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**MARKET ENTRY FOR COMMODITIES: THE ROLE OF TRADE AND
INVESTMENT FINANCE**

Background note by the UNCTAD secretariat

Executive summary

Even without tariff and non-tariff barriers, it can be exceedingly difficult for commodity producers, processors and traders in developing countries to enter international markets. Finance is becoming a critical requisite for establishing and maintaining competitiveness in these markets. It is needed to comply with evolving quality and environmental standards, and in transforming production processes to allow for greater emphasis on products with higher value added. Moreover, producers are often unable to penetrate new markets if they cannot provide competitive financing terms to potential buyers.

If they do not deal with this problem, countries that rely heavily on commodity exports for their livelihood (which is the case for most least developed countries) will not be able to break the vicious cycle of poverty. This report focuses on the main impediments that developing countries face in their access to commodity finance, as well as the major factors that undermine their ability to attract commodity sector investment.

The ability to offer competitive prices is hurt when producers and processors do not have access to efficient means of production (e.g. reliable electricity supply) and do not have the capacity to invest in such means themselves. High financing charges add to costs and reduce the margins of producers, processors and traders. Buyers in high-value market segments often insist on stringent production methods on the part of their suppliers (and may regularly control whether suppliers indeed meet these requirements), and heavy investments may be needed in order to meet such demands. Poor access to finance for investments and trade can thus make commodity producers, processors and traders uncompetitive and incapable of benefiting from new market opportunities or adding value to their production.

In developing countries' agricultural policies, addressing such financing obstacles was for a long time a core part of development programmes. However, poor experiences with agricultural financing schemes (through agricultural development banks, agricultural credit schemes and the like) led to a retreat from this sector by Governments and donors during the 1980s. The scepticism engendered by the failures of these traditional commodity finance schemes still prevails, preventing many from revisiting the issue of commodity sector financing.

But financing techniques and methods have evolved, and as experience in several countries has shown, it is possible to design viable and sustainable financing schemes that meet the needs of commodity producers, processors and traders (and the needs of those servicing the sector). The report discusses several innovative techniques and methods that deserve to be replicated, with support from Governments and the international community. These techniques and methods focus around the supply chain. They build on the strengths of the supply chain to make lending less risky for financiers, and they may involve the investment of financiers in a key component of the supply chain in order to better control the physical flows of the commodities that are being financed. Modern information and communication technology can further strengthen commodity financing practices, including by reducing the costs of delivering and servicing loans.

The report concludes with a discussion of the relevance of these innovative financing mechanisms for Governments, the private sector and international organizations, focusing on how, through their actions, they can help alleviate problems of access to finance in the commodity sector and in this way contribute significantly to the alleviation of poverty.

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Introduction

1. It has been consistently stressed in UNCTAD's work on commodities that, however favourable the market access conditions negotiated in the framework of the World Trade Organization (WTO) or bilateral or regional agreements, one still needs the capacity to use these market opportunities and ensure development gains from trade. Market access does not automatically or even easily confer market entry.

2. The report submitted to the eighth session of the Commission on Trade in Goods and Services, and Commodities described one set of market entry barriers related to distribution networks.¹ This report discusses another set of constraints related to investment and trade finance. The inability of a developing country seller to provide credit to a buyer can be a significant market entry barrier, especially if the buyer is in a developing country. There are of course many other market entry constraints, e.g. those linked to the competitiveness of prices offered, those imposed by phytosanitary regulations, or those that result from weaknesses in trade-related physical infrastructure. Lack of access to finance makes it very difficult to overcome these constraints. In many cases, one will need a comprehensive approach to be able to realize new market opportunities.

3. This first chapter discusses the situation with respect to finance-related obstacles to market entry in the commodities sector, with a focus on how poor access to investment and trade finance reduces commodity firms' competitiveness, hinders their entry into new markets (e.g. to benefit from the fast growth of South-South trade) and prevents them from creating domestic linkages that can sustain export-led growth and translate it into income gains. The second chapter describes innovative financing mechanisms that can overcome these obstacles; most of these financing mechanisms centre on using the strengths of supply chains rather than attempting to lend to individual producers, processors or traders. The concluding chapter gives an overview of the potential roles that Governments, the private sector and international organizations can play in promoting these mechanisms in order to enable developing country exporters to convert market access opportunities into effective market entry. The report builds on the debate of the Expert Meeting on Financing of Commodity-based Trade and Development,² but broadens it to include the energy and minerals sectors.

4. As is the case for other obstacles to commodity sector development, financing bottlenecks have a strong impact on poverty. At least two billion people in developing countries depend on commodities for their livelihood, and the poorer they are, the more constrained they are in their ability to obtain finance. The situation is even more difficult for women farmers, who are very important in this sector and who are often disadvantaged compared to men in their access to formal finance. Without finance to improve their marketing flexibility and investment capacity, it will be difficult for them to break the vicious cycle of poverty. As this paper argues, there are viable, sustainable financing approaches that have been shown to work in terms of enabling producers and others to benefit from market opportunities. If programmes to enhance the use of such approaches are supported by Governments, the private sector and the international community, they can contribute significantly to the likelihood of reaching the Millennium Development Goal of halving poverty by 2015 (from 1990 levels).

¹ "Access, market entry and competitiveness: Note by the UNCTAD secretariat" (TD/B/COM.1/65), 19 December 2003.

² "Financing commodity-based trade and development: innovative agriculture financing mechanisms" (TD/B/COM.1/EM.24/23), September 2004; "Report of the Expert Meeting on Financing of Commodity Based Trade and Development" (TD/B/COM.1/EM.24/4), December 2004.

Chapter I

THE IMPACT OF FINANCE-RELATED OBSTACLES TO MARKET ENTRY ON COMMODITY PRODUCERS, PROCESSORS AND TRADERS IN DEVELOPING COUNTRIES

A. Deferred payment terms as a market entry condition

5. In much of the commodities industry, large buyers or users of services insist on deferred payment terms; they would normally wish to pay only two or three months after the goods or services have been provided. For some buyers (in particular supermarkets), this “free” credit is critical for their bottom line. In other cases, buyers want time to confirm the quality of the goods and know that it could be very difficult to receive a refund from firms in countries with slow judicial systems.³

6. One can encounter this practice sometimes even in the relationship between farmers and traders (with farmers only paid for their products after the trader has sold them). However, it is prevalent for purchases by supermarkets and commodity processors, as well as for procurement of services by large mining and oil companies. It affects both opportunities in international trade (e.g. to directly supply a supermarket chain in developed countries or a grain miller in a neighbouring country) and local opportunities (e.g. to supply urban supermarkets or to provide services to locally active oil or mining companies).

7. Developing country producers and others active in the commodity sector rarely have sufficient capital to provide such deferred payment terms on their own account. They can only sell on credit if they have a way to refinance themselves. This can be very problematic. In many cases, financing costs are prohibitive; even the best interest rates available in the country are such that the transaction becomes loss-making (many developing countries have prime rates of more than 20 per cent). However, viable solutions have been introduced in some countries.

8. One efficient solution is invoice discounting. In a number of Latin American countries, supermarkets have made arrangements with financiers, or even opened their own finance subsidiaries, whereby suppliers can obtain immediate payment against invoices for deliveries to the supermarket.⁴ Local banks in a few African countries have arranged invoice-discounting programmes for local flower, fruit and vegetables exporters who sell to European supermarkets.⁵ In a number of developing countries, export-import banks have post-shipment financing schemes that enable exporters to discount export bills (invoices) directly after shipment of their products. In some other countries, official export credit agencies (ECAs) have insurance programmes that allow commercial banks to discount export bills, as the ECA covers most of the importer’s credit risk. However, it should be noted that only a minority of

³ See Leora Klapper, *The Role of “Reverse Factoring” in Supplier Financing of Small and Medium Sized Enterprises*, World Bank, 2004.

⁴ “For example, Heller Financial and Wal-Mart have a reverse factoring arrangement in Mexico. Wal-Mart offers its Mexican suppliers the option of having their accounts automatically factored by Heller and receiving immediate payment of 80 percent of the sale. (The additional 20 percent, less interest and service charges, is paid upon Heller’s receipt of Wal-Mart’s payment.) Although the sellers may not have any relationship with Heller, they can receive short-term financing because they are borrowing on Wal-Mart’s credit risk. By providing short-term financing, Wal-Mart is able to negotiate better terms with its suppliers and reduce its payment transaction costs (by paying one bill to Heller rather than to a large number of suppliers).” Marie H.R.Bakker, Leora Klapper and Gregory F.Udell, *Financing Small and Medium-size Enterprises with Factoring*, World Bank, 2004.

⁵ Detailed examples for this form of finance in horticulture, e.g. for exports from Zambia and Zimbabwe, can be found in UNCTAD, *Leveraging offshore financing to expand African non-traditional exports: the case of the horticultural sector*, UNCTAD/DITC/COM/2003/4, 2003.

developing countries have export credit or credit insurance programmes, and often if such programmes exist, they mostly target exports of manufactured goods, especially to developed country markets.

9. Post-shipment financing schemes like these deserve to be replicated and adapted to local conditions in other countries. This is a task primarily for developing country banks, although there can also be a significant role for export-import banks and government export credit insurance programmes. More frequent contacts among such institutions, e.g. through a formal network, could be a good way of strengthening financing capacity, especially for South-South trade.

B. Financing obstacles hinder the emergence of a competitive export structure

10. Much of the recent writing on the development of competitive export industries focuses on “development clusters”.⁶ The cluster approach (as used, for example, in most European countries and many US states) focuses on regional clusters of related industries rather than on single “national champions”. These related industries face common obstacles, and with the right set of policies can be set on a path of sustainable development. In contrast, a “stand-alone” export company or even export sector may have difficulty in creating competitiveness and maintaining it.⁷ The ability to build clusters rather than isolated operations is also crucial in creating value from natural resources for the national economy. For example, in sectors such as energy and mining which attract considerable foreign investment, unless Governments can create the necessary skill and supplier bases, their countries will not be able to move up the value chain and develop other sectors.

11. Financing is an important element for enabling companies in a cluster to upgrade their processes and reap the benefits of belonging to the cluster. Such clusters include both exporters and “indirect exporters” (those who make the export possible by providing goods and services to the exporter). There is the need for the cluster to have a critical mass to attract suppliers and create the dynamism in the supply chain that will make it sustainable in the long term. Whereas direct exporters, with some luck, may have access to short- and medium-term finance, “indirect exporters” are often cut off from international, affordable finance and are, moreover, generally excluded from government credit or credit insurance schemes. This can be a major bottleneck in the formation of a viable cluster.

12. The viability and possibility of growth of a cluster depend not only on it reaching a critical mass, but also on its access to good physical infrastructure. Poor infrastructure increases costs (for transport, energy, etc.) and leads to poor performance of suppliers (e.g. late delivery of crucial inputs, delays in

⁶ The standard text is Michael F. Porter, *On Competition*, Harvard Business School Press, 1998.

⁷ Research on the essential conditions for successful horticultural exports confirms the importance of sound development clusters. For example, Ronaldt Thoen, Steven Jaffee, Catherine Dolan, and Fatoumata Ba, *Equatorial Rose: The Kenyan - European Cut Flower Supply Chain*, World Bank, 1999, lists the following conditions:

- *non-interference by government* in the commercial dimensions of the business;
- achievement of sub-regional/cross-border *economies of clustering*, providing a critical mass of activity for technical learning, market information flows, the development/spread of trained manpower, equipment supply and advisory services, and logistics cooperation;
- effective *international technical and marketing strategic partnerships* which have assisted in technology transfer, logistics, market penetration, and creation of a market identity;
- effective coordination of *internal and international logistics* at the industry level, involving cooperation amongst firms and a coordinating role by associations and the freight forwarding industry;
- effective development and management of *irrigation* facilities; and
- successful *complementary industries* which enhance product demand (local catering industry), increase in-bound freight/flights (tourist industry), provide investments resources (other successful cash crops), and/or enable learning in fresh produce packing, storage, and marketing (upscale wholesale/retail operations).

delivery to foreign buyers, or quality deterioration). Processors may not have the funds to invest in proper equipment, leading to an inability to meet market entry requirements (e.g. phytosanitary regulations) and to unnecessarily high processing costs (with developing countries having to reduce import barriers to meet WTO requirements, this may become a major cause of job losses in the years to come). Low investment in warehouse facilities often results in high post-harvest losses.

13. Much can be done to remedy a situation where sectors that in principle could be at the core of a large, developing cluster remain an enclave. For example, in the oil sector, many Governments recognize that small and medium-size enterprises (SMEs) play a crucial role in accelerating the growth of the sector. In their absence, oil and gas companies will act as enclaves in the economy at large, with few backward and forward linkages with the rest of the economy, an unnecessarily high loss of hard currency to foreign service providers, and in all likelihood a lack of pressures to keep the industry efficient. The same applies in the mining sector. Many Governments have therefore adopted measures to enhance local content to stimulate the emergence of SMEs.⁸ But local entrepreneurs face a number of obstacles, including lack of access to advanced technology, weak managerial skills, lack of information on export opportunities, lack of contacts with oil majors, and not much of a track record in the field. Moreover, local entrepreneurs are in need of external financing because in general the oil majors with whom they sign contracts are 60 to 180 days late in paying. Unfortunately, with interest rates of often more than 20 per cent, they tend to face financing conditions that undermine their competitiveness.

14. For international banks, it is difficult to finance local enterprises; even if an entrepreneur has a service contract with an agricultural exporter or an oil major, how do they judge whether the company will be able to provide the services that will generate earnings, and how do they then capture such earnings? However, if local banks become involved, there are innovative possibilities to enable local companies to invest in the facilities and manpower needed to provide goods and services to an exporter – basically, through selling the capacity to provide such services forward in order to get cash now, which makes it possible to make the needed investments.⁹

15. More should be done to train local bankers in innovative techniques to finance commodity sector SMEs (both exporters and “indirect exporters”), including receivables discounting, reserve-based lending and structured finance. In this way, even traditional enclave sectors can be integrated into the national economy. For agricultural export sectors, it will help to create not just more competitive production, but also the flexibility to respond proactively to changing market requirements and opportunities.

C. Financing obstacles to South-South trade

16. Over the past decade, South-South trade has grown at 10 per cent a year, twice as fast as total world trade. China and India saw an annual 14 per cent growth of their imports from developing countries. South-South trade now accounts for 43 per cent of developing country exports and 11 per cent of world trade. Commodities (including semi-processed industrial inputs such as steel and chemicals) account for almost half of South-South trade. South-South trade in commodities has increased faster than South-North trade for almost all commodity groups and all regions. It is also significant that South-South FDI,

⁸ In many countries, there is still much room for improvement, though. For example, state oil companies in many countries control all oil fields, rather than passing their marginal fields on to the private sector. Experience has shown that not only can local private SMEs be more efficient than large companies in exploiting marginal fields, but also that the experience they thus gain can turn the SMEs into regional and international players.

⁹ For example, in Nigeria several facilities giving access to affordable hard-currency finance have been created to enhance the participation of local SMEs in the oil sector. Among others, in mid-2001 IFC decided to finance one third of a US\$ 30 million facility for hard-currency-denominated medium-term loans, for onlending by a local bank to SMEs that had contracts with Shell (the local bank and Shell provided the remainder of the facility).

particularly Asian FDI into other regions, is on the increase and is stimulated by the rise of some Asian companies, particularly in hydrocarbons, metals and textiles, to the ranks of world producers.

17. This fast growth would seem to indicate that South-South trade does not meet many obstacles, including in financing. But in fact financing obstacles do exist, leading to an unnecessary increase in costs (e.g. financing costs are high because of high interest rates in both the exporter's and the importer's country), loss of export margins (e.g. when, as is commonly the case, Western traders have to interpose themselves between buyer and seller to finance the transaction flow) and diversion of trade (e.g. a Southern African maize mill imports from a Western country rather than from a neighbouring country, because the neighbouring country's exporter is unable to sell on credit).

18. The importance of finance for enhancing South-South trade is well-recognized by developing country Governments,¹⁰ and some are trying to improve the situation. For example, recent years have seen a growing number of agreements among developing countries' export-import banks (for example, bilateral letter of credit confirmation facilities, under which the exporter's export-import bank will confirm a letter of credit issued by the importer's bank). Unfortunately, credit ceilings can be quite low compared to actual needs. UNCTAD hopes to stimulate further, more wide-ranging agreements by facilitating the creation of a Network of Export-Import Banks and Development Finance Institutions.

19. Developing country Governments have also facilitated South-South trade financing by creating countertrade structures. For example, Malaysia has enabled its exporters to sell palm oil on credit to a number of countries, with payments made through the export of other commodities by these importing countries. China has provided a large credit line to Angolan importers, to be reimbursed through oil exports. There is scope for more such bilateral payment agreements and other countertrade schemes.

20. Nevertheless, the private sector will have to carry a significant part of the burden of financing South-South trade. Developing country banks have to sign more credit lines with other developing country banks, rather than (as they do now) just concentrating on opening correspondent banking relationships with Western banks. They also need to learn how to apply structured finance mechanisms to South-South trade, for example how to use collateral management to enable direct rice sales from a Vietnamese exporter to a West-African exporter, or how to discount the invoices of a South African orange exporter selling to a Chinese supermarket chain.

D. Obstacles to moving into higher-value products

21. There is little room for amateurism in today's international markets. Buyers have become exigent and show no tolerance towards sellers who do not meet industry standards, the agreed delivery date or expectancies in terms of contract services (such as a prompt reply to buyers' concerns).¹¹

22. Consumers, including in developing countries, are becoming more demanding in terms of quality standards, which have started to include requirements on the production and processing process, as well as packaging requirements. Furthermore, niche and gourmet markets are increasing in importance, as is the market for organic foods. Farmers have to make more of an effort to produce exactly what consumers require, with a production process that is acceptable to consumers and provides the products at the time they want them. Those who are unable to meet these requirements lose access to the more profitable and dynamic parts of the commodity sector, and are left to serve lower-value, stagnant markets. Processors

¹⁰ See, for example, the Group of 77 and China's *San Jose Declaration and Plan of Action on South-South Trade, Investment and Finance*, San José, Costa Rica, 13-15 January 1997, para. 16.

¹¹ See, for a discussion, UNCTAD, *The impact of changing supply-and-demand market structures on commodity prices and exports of major interest to developing countries*, TD/B/COM.1/EM.10/2, 14 May 1999.

may be unable to respond to the trend whereby consumer demand is increasingly directed towards branded products, which are perceived as meeting their quality requirements.¹²

23. This growing importance of consumers (buyers) is not unique to agriculture. In metals trade as well, buyers have become choosy about contracts. Annual contracts with regular shipments, based on London Metal Exchange prices, used to be satisfactory. But for a decade now, buyers have been showing diversified preferences between annual, biannual or quarterly contracts, between regular shipments and shipments on request, and between several ways of paying, including countertrade. More demanding requirements as regards the timeliness of deliveries have favoured the establishment of closer direct contacts between producers and consumers.

24. It is difficult for producers, processors and exporters in developing countries to meet all these market exigencies. They do not have the infrastructure required, lack support services in such areas as export logistics and market information, often face cumbersome bureaucracies, and may lack access to the finance needed to find ways around the obstacles that they face. Nevertheless, as is discussed in the next chapter, innovative financial instruments can enable the private sector to finance the infrastructure necessary to make export operations feasible.

¹² Often, they even lose out in their local markets to established Western brand names. In developing countries and countries with economies in transition, in order not to lose brand name benefits to established Western companies, companies should create the conditions for local brand names to develop.

Chapter II

INNOVATIVE AND SUSTAINABLE FINANCING MECHANISMS TO ADDRESS COMMODITY SECTOR NEEDS

25. From the 1950s onward, Governments and donors tried to improve farmers' access to credit through administrative means, by establishing special rural credit institutions, allocating credit that was often subsidized or instructing banks to lend part of their credit portfolio to agriculture. For a few decades, until the early 1990s, government intervention in rural credit markets was highly prominent and encouraged by major donor agencies. In many cases, subsidized agricultural credit programmes were established to provide farmers with low-cost loans. These programmes placed a tremendous financial burden on Governments and hampered the development of rural credit markets.¹³

26. Few institutions emerged successfully from (or even survived) these interventionist experiences. Commercial banking was lacking, and when it was available it was targeted only at a small number of bigger farmers, leaving the poor far behind expectations. Repayment rates turned out to be abysmally low – except when tied directly to outgrower schemes and marketing boards – and became an eternal drain on government and donor resources. In the process, banks, farmers and agricultural credit were seriously and permanently discredited.¹⁴

27. This created a backlash. In 1998, the Food and Agricultural Organization stated that “the number of donor-supported agricultural credit programmes is in decline and there is little evidence, in many countries, that governments or commercial financial intermediaries are compensating for the reduction in supply of loanable funds to agricultural production, processing and marketing.”¹⁵ Agricultural financing programmes that remained were often commercially unviable but survived through subsidies. This discouraged private sector development of financing schemes, since Governments already funded the best clients and farmers had become accustomed to debt relief. There is now widespread scepticism about the viability of agricultural finance in developing countries. During the 1990s, Governments and donor agencies shifted their attention to micro-finance institutions, which generally did not engage in agricultural finance. “There is growing consensus amongst donors and practitioners that micro finance ... is unable to respond to many of the financing requirements and opportunities related to agriculture, and particularly to those requiring larger amounts and longer maturities.”¹⁶ As noted by one observer, “Once it was savings, now it is agricultural credit that is the forgotten half of rural finance. There lies an enormous underutilized potential!”¹⁷

28. However, experiences with innovative financing mechanisms have shown that commodity financing can be viable – not just for farmers and agricultural processors (and agricultural service providers) but also for small and medium-size enterprises active in the energy and minerals sectors. This chapter discusses some of these mechanisms.

¹³ See J. Yaron, M. P. Benjamin and G.L. Piprek, *Rural Finance: Issues, Design and Best Practice*, World Bank ESSD Studies & Monograph Series 14, Washington D.C., 2001.

¹⁴ H.D. Seibel, *Commodity finance: a commercial proposition? Micro- and meso-finance for agricultural commodity production, processing and trade*, International Workshop on Finance for Small-Scale Commodity Processing: From Micro to Meso Finance, Common Fund for Commodities, Khartoum, 9-11 November 2003

¹⁵ FAO & GTZ, *Agricultural Finance Revisited: Why*, June 1998.

¹⁶ F. Höllinger, *Financing term investments in agriculture: A review of international experiences*, Conference on Paving the Way Forward for Rural Finance, USAID, Washington, 2004.

¹⁷ H.D. Seibel, *op.cit.*

A. Building on the strengths of the supply chain

29. Supply chains have inherent strengths. The various players in the chain are tied together, and strong mutual dependencies normally create incentives for everyone in the chain to meet contractual obligations and to put longer-term considerations ahead of the potential for short-term gains. Even if part or all of the supply chain, from producer to consumer, is in a relatively risky environment (from a lender's perspective), these inherent strengths can make affordable finance feasible.

30. Lenders use the strengths of the supply chain to reduce the risk of their loans. By applying appropriate financing mechanisms, lenders can change their risk from that of a credit risk to a performance risk and shift some of the remaining risk to third parties. The risk of a farmer or processor being unwilling to pay off a loan is much higher than that of the farmer being unable to produce the expected volume of commodities, or of the processor stopping his processing activities. Borrowers benefit not only through higher lending on better terms, but also by obtaining loans that reflect the cash flow pattern of their producing, processing or trading activities.

31. When taking the approach of lending towards a supply chain (rather than lending to one of the individual players in that chain), lenders should primarily consider three issues:

- ❑ What are the strongest elements in the chain? These are often appropriate points to take physical control over collateral, or to use as the source of reimbursement. These would normally be warehouses, processors and offtakers.
- ❑ What are the relations between the various actors in the chain? The stronger the relations, the less likely a deliberate default becomes. The exact relations between the various actors will to a large extent determine the mechanics of the financing.
- ❑ What are the weakest links in the chain? In many cases, the weakest links will be related to risks caused by the environment. For example, poor weather may damage a crop or hinder its proper evacuation to the market. Government agencies may intervene, directly or indirectly (they may decide to change the "rules of the game" of the market place, for example by suddenly allowing the import of the crops at low tariff rates, displacing the local production financed by the lenders). An infrastructure breakdown (e.g. electricity cuts) may lead to delays or shortfalls in production. Lenders will normally try to include specific risk mitigants against each of these risks, for example weather insurance, due diligence in estimating the likelihood that Governments will arbitrarily intervene in the market, or even (as discussed in the next section) inclusion of the upgrading of key infrastructure in the financing package.

32. One simple form of supply chain finance is warehouse receipt finance. This can be either in its traditional form, or through repurchase agreements (repos). In traditional warehouse receipt finance, the bank takes control over goods (agricultural products, minerals or fuels) in a warehouse or tank facility, and if the borrower defaults, the bank can seize the goods and sell them. This has been extensively discussed in earlier UNCTAD reports.¹⁸ In a repo, the bank will not take a pledge over the goods being stored or shipped, but will rather buy the goods and simultaneously sign a contract for re-sale in (x) weeks

¹⁸ For example, UNCTAD, *Collateralized commodity financing with special reference to the use of warehouse receipts*, UNCTAD/COM/84, 1996. For a good case study on a country (the Philippines) with a variety of warehouse receipt finance schemes, all with their own problems, see R. Montemayor, *The role of financial instruments for commodity trade in poverty reduction: The Philippine experience*, Regional workshop on commodity export diversification and poverty reduction in South and South-East Asia, UNCTAD/ES CAP, Bangkok, April 2001.

time at a price that reflects the cost of funds from the original time of sale to the re-sale. Repos are used not just for goods in storage, but also for goods in transport. They are recent, and are used only by a handful of lenders such as Rabobank, ABN/Amro and the trading company Louis Dreyfus. Repo finance for commodities has spread to over a dozen countries in recent years. However, the legal and regulatory environment with respect to the rights of a financier to realize pledges in case of borrower default is still difficult in many developing countries.

33. Banks may also wish to take collateral over goods as they move through the supply chain, rather than just at one point or as they move from one stage to the next. For example, they can start financing the goods once they enter an upcountry warehouse and continue financing as the goods are being transported and processed, enter an export warehouse, are exported and transferred to a vessel, are transported to the importing country and are then stored again. In doing so, they normally work through specialized collateral managers, agents who take responsibility for controlling commodity stocks and flows.

34. Instead of obtaining better security by controlling goods, banks can structure their financing around payments from offtakers, such as processors, traders or end users (especially industrial users and supermarkets) and/or around the supply of inputs and equipment. This works when there are regular contacts between the beneficiary of the financing and the offtakers and/or the borrower's suppliers. The stronger the contacts, the easier the finance. Financing models include the following:

- The onlending practices traditionally found in many countries (large traders or processors give advances to smaller traders; these give advances to farmers, who are supposed to sell to them);
- The leasing of equipment, e.g. tractors, dump trucks or floating oil production and processing platforms;
- Credits reimbursed through regular sales through official channels (e.g. the Dutch flower auction, sales agents at the Rungis vegetables market in France, or supermarkets¹⁹);
- More complex integrated "processor to producer" or "producer to consumer" agricultural financing schemes. Typical "processor to producer" financing schemes use a combination of collateral management and the processor as "strong point" in the production cycle. Processors are provided (possibly in kind) with the inputs, including seeds, that producers need; they then provide these inputs on credit to farmers, who would normally grow the product under a contract farming arrangement with the processor and benefit from technical advice arranged by the processor; the processor deducts the costs of inputs from the payment to farmers the moment that they deliver their crop; and the lender is reimbursed directly by the processor's offtaker. Typical "producer to consumer" financing schemes include a variety of actions that ensure that producers are able to meet consumers' requirements; some examples for India are described in box 1 below.

¹⁹ For details on this form of finance in horticulture, see UNCTAD/DITC/COM/2003/4, 2003.

Box 1
Integrated agricultural supply chain finance in India

Some Governments have recognized the importance of the supply chain as a vehicle for export promotion. This is, for example, the case in India, where there is a large number of initiatives to modernize agriculture using the supply chain and clustering concept. Among others, the Export-Import Bank is promoting agri-export zones, following a cluster approach. Geographical regions that grow high-potential crops (such as durum wheat, mangoes, medicinal plants and flowers) are identified, and then an end-to-end approach is taken, integrating the whole chain from production to consumption.

Several commercial banks have been ready partners in contract farming schemes set up by agricultural equipment or input suppliers to enhance their sales, or by offtakers to ensure a proper quality of the commodities that they can buy. Some have decided that, rather than wait for industrial firms to set up such schemes, they can take the initiative and bring suppliers and offtakers into them. For example, Rabo India Finance Pvt Ltd. is establishing agri-service centres in rural areas in cooperation with a number of agro-input and farm services companies. The services provided would be much like those in contract farming, but with additional flexibility and a wider range of products such as inventory finance. In addition to storing products, each centre would rent out farm machinery, retail agricultural inputs, provide information to farmers, arrange credit, sell other services and provide a forum for farmers to sell.

ICICI Bank has a series of end-to-end financing schemes in agriculture and livestock. For example, in one scheme, it is financing the cotton chain from farmer to textile mill, with components to improve cotton quality and insurance to cover certain risks. In another scheme, it provides credit to farmers who deposit certain commodities (chili, wheat, cumin, aniseed, cotton, oilseeds) in a warehouse, with a back-up offtake guarantee provided by commodity processors (the farmers may sell the products themselves, in which case the buyer pays directly to the Bank; or if the farmer does not sell, the Bank can deliver to the processor and remit the remainder after loan reimbursement to the farmer). Several NGOs have entered the fray. For example, the Grassroots Trading Network has a pilot project with a group of farmers and a large agribusiness company, ITC Ltd., for the procurement of sesame seeds of a quality suitable for exports, using what it calls a "consolidator model". In yet another scheme, a micro-finance institution, BASIX, builds weather risk management into the supply chain financing.

Most of these initiatives are still in the pilot stage, and if successful, could be widely replicated both in India and in other countries.

Source: T.C. Venkat Subramanian, "The role of trade: South-South and global", IPC Seminar, New Delhi, 13 November 2003. See also the Reserve Bank of India notification which spells out how banks can use the structures created through agri-export zones to provide pre-export finance: <http://sezindia.nic.in/rbi26.asp>.

Box 2

Financing “indirect exporters”: The Zimbabwean experience

In Zimbabwe’s floricultural sector, the costs of bringing flowers to the international market are higher than the actual production costs. Furthermore, a significant share of production costs consists of the costs of inputs and packaging. Given that producers are price-takers, they will receive lower prices if these services are not provided efficiently and at reasonable cost.

Traditionally, many banks believe that only those generating hard currency revenue can borrow in hard currency. Local currency earners are relegated to much more expensive local currency finance. However, this is not necessary. Service providers to the export sector can be considered as “indirect exporters”, and with innovative financing schemes can be made to benefit from hard currency finance.

Such schemes would normally make use of special purpose vehicles (SPVs)*, which could be owned by growers, marketing agents, or others. The SPV would be under contract with the marketing agent to provide certain goods (e.g. inputs) or services (e.g. freight), and the marketing agent can in turn assign part of the expected export proceeds to the payment (offshore) of these services. Banks, in turn, will be willing to lend to the SPV against the surety of these future export proceeds; the tenor will depend on their trust in the capacity of the exporters to continue exporting.

* A special purpose vehicle (SPV) is a borrowing vehicle established for the purpose of collecting monies from investors and channelling them to a borrower for investment purposes.

Source: Chris Goromonzi, “Financing indirect exporters in the supply chain: the case of export agriculture”, presentation at the pre-event for the Expert Meeting on Financing Commodity Based Trade and Development, UNCTAD, 15 November 2004.

35. Financing along the supply chain also makes it possible for banks to finance suppliers of goods and services. These suppliers will, in effect, receive part of the revenue stream of the producers, processors or exporters for whom they are working. If the revenue stream is secured through the lending structure put into place by the bank, then the supplier’s credit risk is also mitigated. Box 2 discusses further this. A similar logic can even be applied to the infrastructure that producers, processors and exporters need. Box 3 gives an example.

Box 3
Financing a dam in Zambia on the back of expected export flows

Contango is a large-scale vegetable production, processing and export operation in Zambia. It exports to retailers in the United Kingdom, who have been requesting annual volume increases of 20 per cent. This growth has to come from outgrowers, small family farmers who produce under contract with Contango.

Zambia is prone to drought, and without irrigation outgrowers would not be able to produce throughout the year, may see some of their crops fail, or may be unable to produce the quality required for exports. Contango needed about US\$ 2 million to construct dams in order to provide water as well as electricity to outgrowers. Funds of the required longer-term tenor were not available from banks. Instead, Contango used financial engineering to attract mutual and pension funds. It created a special purpose vehicle (SPV) which took ownership of the dams and would receive monthly payments for electricity and water charges from each of the more than 2,000 outgrowers involved in the programme. These payments are to be deducted from each outgrower's share of export receipts and paid directly by the foreign bank handling these receipts into the SPV's offshore account.

Source: Edwin Moyo, "Infrastructure as a trade finance instrument", presentation at the pre-event for the Expert Meeting on Financing Commodity Based Trade and Development, UNCTAD, 15 November 2004.

B. Creating and strengthening supply chain institutions as a tool for leveraging financing opportunities

36. Rather than relying on others to get organized and to reach the market entry requirements of buyers, banks can take the initiative and set up critical supply chain institutions themselves. That is to say, directly or through an investment fund that they control,²⁰ they create a new supply chain entity, or they take over an existing entity and put their own management in place. Normally, they would anticipate that this would be a temporary intervention, and producers or others would be expected to take over the entity in due course.

37. This mechanism has been used, for example, in Zimbabwe to allow the export of fruits, vegetables and flowers to Europe. Production capacity existed, but the existing exporters did not have the technical wherewithal to reliably meet the requirements of European buyers. The bank thus put a new marketing company in place, with professional management, which made possible exports that met European market entry requirements and thus made it possible for the bank to start financing producers. In Latin America and some other countries, banks have invested in warehouses and testing and grading laboratories. The mechanism can also be used to finance a processing plant. Box 4 describes the example of the creation of a rice mill in the Philippines by a bank, but similar structures can easily be adapted to other crops where a high-quality processing plant is necessary to meet the demands of lucrative markets.

²⁰ The indirect manner is often more practical. In many countries, banks are not allowed to take such equity positions directly. And in any case, the new Basel 2 Capital Adequacy Accord which is due to become operational in 2007 will discourage banks from taking the direct investment route.

C. Technology as a tool for linking farmers to marketing and financing networks

38. Information and communication technology (ICT) has by itself already improved market opportunities, as it has made it much easier for developing country producers, processors and exporters to identify potential new markets and explore market entry barriers and potential solutions. ICT can also facilitate access to finance. The possibilities are largest in the agricultural sector, where ICT can help reach large numbers of farmers at an affordable cost.

39. Farmers may not be able to buy the seeds, fertilizers, pesticides and other inputs they need to produce the high-quality products that offer the best market prospects. Integrated schemes like those discussed in the previous two sections can provide a solution. Technology can provide a way for such schemes to become less cumbersome and thus make it possible to deliver credit (as well as critical inputs) to farmers in time and at a reasonable cost.

40. In one example of a relatively simple scheme (which is nevertheless still one of the very few worldwide), an input supplier set up a specialized finance company, "Financiera Trisan", in Costa Rica in

Box 4

Banks as an equity partner in supply chain development: the Philippines example

In 1986, the Rural Bank of Panabo (RBP) introduced an approach which it called the "corporate concept". With a group of rice farmers, the bank set up a joint venture called Panabo Agro-Industrial Corporative (PAICOR). PAICOR is a rice mill and marketing business that provides farmers with all the services they need to produce paddy and process and market milled rice. RBP's key objective was to find a means by which small farmers could become owners of a mill, while avoiding the capital and management shortcomings of cooperatives. Through PAICOR, farmers are able to obtain production and investment loans, and repay them in kind by delivering paddy direct to the mill, which they co-own.

RBP drove the scheme by fully paying up its shares at PAICOR's establishment, which provided almost all the initial investment capital. The farmers paid less than 5 per cent of the shares upfront, and another 40 per cent over a four-year period through paddy deliveries. Through further paddy deliveries, they increased their shareholding to obtain a majority share in 1992, at which time the corporation was converted to a cooperative (this was planned from the start of the scheme in 1986). The new cooperative retained the professional management put in place by RBP and thus remained as a viable financing mechanism for RBP. The scheme was replicated in 2000 in another rice growing area.

Source: Alex Valdez Buenaventura, "PAICOR – a cooperative of rice farmers organized by the rural bank of Panabo", presentation at the pre-event for the Expert Meeting on Financing Commodity Based Trade and Development, UNCTAD, 15 November 2004.

the early 1990s to issue credit cards to its clients and to its clients' customers. This provided a lower-cost alternative to its traditional supplier credit system. The scheme was profitable, since its relatively high delinquency rates were more than compensated by its high interest rates on negative balances.²¹

41. Similar practices can be introduced elsewhere, and opportunities exist for innovation. Credit cards can be used as smart cards for example, enabling a wider range of transactions such as guaranteeing forward

²¹ See M.D. Wenner and R. Quiros, "Agricultural Credit Card Innovation: The Case of Financiera Trisan", *Best Practices Series*, Inter-American Development Bank 2000.

sales, arranging price or weather risk management transactions or obtaining inventory finance.²² Box 5 gives some examples of the developments in this respect in India. Other benefits can be foreseen, since the very act of lending enables banks to develop credit records for individual farmers. After a few years, banks can rate farmers and base future lending decisions on their ratings, which would give well-performing farmers enhanced access to medium-term credit.

²² See UNCTAD, *Farmers and farmers' associations in developing countries and their use of modern financial instruments*, UNCTAD/ITCD/COM/35, 2002.

Box 5**Using technology as a tool for agricultural finance: the Indian experience**

Transaction costs for reaching individual farmers and then servicing individual loans are high. Group lending has been one response, but with rapid advances in information and communication technology, one can now also use the Internet and/or smart-card-based systems to aggregate demand for credit and automate loan disbursement and reimbursement. India, where several institutions have initiated major initiatives to use technology to overcome the urban-rural gap, has several pilot projects that are already showing the promise of this approach.

One initiative has been to install rural internet kiosks which provide a range of services, including banking. Such kiosks can be smart-card enabled, and they can be associated with low-cost automated teller machines (ATMs), allowing, for example, farmers to negotiate a credit with a bank (the smart card will convey the farmer's unique identity), use part of this credit to place an order with a fertilizer dealer, and withdraw the cash from the ATM, all this without having to visit a bank branch or signing any formal loan documentation. One scheme introduced by ICICI Bank uses an "electronic growers loan card", with farmers who register with the Tobacco Board receiving a loan limit against which they can draw inputs; after their tobacco has been auctioned by the Board, the loan reimbursement is automatically deducted from the sales proceeds.

Another scheme, initiated by the country's largest commodity exchange, the National Commodity & Derivatives Exchange, "de-materializes" warehouse receipts. Farmers and others can deposit certain commodities (as traded on the exchange) in accredited warehouses, and their deposit is then electronically registered. This is like an "electronic wallet", but with the commodity as its currency. Sale of the commodities, or its pledging as collateral to a bank, is very easy. A small farmer version of this has been developed by one of India's key technology institutes, IIT, which has designed a so-called "infothela". Basically, this is an Internet-enabled computer fixed to a bicycle rickshaw, which is also equipped with a diesel generator. The rickshaw is driven around a central location, up to a radius of some 30 kilometers. When it is inside a beam projected by an antenna in that central location, the infothela gives users Wi-Fi broadband access to the Internet. Farmers can use the infothela to check prices, order inputs, arrange for the sale of their products, and also access their de-materialized commodity balances, drawing cash against them or remotely giving instructions to the warehouse operator to sell them.

Possibilities for such integration of farmers into an efficient credit and input marketing scheme will be further enhanced with the migration of India's "Kisan Credit Cards" (KCCs) to a smart card. Under the KCC scheme, farmers in India are allocated a credit line, with credit risks insured through a government agency. The KCCs are traditionally simple passbooks, in which credit allocations and reimbursements are registered, but a number of banks have started pilot projects to convert KCCs into electronic purses or even smart cards.

Sources: Zarin Daruwala, "Agri lending – a different approach", Conference on Global Banking Paradigm Shift, Bangalore, 15 September 2004; website of Indian Institute of Technology, Kanpur, <http://www.iitk.ac.in/MLAsia/infothela.htm>.

Chapter III

CONCLUSION: POTENTIAL ROLES OF GOVERNMENTS, THE PRIVATE SECTOR AND INTERNATIONAL ORGANIZATIONS IN PROMOTING INNOVATIVE COMMODITY FINANCING MECHANISMS

42. Buyers in many markets, in developed countries as well as the formal sector in developing countries, impose high standards on their suppliers of goods and services. Suppliers need to reach these standards to gain market entry. In part, their ability to do so depends on their skills and knowledge, so better information on market standards (official phytosanitary requirements, the private standards of large buyers, market requirements on timeliness, proper ways for sellers to interact with buyers, etc.) and training can help. But more often, suppliers are faced with real constraints in their efforts to meet buyers' demands, because crucial infrastructure and services are missing from their environment, or because they can hard afford to upgrade their production facilities or procedures.

43. In some cases, suppliers can overcome these obstacles by grouping together. For example, as a group, exporters may have sufficient volumes and enough financial wherewithal to charter a regular flight to evacuate their product. Together, they may be able to invest in critical infrastructure, such as a cold storage facility at the airport or a testing laboratory that can deliver the quality assurances that buyers need. As a group, they may be able to convince a bank to provide refinancing facilities for the sales that they make on credit. But such collective action has its limits, both in scope (it can work only for common goods) and because even collectively, producers, processors and exporters may still have only inadequate means to invest.

44. Outside help may be available from Governments, aid donors and in some cases offtakers, who may be willing to finance the construction of critical infrastructure. More frequently, however, producers, processors and exporters are left to cater for themselves. If they are in principle able to produce and sell a commodity (raw or processed) at a competitive price, but in practice they are not able to meet market entry conditions because of their own inadequate production or processing facilities, poor infrastructure or absence of critical services, then the type of innovative financing mechanisms described in this report can help.

45. When a financier looks at a loan application in isolation and the potential borrower does not meet market entry conditions, the loan would normally be rejected (unless the borrower can put up sufficient collateral). But if the financier adopts an end-to-end approach, looking at the supply chain from producer to end-user, then a comprehensive financing package may well be feasible. The financier would then not just address the producer's or processor's direct financial needs, but would also finance several other actions to de-bottleneck the supply chain, all the time secured by the expected proceeds from final offtakers. The report has discussed various ways of doing this.

46. Responsibility for providing this form of finance would at first sight seem to lie with banks. After all, these should be profitable interventions, and it should not be necessary for anyone to push banks in this direction or to subsidize their operations. However, there is a public interest in financiers learning how to do this as fast as possible. Moreover, the policy, legal and regulatory framework should be such that financiers have an interest in doing so, and are not prevented from applying possible new financing mechanisms. Furthermore, weaknesses in infrastructure and the provision of services may be so large that no group of private entrepreneurs can expect to overcome them, and public investment (particularly in infrastructure) is required.

47. There are then three primary areas for public action. First, Governments should ensure an appropriate policy, legal and regulatory framework, and international organizations may wish to assist them in this regard. Second, various organizations can assist in the development of knowledge and capacity among financiers (and other critical service providers in commodity finance, such as warehouse operators, collateral managers and grading agencies) in respect of innovative financial mechanisms, so that they become empowered to lend to the commodity sector in a comprehensive manner. Third, Governments may consider investing in trade-related infrastructure such as port and airport facilities, warehouses, grading and testing facilities, etc.

48. International organizations, including aid donors, should fully support these efforts through investment support, loans and technical assistance grants. A case in point is BASIX, which borrowed funds (at zero interest rates) from the Canadian International Development Agency and the Swiss Agency for Development for on-lending to rural poor areas in India. Donors may wish to focus extra attention on reaching groups that are to a large extent excluded from the formal credit sector and who thus have the least opportunities to overcome financing obstacles by themselves (e.g. women farmers), as well as on countries where the gaps in trade-related infrastructure, new technologies and services are the largest (in particular, least developed countries). This was the case of NABARD bank in India, which succeeded in testing new technologies thanks to the support of donors; GTZ assistance was critical for the implementation of participatory approaches in watershed development, Swiss Development Cooperation assisted in the development of self-help groups, and the EC programme for poor villages involved testing innovative approaches for poverty alleviation. All these were based on pilot projects to introduce new technologies and technical assistance services to ensure successful results.

49. Governments could make certain that actions in the area of commodity financing form part of their strategic development plans, including their poverty reduction strategies. These actions should be put into the appropriate wider framework of macroeconomic policies (in particular, the foreign currency that can be generated when an appropriate commodity financing system is in place), of food security and poverty reduction, and of the country's trade capacity and competitiveness. Without such specific inclusion in the country's strategic development plan and the ownership and feeling of priority that it conveys, the donor community is unlikely to give financial support to projects and programmes in this sector. And such donor support is often essential, including for the testing of new approaches and for educational and extension-type activities.

50. Governments could create a policy, legal and regulatory framework that enables efficient commodity finance.²³ If Governments want to improve finance along the supply chain, they should particularly consider the legal environment with respect to ownership rights, bankruptcy and the transferability of warehouse receipts, contracts and export licenses.²⁴ Where useful, they could introduce new regulations, such as a warehouse receipt act, to provide a clear legal and regulatory system. Donor agencies should support governmental efforts.

51. With respect to awareness-raising and training needs, local banks generally have little knowledge of innovative financing (this should be seen in the light of the fact that experiences in many cases are quite recent and thus little known outside the countries where they have been piloted). Local banks could become a major driving force for expanding lending to agriculture and other commodity sectors. Innovative financing mechanisms could improve their competitiveness and increase profitability by serving new segments and markets or by generating additional income in their business with existing

²³ See FAO/GTZ, *Agricultural finance: getting the policies right*, FAO 1998.

²⁴ See a detailed checklist in N. Budd, *Legal and regulatory aspects of financing commodity exporters and the provision of bank hedging line credit in developing countries*, UNCTAD/COM/56, 1995.

clients.²⁵ Their understanding of the commodity sector and innovative finance tools needs to be enhanced. Apart from training and education, it would also be useful if international organizations could support pilot projects.

52. International banks and commodity companies can also support such efforts. These days, when large Western companies become involved in developing countries, they normally build a corporate social responsibility (CSR) programme into their operations. The main drivers for this are the companies' own philosophy and policies (many, if not most of the Western world's major companies now define themselves as socially responsible corporate citizens), the desire to build up good relations with host communities, and the wish to avoid problems with western non-governmental organizations (NGOs). If they genuinely wish to make the strongest impact on local economies, it may well be best to make CSR an extension of their normal, day-to-day activities. "There is no inherent contradiction between improving the competitive context and making a serious commitment to bettering society. Indeed, the more closely a company's philanthropy is linked to its competitive context, the greater the company's commitment to society will be. If systematically pursued in a way that maximizes the value created, context-focused philanthropy can offer companies a new set of competitive tools that well justifies the investment of resources. At the same time, it can unlock a vastly more powerful way to make the world a better place."²⁶ For example, commodity firms, as well as supermarket chains and other large off-takers, can assist local producers and others in financing the necessary prerequisites to meet market requirements, and international banks can work with local ones to coach them in the use of innovative commodity financing mechanisms.

53. There is also an opportunity to strengthen trade finance support entities. International organizations that finance commodity sector infrastructure in developing countries, such as the International Finance Corporation, the European Investment Bank or the Commonwealth Development Corporation, might wish to expand their financing in "chain integrators" such as warehousing companies, collateral managers, marketing companies, SPVs which service specific sectors/companies and commodity exchanges. For example, in order to make collateral management services more accessible to a larger group of players, international financing institutions and local banks could invest in such companies, tying up with an experienced collateral manager for the necessary technical skills.²⁷

54. In this respect, "donors need to be creative in finding ways to engage with private sector actors. Private companies have shown flexibility in including poorer farmers in credit-based transactions, yet donors may face restrictions on directly supporting companies, due in part to the issue of benefits from public money potentially being captured by individual companies through improved profits and market position."²⁸

55. Market liberalization and the reduction of tariff and non-tariff barriers opens up new opportunities to worldwide producers. It may be difficult for developing country suppliers, however, to meet the demands from suppliers. In many cases, meeting such demands requires investments in the supplier's operations and production process or in the infrastructure and/or services on which he relies. With finance scarce and expensive in most developing countries, this can prove an insurmountable obstacle. But if the

²⁵ J. Bucheneau, *Innovation Products and Adaptations for Rural Finance*, Frontier Finance International, http://www.basis.wisc.edu/rfc/documents/theme_products.pdf.

²⁶ Michael E. Porter and Mark R. Kramer, "The competitive advantage of corporate philanthropy", *Harvard Business Review*, December 2002.

²⁷ As one of the results of UNCTAD's work in India, such a company has now been set up in that country. It would be of great benefit if a similar company with a regional focus could be introduced in Africa.

²⁸ D. Pearce, *Buyer and supplier credit to farmers: do donors have a role to play?*, Paving the Way Forward for Rural Finance Conference, USAID, Washington 2004.

supplier is in principle able to supply commodities at a competitive price, then with innovative financing mechanisms one can upgrade the full supply chain. Obstacles of this nature are strongest for those largely excluded from the formal financing system (e.g. women) or countries with the weakest trade-related infrastructure and services sector (least developed countries). Keeping in mind the Millennium Development Goals, support from the international community for activities in this area would therefore seem appropriate.