan repayment cycles to suit the income and expenditure cycles of key crops in the areas where they had branch offices (World Bank, 2004). Similarly, Small Farmer Cooperatives in Nepal have introduced a range of financial products adapted to the agricultural and household needs of their members. These include loans for tea farming and livestock insurance.

3.5 Making use of existing institutional infrastructure, including banks

State banks, post offices, agricultural development banks and commercial banks may have extensive rural branch networks that could increase access to financial services. There are three principal options for engaging with such entities: a) through a management-led turnaround of a state bank (e.g. AgBank in Mongolia); b) by creating a specialised rural/microfinance unit that operates independently through bank branches and systems (e.g. Banco do Nordeste in Brazil); and c) partnership arrangements between MFIs and such entities (World Bank, 2004). These models are relatively new and need further donor and government support to improve and extend their use.

4. Agenda for improving rural finance – closing the evidence gap

Innovative financial institutions – including MFIs, banks and cooperatives – have shown that it is possible to provide viable financial services to small-scale agriculture in rural areas. They have done this by adapting financial products, making creative use of delivery mechanisms to reduce costs and adopting new technologies. Further innovation is needed to extend the benefits of financial services to wider rural areas. DFID could support such innovation by conducting research to identify promising new approaches and by funding, for example, Challenge Fund-type mechanisms and country-level financial sector programmes. Support is also needed to roll out and replicate proven innovations.

The policy and operating environment surrounding financial institutions in rural areas also needs improvement. Rural households generally have no formal mechanisms to insure against risk, so lenders can be subject to acute credit risk in such areas. In addition, borrowers are often unable to offer suitable collateral and, even if they have collateral, weak contract enforcement makes it difficult to enforce loan covenants when borrowers

default. Better mechanisms to manage agriculture-related risk are needed, and DFID should work with developing country governments to reduce political risk through improved government and donor policy towards agriculture and trade. Improved client and asset registries and stronger judicial capacity to register and enforce claims on collateral are also needed.

Insurance and WR schemes appear to offer good potential. For example, microinsurance allows borrowers to access finance for agriculture by reducing the risk of default arising from adverse weather. Warehouse receipt systems (when accessible to small-scale farmers) provide a way of turning agricultural produce into collateral. DFID and the World Bank (with NRI) are providing pilot funding to explore the feasibility of financial products that combine input credit with weather-indexed insurance and produce marketing using WR systems (a model suggested by Bryla, 2003) in Zambia. The problem is that poor policy environments impede progress in extending insurance and WR arrangements and this situation needs improving. At the same time, donors need to work with governments and private sector players to integrate interventions that reduce rural credit risk with mainstream rural financial development programmes and policies.

Agribusinesses have an important role in providing input credit and financing commodity trade in rural areas, and links with financial institutions offer a promising way forward in extending agricultural finance. However, agribusiness operations can be hampered by unfavourable market conditions (sometimes attributable to government interventions) and weak contract enforcement. Efforts to promote competitive and reliable fund transfer services and to adopt technology that lowers the cost and improves efficiency of financial services delivery to the rural population have been constrained by a lack of infrastructure and supportive legal frameworks. The rural poor would benefit directly from regulatory systems that engender confidence in the role of MFIs and other non-bank financial institutions in rural savings mobilisation. They would also benefit if MFIs and banks acted as channels for rural payments and transfer of remittances. Efforts to promote partnerships with the private sector and governments (in the North and the South) and to remove barriers to the flow of remittances also offer real potential for 'making rural finance count for the poor'.

Finally, policy makers need better data on which to base rural finance policies and allocate funding. Policy makers (including governments, donors and financial institutions) have little data on current provision of finance in rural areas or on the type of financial services needed. Groundbreaking survey work has been conducted by DFID's financial sector partner in South Africa – the FinMark Trust. The data was so useful to financial institutions that a number of South African banks sponsored the follow-up study the next year. A rural version of such a survey, with additional perspectives on the financial service needs of poor farming-dependent households, could prove invaluable in dispelling commonly held myths about rural finance and about the ability of farmers to repay loans and save money. In short, more data would lead to more effective rural finance interventions on the part of DFID and other donors.

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