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English only

United Nations Conference on Trade and Development

EXPERT MEETING ON FINANCING COMMODITY BASED TRADE AND DEVELOPMENT

WORKSHOP PRESENTATIONS

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SESSION 1



Changes in the global food system

Rabobank view on Food & Agribusiness

15 November 2004
Geneva

Cindy van Rijswick

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- 2 Rabobank: the global F&A bank
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- 4 Outlook

Rabobank: The global F&A bank



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Food & agribusiness: a global complex



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Food demand evolves



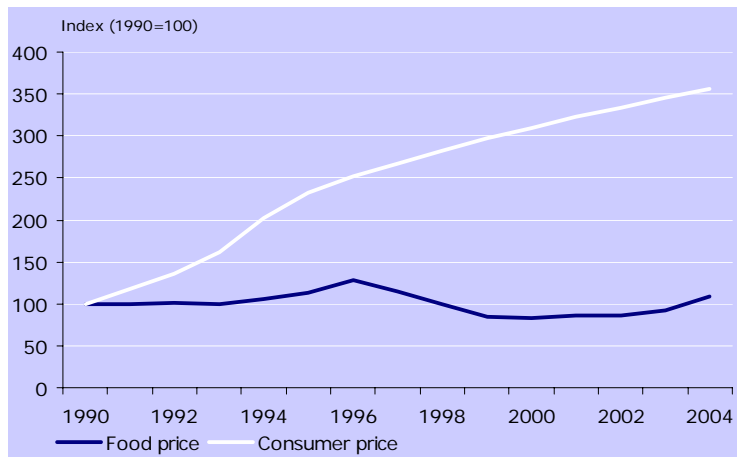
Income development, demography, culture, religion

Food perception



5

A wide choice of food is available for decreasing real prices



.....but what a crazy world: 800 million people still undernourished and at the same time even more people with serious overweight

Source: IMF, 2004.

6

...and power of global retail is growing



Top 10 largest food retailers

	Company	Country	Sales (USD billion)
1	Wal-Mart	US	112
2	Carrefour	France	62
3	Ahold	The Netherlands	53
4	Kroger	US	38
5	Tesco	United Kingdom	38
6	Aldi	Germany	34
7	Rewe	Germany	33
8	Metro Group	Germany	31
9	ITM	France	29
10	Schwarz Group (Lidl)	Germany	28

Source: M+M Planet Retail 2003.

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Food and agri industry is also scaling up



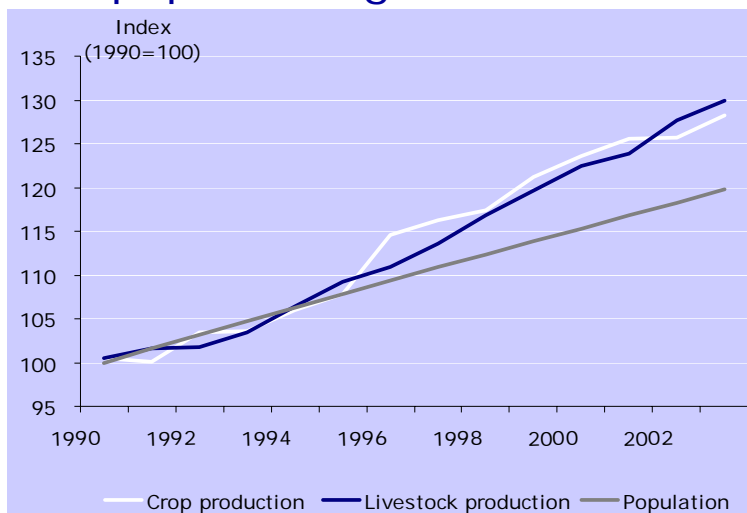
Top 15 largest food and agri companies

	Company	Country	F&A sales
1	Nestle	Switzerland	54.3
2	Cargill	US	53.9
3	Kraft Foods	US	31.0
4	ADM	US	30.7
5	Unilever	Netherlands/GB	27.2
6	PepsiCo	US	27.0
7	Tyson Foods	US	24.5
8	Bunge	US	22.3
9	Coca Cola	US	21.0
10	Con Agra	US	19.8
11	Diageo	US	15.4
12	Danone	GB	14.9
13	Kirin	Japan	12.1
14	Anheuser-Busch	US	11.7
15	Mars	US	11.2

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Source: Rabobank, 2004.

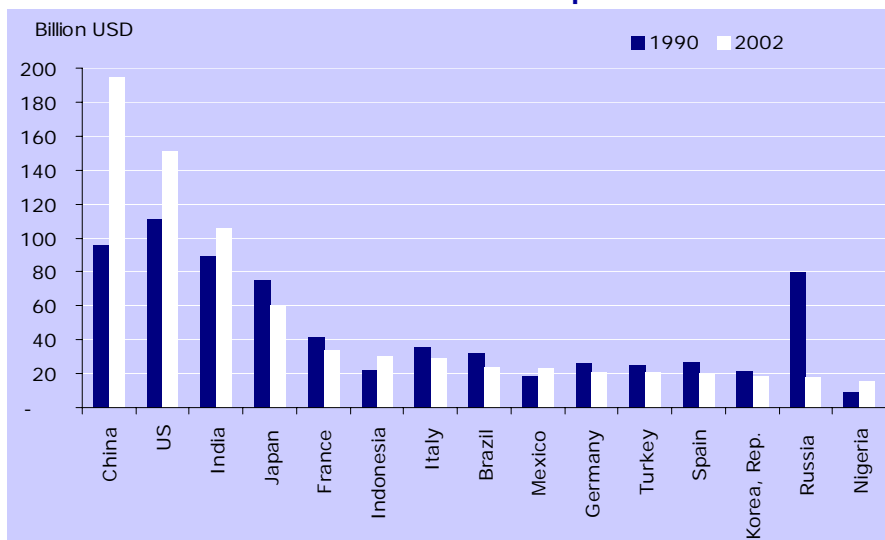
Agricultural production has kept up with population growth



Source: FAO, 2004.

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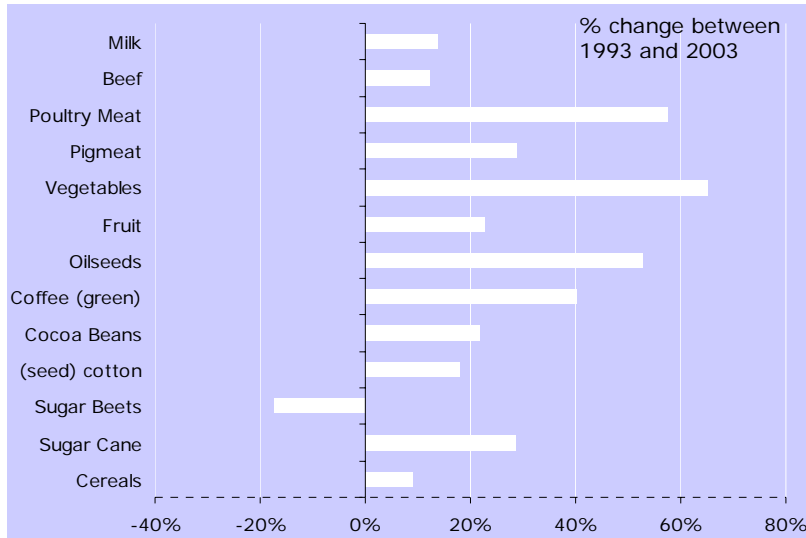
Cost advantages and growing domestic markets boost production



Source: World Bank, 2004.

10

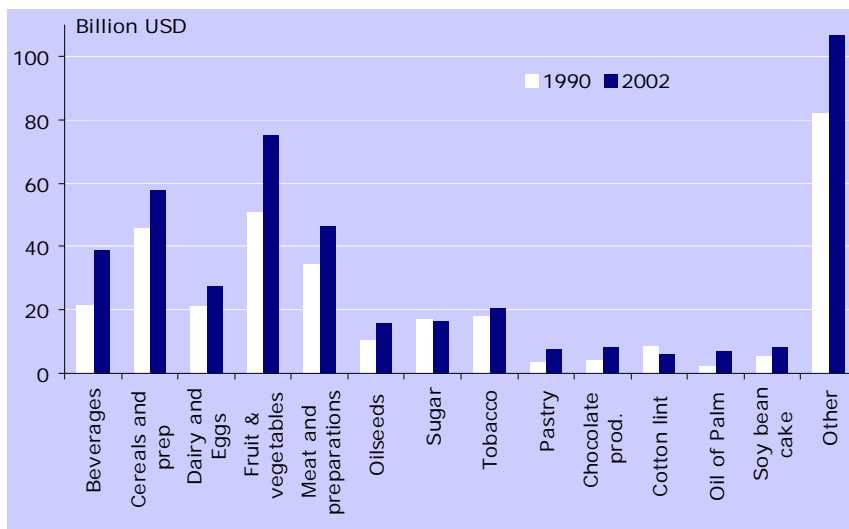
Horticulture, livestock and oilseed production are on their way up



Source: FAO, 2004.

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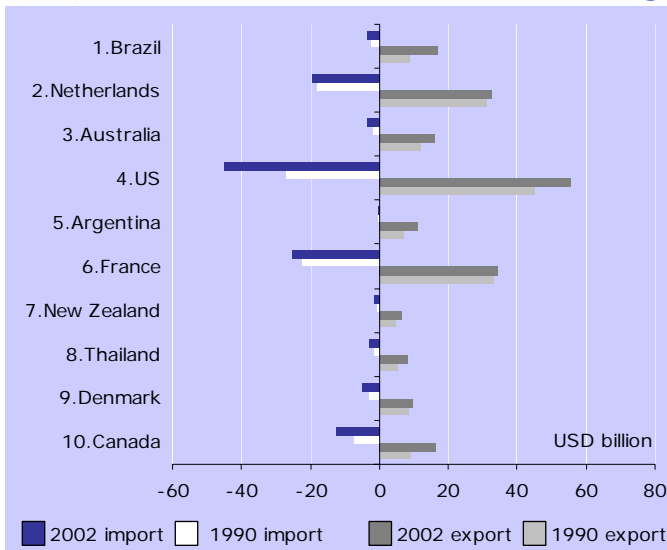
Developments in production are reflected in trade



Source: FAO, 2004.

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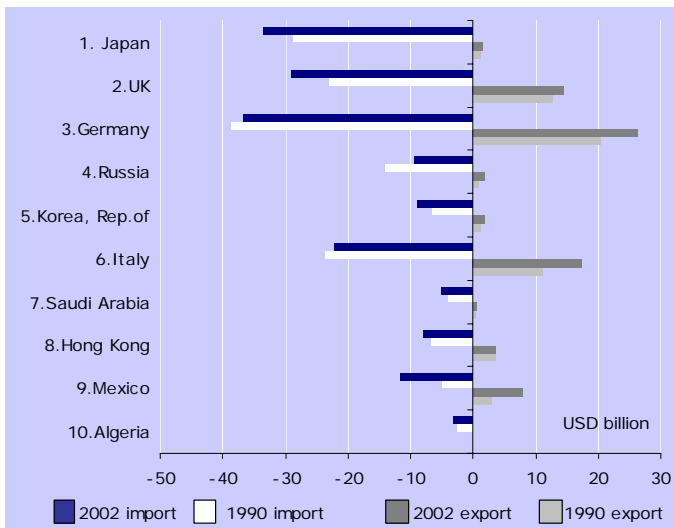
Top-10 countries regarding F&A trade surplus: Latin America wins ground



Source: calculated from FAO data, 2004.

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Top-10 countries with largest F&A trade deficit



.....are mainly large matured markets and/or countries with a lack of competitive resources or inputs for agricultural production

Source: calculated from FAO data, 2004.

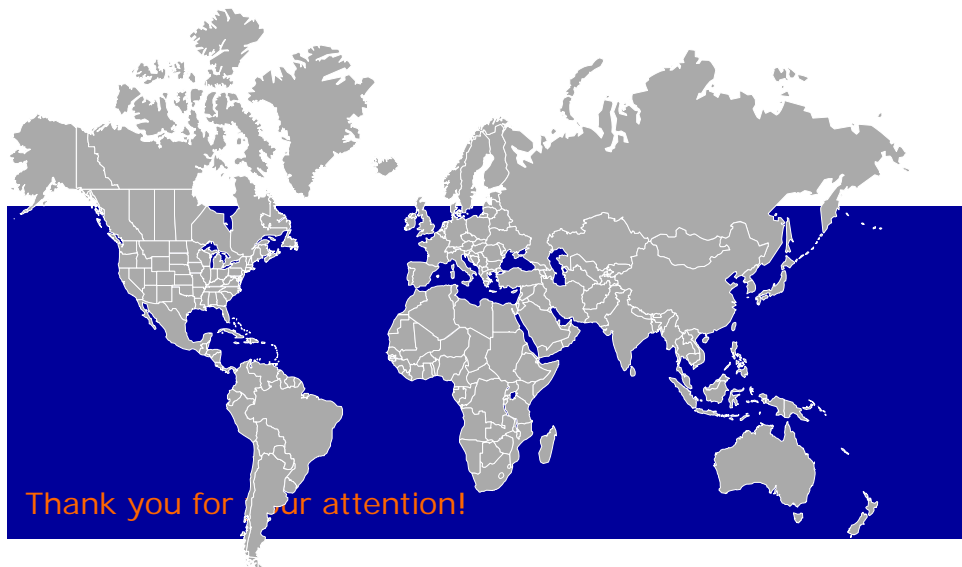
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Outlook



- Emergence of markets in Latin America, Asia, Eastern Europe
- ...also for research, production, processing and trade (China, India, Brazil)
- Emerging countries will benefit most from trade liberalisation
- ...but natural constraints (for example water availability) are key
- Companies have to focus on what they really excel in
- ...be flexible and cooperate with others when needed
- New forms of cooperation, further internationalisation, and growth of industry in emerging markets, create new opportunities for financing the global food and agri complex

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INFRASTRUCTURE

**AS A
TRADE FINANCE INSTRUMENT
PRESENTED TO UNCTAD
BY EDWIN MASIMBA MOYO.
GENEVA, NOVEMBER 15 – 18
NOVEMBER 2004**

Background

- It has been urged that structured trade finance is a short term instrument designed to meet the short term needs of exporters. Indeed recent years have seen many new innovative short term pre and post shipment instruments to finance the commodity sector in developing countries.
- Most of these financial instruments are proving to be much more successful than the approaches of the past.
- This has not only brought hope to developing countries and their governments, but confidence to some of the financial institutions that previously shunned financing traders or farmer's associations or co-operatives.
- But, although these financial instruments have brought hope, there still remains a lot of scepticism on whether these same instruments can be used to finance infrastructure such as dams and electricity that are so critical to the success of farming associations.

RISK AVERSE

- Most financial institutions view infrastructure as long term. They are, therefore, not prepared to do this because of the long term risks associated with this kind of financing. Short term instruments become attractive because of the shorter periods of risk that these financing instruments carry.
- And yet, if infrastructure financing is not introduced in these farming operations, it could lead to serious performance risks, caused by drought.
- Southern Africa has been prone to these drought periods in recent years, causing good farmers to lose opportunities. To ignore this type of funding, is therefore, too risky for Banks that are providing short term financing.
- This case study presents a practical situation where trade finance has been structured to meet the needs of infrastructure finance in both Zambia and Zimbabwe. It demonstrates how structured finance can be used to develop infrastructure in developing countries.
- It also shows how infrastructure finance is very much a function of trade finance and why International Banks should accept it as part of the commodity supply chain.

Major Risks:Category 1

- **Poor infrastructure**
- **Poor weather patterns**
- **Lack of better agriculture knowledge**
- **Lack of access to technology**
- **Lack of collateral**
- **Poor logistical support**
- **Lack of markets**

Major Risks:Category 2

- **Political Instability**
- **Government Policies – Fiscal and Monetary – Interests, exchange rate regimes and inflation.**

Hedging Mechanisms

- 1. Unpredictable weather patterns – Hedging mechanism - Construction of Dams and new technology**
- 2. Lack of better agricultural knowledge – Hedging mechanism - employ teams of qualified agronomists**
- 3. Poor logistics – Hedging mechanism - diversify**
- 4. Lack of Markets – Hedging mechanism – Apply strong links with markets. Grow to specific market program**

Hedging Mechanism

- 1. Political Risk – Hedging Mechanism - Involve the local people as a way of poverty alleviation to give mileage to local politicians and governments.**
- 2. Fiscal and monetary policies – Hedging Mechanisms – Apply derivatives**

Contango Project

Contango, is an established a large-scale vegetable production, processing and export operation in Lusaka, Zambia. Contango products (pre-packed mange tout, sugar snaps, fine beans, baby corn, mange tout, sugar snaps and fine beans and runner beans) are exported to retailers in the UK, who, in the context of increasing demand for high-value horticulture products, dwindling European supply and the sudden decline of Zimbabwean production have been requesting annual volume increases of 20% from suppliers.

- Contango is owned by a partnership of seasoned horticulturists who have run formidable operations in Zimbabwe and still do. They are the largest horticulture exporters in Zimbabwe. The owners wanted to leverage their, and their management team's 10 years of horticultural export experience to create and manage the Contango Zambian operation. Zambia's growing conditions, relative political and economic stability and the strength and experience of the management team will ensure the project's success.

Marketing

- Marketing for the venture is handled by Exotic, one of the largest and most respected primary marketing organisations in the UK. Logistics are outsourced to Rollex and M.K. Airlines. This has allowed Contango to focus on production and processing of vegetables. The production is split between base farm production on Contango's 3020 ha commercial farms and production by leased farms, out growers, all small scale farmers contracted to grow for Contango. Contango quality checks, grades, cuts, cleans and packages all product in their pack sheds. All products for export are EUREPGAP and HACCP accredited.(This is accreditation given by the UK supermarkets.)

Precedent

- The project has created significant financial benefits since its launch early 2004. Even under conservative assumptions, Contango will be cash flow positive by year 2 and will generate annual revenues of USD 19.0 million and operating cashflows of USD 2.0 million. Its annual revenues will average US\$50 million by year five. Contango's team has considered the risks inherent in this project and have taken actions and planned in a way to minimise those risks
- The project will have significant social and community benefits. An additional two thousand jobs will be created by year 3 and the food security, health and education of workers will be improved. In the first 5 years of operation alone, USD 13 million will be injected into the community as wages, payments to out growers and purchases of inputs and services. In the longer term the venture will pay \$250,000 pa in taxes. Contango will also operate as a precedent for businesses looking to expand into Zambia

OUT GROWER PROGRAMS

• **Outgrowers programs have been used in the horticulture sector as a means of financing infrastructure through trade finance or finance based on receivables. As seen from the above, there are major risks associated with the outgrower programs such as; lack of adequate water for irrigation purposes. Most of the outgrowers are dependent on rainfall and as such are not able to grow throughout the year.**

• **Zambia is prone to drought and as such these small scale outgrowers could not fit into the export program. Lack of electricity also made it difficult to install proper irrigation systems.**

CONTANGO PROGRAMS

- **Contango using its Zimbabwe experience where its management has been involved in raising capital for the construction of dams for its outgrowers decided to approach mutual and Pension Funds to issue paper to raise USD 2 million for dam construction and provision of electricity.**
- **The Mutual and Pension Funds were asked to form a Special Purpose Vehicle Company which took ownership of the dam and the provision of electricity to the outgrowers.**
- **About 2000 small scale farmers were put together within 5 – 50 kilometres radius, given growing programs and provided with irrigation and electricity by the EPZ.**

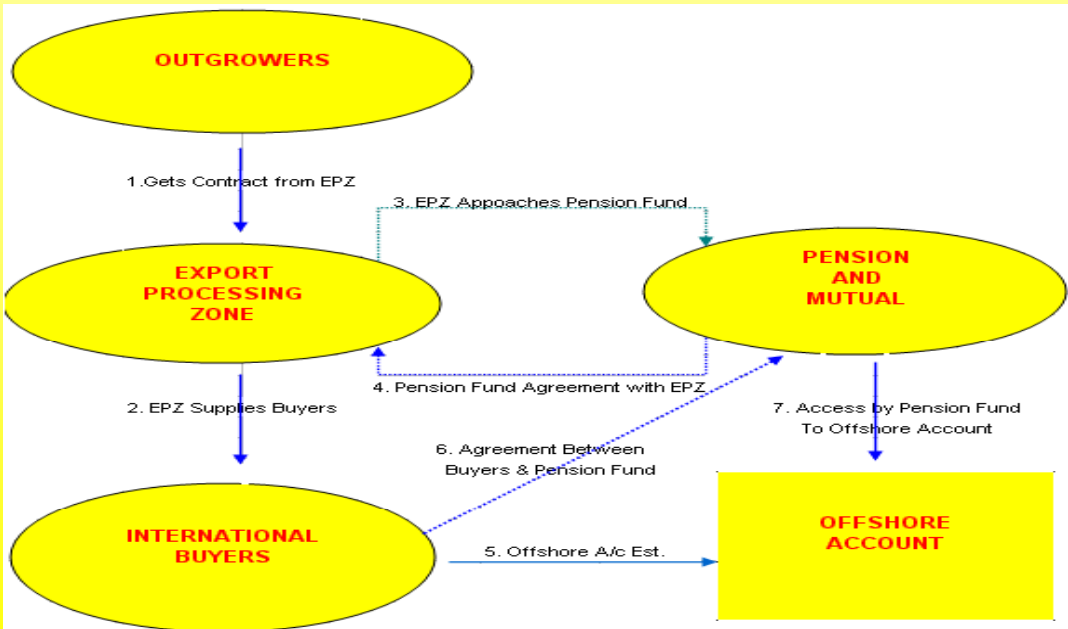
WATER & ELECTRICTY

The special purpose vehicle company would be paid water rights and electricity on a monthly basis by each of these outgrowers. This money would be deducted from each outgrowers export receipts and paid directly by the foreign bank into the SPVs account.

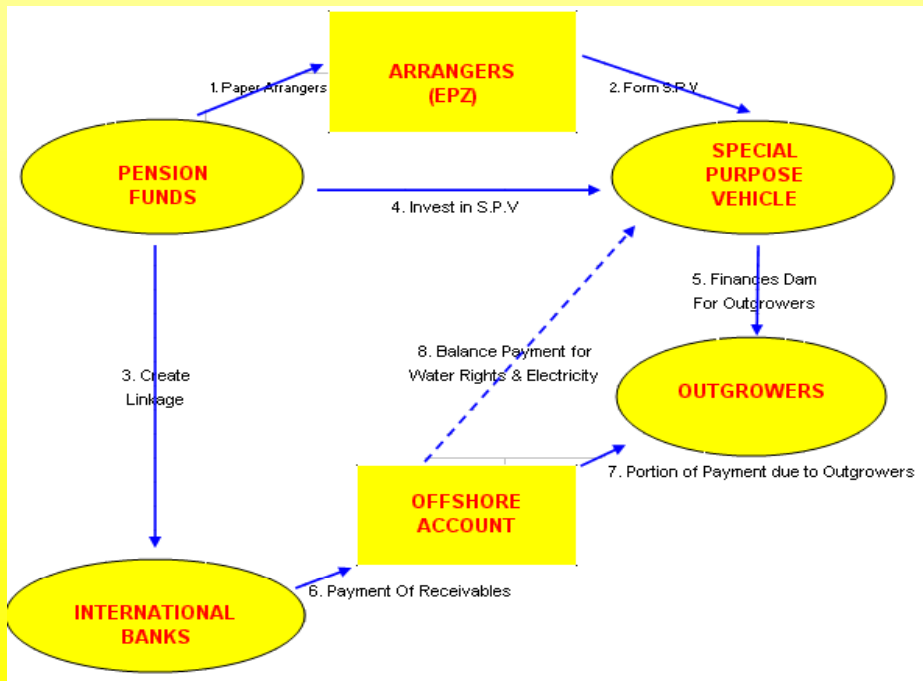
This model was also used in Zimbabwe by Mitchell and Mitchell to build a dam for its outgrowers in 2000. The Mutual and Pension Funds raised up to the equivalent of USD 5 million to build the dam which is now owned by a SPV. Today the SPV has about USD 5,3 million, invested in various instruments.

The Flow Chart process is shown in the following two diagrams.

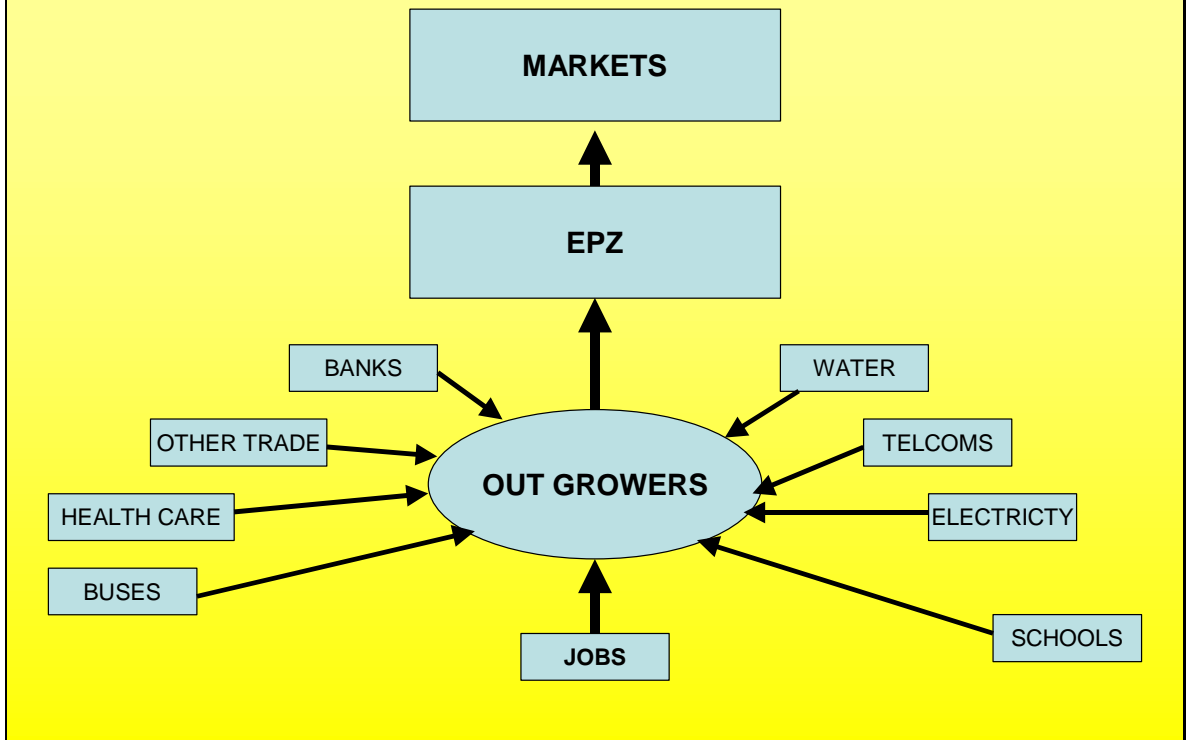
SPV Diagram



SPV FINANCING DIAGRAM



INFRASTRUCTURE CREATED



SESSION 2

**UNCTAD Expert Meeting
Financing Commodity-based Trade &
Development:
Innovative Financing Mechanisms**

**Using Innovative Internet-based Communication
Technologies to Streamline and Simplify
Collateral Inventory Administration**

Matthieu Delorme - Cotecna Group

Geneva – 15 November 2004

**Using Innovative Internet-based Communication
Technologies to Streamline and Simplify
Collateral Inventory Administration**

- **Collateral Management & Post-Harvest Finance**
 - ✓ Basic structure
 - ✓ Typical applications
 - ✓ Relevant issues
- **Using Web-based Technology: VESTALIS™**
 - ✓ Functionalities
 - ✓ Features and benefits
- **Application Examples**
 - ✓ Nigerian cocoa exports
 - ✓ Oilseeds crushing in Russia & the Ukraine

Collateral Management & Post-Harvest Finance

Basic Structure

- Legal and physical control of the storage facility by the Collateral Manager (“CM”).
- Verification of incoming goods’ quantity and condition/ quality by the CM.
- Custody of the Goods by the CM.
- Issuance by the CM of a Warehouse Receipt in the name of the financier covering the Goods. Triggers loan disbursement.
- Gradual release of the Goods upon instruction by the financier to the CM.

Collateral Management & Post-Harvest Finance

Typical applications

- Pre-export accumulation to shippable quantities.
- Post-harvest grading to export quality.
- Accumulation for subsequent processing or re-distribution.
- Cash-generation with deferred pricing.
- Combination thereof.
- Does not typically finance the producer directly, but does take the money closer.

Collateral Management & Post-Harvest Finance

Relevant issues: Need for ...

- Quick access to cash once Goods are in storage.
- Quick access to Goods once they are released.
- Documents authenticity verification. Fraud prevention.
- Administrative efficiencies.
- Operational efficiencies.
- Costs.

What can Web-based information technology do for us? **VESTALIS™**

Using Web-based Technology: Functionalities



Using Web-based Technology: Functionalities

VESTALIS™ Demo Contract n° 13-GHCM1 > CONTRACT OPTIONS

Contract Date	28.09.2004
Instructing Party	ABCD BANK
Depositor	XYZ TRADING
Other parties	
Location	Aaaa, Bbbb
Products	Rice Sugar
Preliminary Audit	View
View Contract (PDF version)	

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Using Web-based Technology: Functionalities

VESTALIS™ Demo Contract n° 13-GHCM1 > AAAA > DAILY MOVEMENTS FROM 29.10.2004 TO 02.11.2004

Unit for Rice:
Unit for Sugar:

Site:
From: / /
To: / / [Go](#)

[Excel Version](#) [Printable Version](#)

Report Date	Warehouse No	Product	Opening Balance Cotecna	In	Out	Closing Balance Cotecna	Comments
02.11.2004	Aaaa 1	Rice	6'035.00	0.00	0.00	6'035.00	
	Aaaa 2	Sugar	4'640.00	0.00	0.00	4'640.00	
01.11.2004	Aaaa 1	Rice	6'035.00	0.00	0.00	6'035.00	
	Aaaa 2	Sugar	4'640.00	0.00	0.00	4'640.00	
31.10.2004	Aaaa 1	Rice	6'035.00	0.00	0.00	6'035.00	
	Aaaa 2	Sugar	4'640.00	0.00	0.00	4'640.00	
30.10.2004	Aaaa 1	Rice	6'035.00	0.00	0.00	6'035.00	
	Aaaa 2	Sugar	4'640.00	0.00	0.00	4'640.00	
29.10.2004	Aaaa 1	Rice	6'035.00	0.00	0.00	6'035.00	RO n°2 completed
	Aaaa 2	Sugar	5'058.00	0.00	418.00	4'640.00	

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Using Web-based Technology: Functionalities

The screenshot shows the 'Warehouse Receipt Request' page in the VESTALIS application. The browser title is 'VESTALIS™ - Warehouse Receipt Request - Microsoft Internet Explorer'. The address bar shows the URL: https://www2.cotecna.ch/cma_demo/Client/WrList.aspx. The application header includes the VESTALIS logo and COTECNA name, with navigation tabs for Home, Contract, Stocks, WHRs, ROs, Summary, Contact Us, and Logout. The main content area displays 'VESTALIS™ Demo Contract n° 13-GHCM1 > RICE > WAREHOUSE RECEIPT REQUEST'. A table shows quantities for sites 'Aaaa' and 'Bbbb':

	Aaaa	Bbbb
Total quantity	6'035.00	5'412.00
Quantity under whrs	5'500.00	5'000.00
Quantity available	535.00	412.00

Below the table, there are input fields for 'Selected Product' (Rice), 'Site' (Aaaa), and 'Net Weight' (500 MT). A 'Remarks' text area contains the text 'Please indicate markings. Thank you.'. At the bottom, there are 'Continue' and 'Cancel' buttons. The footer includes 'Copyright 2003 © Cotecna SA' and a link to 'Cotecna Warehousing General Conditions'.

Using Web-based Technology: Functionalities

The screenshot shows the 'Post a new RO' page in the VESTALIS application. The browser title is 'VESTALIS™ - Post a new RO - Microsoft Internet Explorer'. The address bar shows the URL: https://www2.cotecna.ch/cma_demo/Client/RORequest.aspx. The application header is identical to the previous screenshot. The main content area displays 'VESTALIS™ Demo Contract n° 13-GHCM1 > NEW RO POSTING'. A section titled 'New Release Order Information' contains a table with the following data:

WHR No	Date Issued	Status	Product	Quantity issued	Previous Ro	Quantity available	
5	02.11.2004	Valid	Sugar	4'000.00	0.00	4'000.00	Select
3	01.10.2004	Valid	Rice	5'500.00	0.00	5'500.00	Select
2	01.10.2004	Valid	Sugar	5'000.00	0.00	5'000.00	Select
1	01.10.2004	Valid	Rice	5'000.00	0.00	5'000.00	Select

Below the table, there are input fields for 'Selected Warehouse Receipt' (WHR No. 5), 'Quantity to release' (2000), 'Requested execution date' (20/11/2004), and 'Parties to whom goods are delivered' (XYZ Trading Ltd.). A 'Comments' text area contains the text 'Delivery ex Warehouse.]. At the bottom, there are 'Next' and 'Back' buttons. The footer includes 'Copyright 2003 © Cotecna SA' and a link to 'Cotecna Warehousing General Conditions'.

Using Web-based Technology: Features and benefits

- Proprietary system developed and run by Collateral Manager. Commercial neutrality.
- Applicable world-wide and open to any party contracting under a CMA, at NO extra cost.
- Speed of execution.
- Multi-site, multi-products.
- Security (Log-in procedures; Encrypted communication; Double signatures; Back-up's, etc.).
- One click access to all contractual functions
- Administration efficiencies. Contract history, filing.
- Structured, yet flexible communication flows.
- Internal controls
- Accessibility (anywhere, any time...)

Application Examples

Nigeria Cocoa exports

- Multi-site (Close to producing areas + Port of shipment)
- Basic processing (export grading)
- Information-intensive.

Oilseeds processing in Russia & the Ukraine

- Multi-site (Close to producing areas + Processing plant)
- Industrial process.
- Multi-products (Seeds, Oil & Meal)
- Information-intensive.
- Timeliness-sensitive.
- Non-stop operations.

COLLATERAL MANAGEMENT

What is it?

Collateral Management is a mechanism which allows movable assets belonging to a borrower to become eligible as collateral security in the context of a loan agreement.

Under this mechanism, an independent party with no commercial interest in the Goods (usually a first class inspection company “the Collateral Manager”), takes legal and physical control of a storage facility holding an inventory, and of its management.

Based on such controls, and quantitative as well as qualitative inspections upon arrival of the Goods into storage, the Collateral Manager is able to issue to a Financier a Warehouse Receipt covering the inventory, and commits itself not to release any part thereof prior to receiving a valid release order from the Financier.

This allows the Goods to become eligible collateral security in the context of a loan.

Services by the Collateral manager can be extended to include monitoring of the flow of Goods from their point of origin (if such is the time of disbursement of the loan) to a storage facility, and from such a facility to their destination (for example an export point).

Custody of the Goods can also be completed by custody of the related documentation.

In a nutshell, Collateral Management not only provides the security necessary to the structuring of transactional finance, but also ensures that Financiers keep track of the application of the loans, on a real time basis.

COLLATERAL MANAGEMENT and **MONITORING** are commonly used as effective tools to raise post-harvest, pre-export finance.

This brief and the attached chart present a step-by-step general summary of how this can be done.

0 Producer level

Storage, if any, at producer level is often neither large enough nor legally structured to allow any kind of effective and economical monitoring by a Collateral Manager.

The issue of producers’ post-harvest finance (raising cash without an obligation to sell) can still be addressed, through mechanisms allowing farmers to retain ownership through some of the subsequent steps of the export process.

1-2 Primary collection centres

These centres are often found, depending on the structure of the market. Sometimes, they act as a consolidation points for smaller holders, while larger producers deliver directly at the intermediate consolidation/gradin/processing point.

At any rate, they remain fairly small units, and the intervention of a Collateral Manager may not always be viable.

When it is, the speed of rotation at such centres and the individual size of each lot are such that the most economical solution is a simple monitoring, so that the Financier can be assured

that there is a good correlation between his disbursements and the volumes going through the process.

As such, these disbursements are not secured. But they are also fairly small, and can be the object of a rotating sub-limit.

In case of a major urban lender, this sub-limit can be granted to, or administered by, a rural network retail banking institution.

Transportation (2 & 4) can be monitored by the Collateral Manager at each step of the process, to ensure that goods go to the right location. Since the quantity in transit at any given point in time is normally relatively small, and transit time usually short, the risk taken until the realisation that something is not right (in which case further disbursement can be suspended until things go back to normal) can be kept at a very low level, within a sub-limit.

Transit monitoring is thus an excellent risk mitigation tool in pre-export finance structures.

Further security can be sought by entrusting the custody of transport documents to the Collateral Manager.

3-4 Intermediary Consolidation and/or Grading/Processing

This feature is almost invariably found in an agricultural commodities export process. Goods need at the very least to be graded for export, and often undergo some kind of processing, from simple packing to more elaborate operations such as crushing, etc.

Collateral Management is a perfect tool to provide security to Financiers funding such operations. Their size is usually adequate for the service.

Warehouse Receipts (WHRs) can be issued by the Collateral Manager for raw material as it comes into the facility. If required, this can be combined with quality determination, ensuring that the processing output is in line with not only the quantity but also the quality of the input.

Output quality can also be verified, to ensure that they meet export grades requirements.

Funds are released against the security provided by the WHRs. A small sub-limit can be set to allow limited quantity of raw material to be processed. The resulting finished product is then covered by a new WRH, allowing further releases of raw material and so on.

5 Pre-export finished goods warehouse

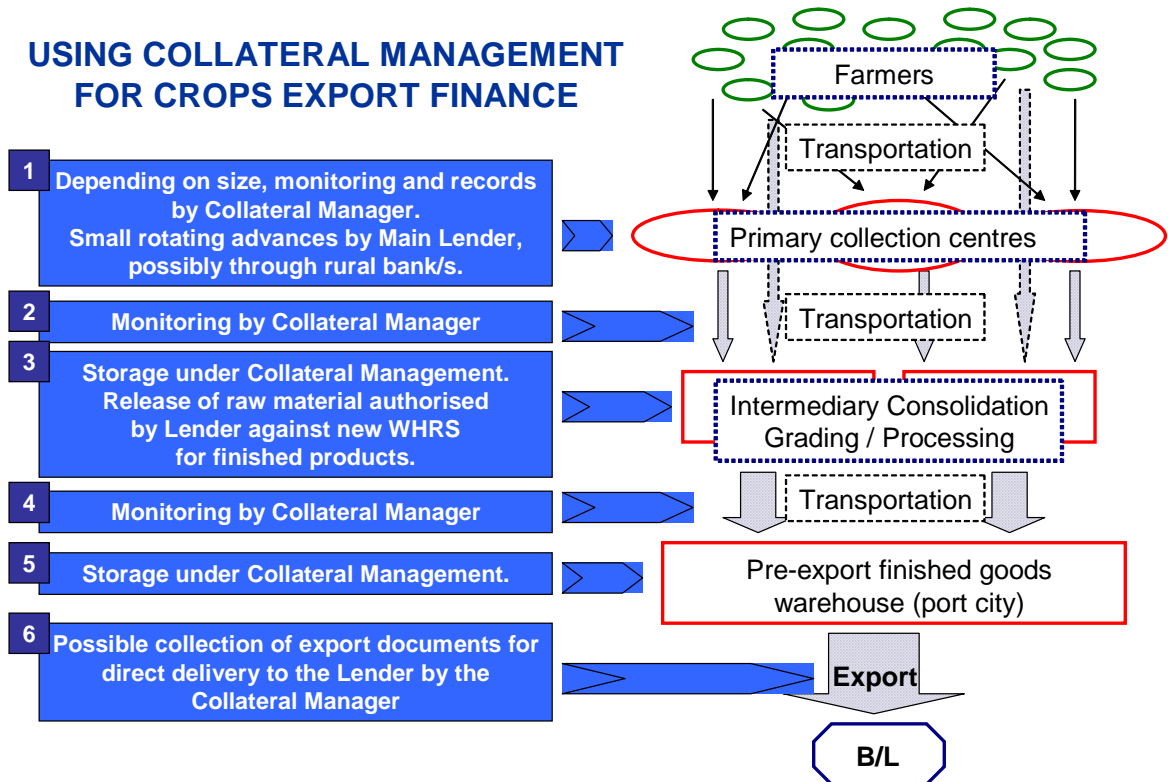
At the last step prior to the export shipment, goods are kept under Collateral Management until an ocean Bill of Lading replaces the Collateral Manager's WHR as a security.

6 Export documents collection

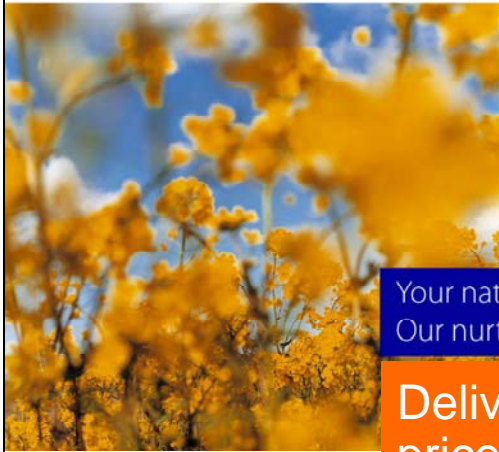
In order to ensure that continuous security is retained by the Lender, the Collateral Manager can take delivery of the export documentation for account of and direct delivery to the Lender.

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USING COLLATERAL MANAGEMENT FOR CROPS EXPORT FINANCE



SESSION 3



Your nature
Our nurture

Delivering commodity
price risk management to
the developing world.

15th November
2004

Nick Hungate, Rabobank

Rabobank CPRM 2004

Timeline of recent events



- World Bank International Task Force on Commodity Risk Management in Developing Countries convened in January '99
- Provide access to smallholder producers in developing countries to the same risk-management instruments available to producers in industrialised countries
- Aimed to identify key players in the following commodities and geographies:
 - Cocoa, Coffee, Cotton and Sugar
 - East and West Africa, South and Central America

2

Rabobank CPRM 2004

Why does Rabobank offer CPRM products?

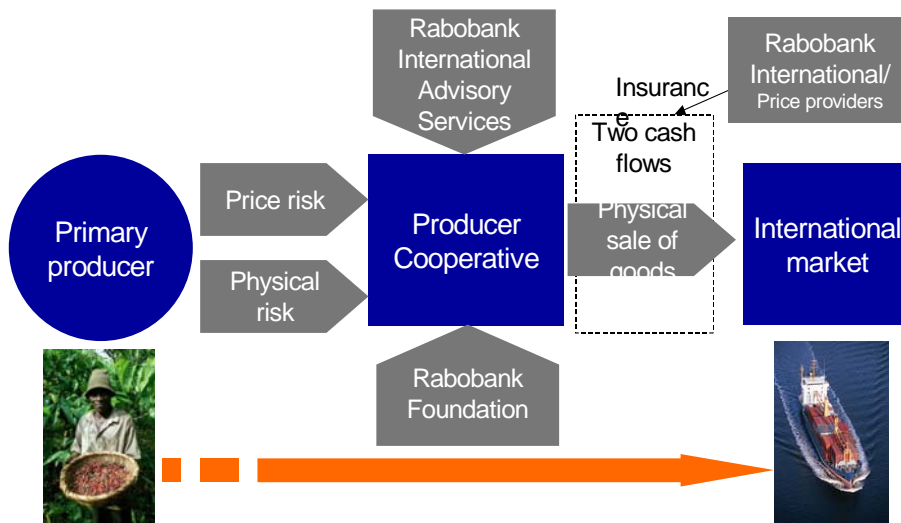


- Largest F&A bank with a global capacity and extensive knowledge of the agriculture markets & risks
- RI has some different and some unique products
- Not viewed as competitor by clients as we do not trade physical commodities OR take significant futures positions on a proprietary basis.
- Triple A-rated institution

3

Rabobank CPRM 2004

The Rabobank path of interaction



4

Rabobank CPRM 2004

A client profile and the Rabobank solution



Client requirements

- Access to world markets
- Trade without a futures contract
- Flexibility to cash in value of their price protection as cash inventory is marketed
- Reliable counterparty
- Market information
- Competitive and realistic pricing

Rabobank's solution

- Price floor with dates and tonnage tailored to clients needs
- Price floor and premium calculated after analysis of clients budget and price expectations
- Premiums paid up front to manage banks credit requirements
- Option can be sold back to Rabobank when it is no longer required
- Regular market updates and options valuations provided to clients

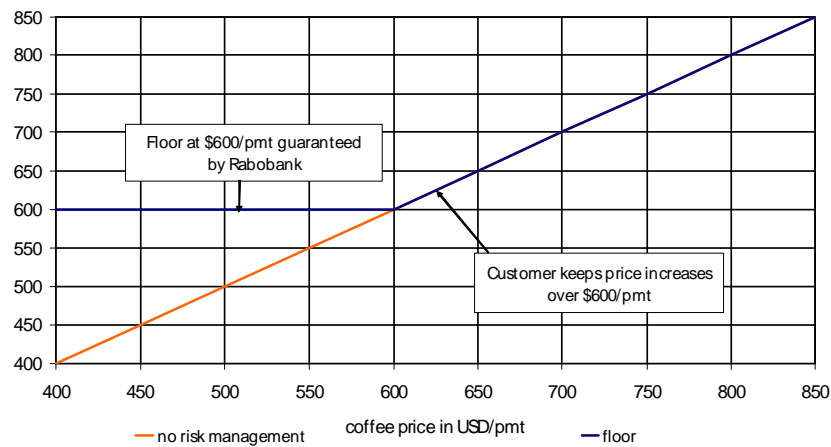
5

Rabobank CPRM 2004

Establishing the floor



Customer's income in USD/pmt



6

Rabobank CPRM 2004

Who does what in this situation?



- World Bank and ITF carries out the following functions

- Regulatory
- Advisory on Risk Management Strategy
- Marketing
- Training

- Rabobank carries out the following activities

- Credit
- Operations
- Extensive documentation
- Solvency



7

Rabobank CPRM 2004

Major considerations for Rabobank



- Compliance client approval
- Multiple small pilot transactions
- Very labour intensive
- Communication problems
- Sustainable profit

The Rabobank transactions represent the bulk of the trades so far concluded as a result of the ITF.

8

Rabobank CPRM 2004

Major considerations for the client



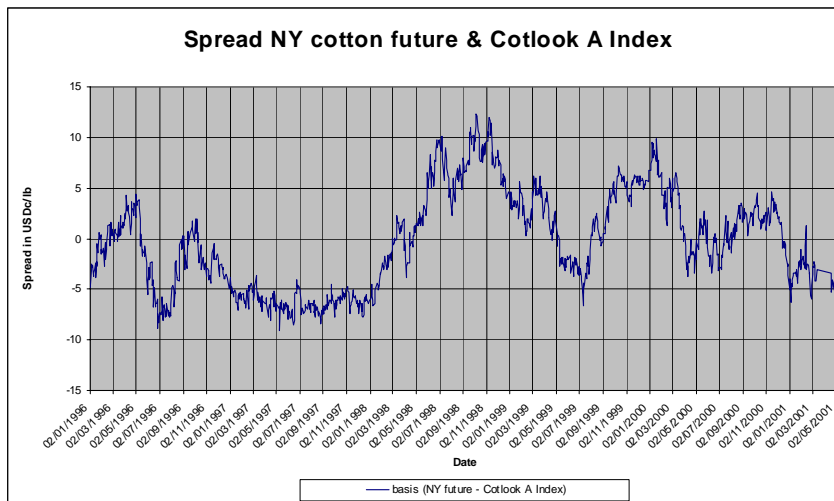
- How to justify the premium – lower borrowing costs/increased notionals.
- Still facing the issue of basis risk. A good reason not to hedge at all ?
- Encouragement from local FI's.
- Who makes the decisions – to buy and sell
- How long will the decision take... missing the opportunities
- Understanding the market and access to market information.



9

Rabobank CPRM 2004

Historic A index (implied AWP) versus NY futures, cotton spread



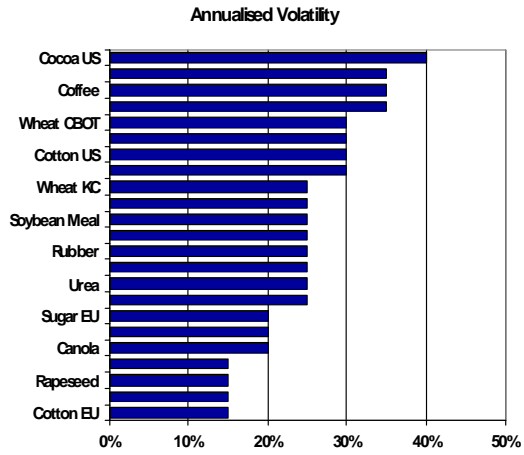
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Rabobank CPRM 2004

Reasons for going on: price & volatility both high



- Soybeans +83%
- Wheat +33%
- Gold +26%
- Copper +86%
- S&P +15%
- Euro (CME) +17%
- Natural Gas +8%
- Crude Oil +20%
- Baltic Freight Index +238%
- Pulp & Packaging +29%



Primary Producers are exposed and able to take

11

advantage of both

Rabobank CPRM 2004



CPRM offers financially viable solutions to commodity producers in the developing markets

Thank you for your attention

12

Rabobank CPRM 2004

Contacts

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PAICOR

A *CORPORATIVE* OF RICE FARMERS

The pro-active role of the Rural Bank of Panabo in the Philippines in creating agri finance possibilities

presented by

Alex V. Buenaventura

Expert Meeting, UNCTAD

Geneva, NOV. 15-17, 2004

PRESENTATION OUTLINE

- THE *CORPORATIVE* CONCEPT
- CHALLENGES FOR SUSTAINABILITY
- ADAPTABILITY TO OTHER SECTORS
- ROLE OF LOCAL BANKS
- ROLE OF GOVERNMENT
- TECHNICAL ASSISTANCE IDEAS
- UNCTAD T.A. DELIVERY STRATEGY



WHAT IS A **CORPORATIVE** ?

A **CORPORATIVE** IS A

- **PRIVATE STOCK FOR-PROFIT CORPORATION**
- ORGANIZED AND CONTROLLED BY A **CREDITOR BANK/INSTITUTION**
- IN PARTNERSHIP WITH ITS **SMALL BORROWERS/PRODUCERS**
- FOR NEEDED BUT **CAPITAL INTENSIVE SUPPORT FACILITIES.**
- LIKE **A VENTURE CAPITALIST**, THE CREDITOR BANK THROUGH TIME **DILUTES OR DIVESTS MAJORITY CONTROL** IN FAVOR OF ITS PARTNER BORROWERS AND
- **ULTIMATELY, THE CORPORATION MAY BECOME A COOPERATIVE.**



PAICOR: The 1st CORPORATIVE

- PANABO AGRO-INDUSTRIAL CORPORATION, INC.
- PRINCIPAL PURPOSE: RICE TRADING/MILLING
- **REGISTERED ON FEBRUARY 1986**
- INITIAL CAPITAL STRUCTURE:

	SUBSCRIBED	PAID-UP
1 BANK (RBP*)	40 % \$ 7,143	\$ 7,143
43 BANK OWNERS	15 % \$ 2,679	\$ 714
185 RICE FARMERS	45 % \$ 8,036	\$ 357
TOTAL	100 % \$17,858	\$ 8,214

*RURAL BANK OF PANABO

- **BECAME PAICOP, A COOP, ON APRIL 22, 1992**



PAICOR

BENEFITS FOR FARMERS

- “INSTANT” RICE MILLING COMPLEX
- PROFESSIONAL MANAGEMENT (BANK)
- TIMELY/ADEQUATE LOANS
- ASSURED MARKET
- LOWER COST OF INPUTS
- YEAR END DIVIDENDS
- ASSURED OWNERSHIP INCREASE

PAICOR

BENEFITS FOR THE BANK

- MORE PRODUCTION LOANS
- MORE FIXED ASSET LOANS
- MORE WORKING CAPITAL LOANS
- COLLECTION-IN-KIND CAPABILITY
- YEAR END DIVIDENDS



***CORPO* FOUNDATION**

- CORPORATIVE SYSTEMS FOUNDATION, INC.
- A NON-STOCK, NON-PROFIT CORPORATION
- **Registered in January 7, 2000**
- BY THE NETWORK RURAL BANKING GROUP COMPOSED OF 3 BANKS: Rural Bank of Panabo, Network Rural Bank & ProBank
- **TO REPLICATE PAICOR**
- ***CORPO soon created DASURAICOR***



DASURAICOR: The 2nd PAICOR

- DAVAO DEL SUR AGRO-INDUSTRIAL CORPORATION, INC.
- Registered on March 8, 2000
- INITIAL CAPITAL STRUCTURE:

	SUBSCRIBED	PAID-UP
1 BANK (NRBG*)	59 % \$ 211,340	\$ 211,340
1 LAND BANK**	40 % \$ 142,857	\$ 142,857
182 RICE FARMERS	1 % \$ 2,946	\$ 2,946
TOTAL	100 % \$ 357,143	\$ 357,143

* Network Rural Banking Group

** LAND BANK "ACCESS " PROGRAM (a special venture capital facility)

- BY LAWS PROVIDE FOR AUTO DIVESTMENT BY LAND BANK FOLLOWED BY NRBG IN FAVOR OF FARMERS



CHALLENGES FOR SUSTAINABILITY

ACTUAL PERFORMANCE	# FARMERS*	# HECTARES	NET INCOME AFTER TAX
PAICOR: 1986	229	354	(\$ 49)
AVE: 1987-1990	227	350	\$ 2,539
1991	222	335	(\$ 4,379)
PAICOP: 1992	274	393	\$ 4,089
1993	275	394	\$ 4,988
AVE:1994-1998	274	410	\$18,034
AVE:1999-2002	270	440	(\$21,223)***
2003	239**	421	\$ 4,277
DASURAI COR:2000	182	321	\$15,831
2001	192	378	\$ 279
2002	207	385	(\$28,515)***
2003	102**	226	(\$19,956)

CHALLENGES:

* STAGNANT # FARMERS UP TO 2002

** DROP IN # FARMERS DUE TO SHIFT TO OTHER CROPS

*** NET LOSS DUE TO SPOILAGE & SMUGGLING



SOLUTIONS TO CHALLENGES

- **INVENTORY SPOILAGE PROBLEM ALREADY SOLVED THROUGH PURCHASE OF MECHANICAL DRYERS.**
- **SMUGGLING PROBLEM ALREADY ERADICATED BY THE NEW GOVERNMENT UNDER PRESIDENT GLORIA MACAPAGAL ARROYO.**
- **PROBLEM OF DECLINING # PARTNER FARMERS IS DUE TO UNPROFITABILITY OF RICE FARMING CAUSED BY PERENIAL CROP FAILURES & LOW PRODUCTIVITY!!!**

RISK FREE PRODUCTION A MUST FOR SUSTAINABILITY

- INSPITE OF FINANCING SUPPORT
- INSPITE OF MARKETING SUPPORT
- PARTNER FARMERS REMAIN POOR!!!
- A RISK-FREE, 8-TON PER HECTARE RICE PRODUCTION TECHNOLOGY MUST BE DEVELOPED!!!
- **CORPO** FOUNDATION WITH LAND BANK ASSISTANCE IS NOW DEVELOPING THIS NO-FAILURE TECHNOLOGY.

ADAPTABILITY TO OTHER COMMODITY SECTORS

THE CORPORATIVE STRUCTURE IS REPLICABLE & ADAPTABLE TO OTHER COMMODITY SECTORS PROVIDED **PRODUCTION IS RISK FREE AND GLOBALLY COMPETITIVE, THE MARKET IS ASSURED AND A VENTURE CAPITALIST IS INTERESTED.**



ROLE OF LOCAL BANKS

- REVIEW POLICY BIAS VS. AGRI CREDIT
- LEARN & ADOPT TESTED AGRI LOAN PACKAGES BASED ON TRI-PARTITE AGREEMENTS BETWEEN BUYERS/PROCESSORS, PRODUCERS & FINANCIERS. EXAMPLES:
CAVENDISH BANANA: EXPORTER-----FARMER—BANK
PALM OIL: PALM OIL MILL-----FARMER---BANK
SUGARCANE: SUGAR MILL-----FARMER---BANK
- REPLICATE CORPORATIVES ONLY FOR RISK FREE & GLOBALLY PRODUCTIVE CROPS



ROLE OF GOVERNMENT

- SET UP A SPECIAL VENTURE CAPITAL FACILITY FOR **CORPORATIVES**
- PROVIDE CAPACITY BUILDING ASSISTANCE TO NGOs REPLICATING **CORPORATIVES**
- FUND R & D ON ELIMINATING RISKS & INCREASING PRODUCTIVITY IN SELECTED CROPS
- PROVIDE INCENTIVES FOR GLOBAL BUYERS OF AGRI PRODUCTS TO LOCATE IN THEIR COUNTRIES

TECHNICAL ASSISTANCE IDEAS

- IDENTIFY OTHER COMMODITIES WITH **CORPORATIVE** POTENTIAL
- DEVELOP **CORPORATIVE** INSTALLATION & OPERATIONS MANUAL FOR SAID COMMODITIES
- SUPPORT INSTALLATION CAPABILITY BUILDING FOR SAID **CORPORATIVES** BY SPECIALIZED NGOs

UNCTAD T.A. STRATEGY

- ADOPT THE **CORPORATIVE** STRUCTURE AS A PRE-COOP OR AS A COOPS MERGER & CONSOLIDATION DEVELOPMENT STRATEGY
- CHAMPION THE DELIVERY OF THE VARIOUS TECHNICAL ASSISTANCE IDEAS EARLIER SPECIFIED



**THE LARGEST RURAL BANK IN THE PHILIPPINES and THE
MOST EXTENSIVE RURAL BANKING NETWORK IN
MINDANAO**



ONE NETWORK BANK

N NETWORK BANK  Rural Bank of Panabo  **ProBank**

PERA NG MINDANAO, PARA SA MINDANAO

END OF PRESENTATION

SESSION 4

KISAN CREDIT CARD SCHEME

K.G. Karmakar
Executive Director
National Bank for Agricultural Development (NABARD)

1. The Genesis

1.1 Agriculture plays a dominant role in the Indian economy with 70% of the population of the country dependent on it for livelihood. The agricultural scene is characterised by low productivity, dependence on rains, lack of diversification, rudimentary agricultural practices and bottlenecks in the credit dispensation to the millions of farmers for their Seasonal Agricultural Operations. The Government of India has taken various initiatives to make India agriculturally self-sufficient and its sustained efforts ensured the Green Revolution in the 1970s and 1980s. This has contributed to a great extent to the food security of the country even during the worst years of drought. But the agricultural scenario still offers immense potential to contribute to the Indian economy. Apart from steps for modernising agriculture, credit has been identified as a catalyst to spur agricultural growth. Notwithstanding an expansion in institutional credit flow for the agricultural sector, the traditional systems and procedures, documentation, etc., adopted by the banking system have rendered availment of credit by the farmers rather cumbersome.

1.2 Given the enormity of the credit requirements on the one hand and the vagaries of nature on the other, financing for agriculture has been a gigantic task for banks in India. The access to institutional credit for a large number of farmers, particularly small and marginal farmers, continues to be a challenge to the Indian Banking industry.

1.3 The financial sector reforms ushered in during the early 90's which had infused a spirit of competition among the banks in India, laid emphasis on the twin aspects of quality of service and customer-orientation with client friendly products, which are the crucial determinants for the success of any banking institution.

1.4 In India, the Cooperative Banks have traditionally been playing a predominant role in meeting the credit needs of the rural people. The Government of India, realising the enormous needs of the farming community, took a conscious decision to involve commercial banks in rural credit through a directed/mandatory approach in 1969s. As a part of this effort, the Government of India established Regional Rural Banks (RRBs) to exclusively cater to the needs of the rural poor since 1975. The multi agency rural credit delivery system which has evolved over the last 100 years, is a complex one and is set out at Annexure - 1.

1.5 The process of financial reforms also highlighted the need for innovative credit interventions from institutional agencies to support farmers. Any credit facility to the farmers should not only be timely, but also be available in adequate quantum besides ensuring flexibility in terms and simple documentation.

1.6 The Government of India, Reserve Bank of India (RBI) which is the Central Bank and the National Bank for Agriculture and Rural Development (NABARD) the Apex Bank for integrated rural development have, therefore, been focusing on the

need to streamline the credit delivery mechanism and to simplify the existing systems, procedures, documentation relating to sanction and disbursement of credit to the farmers at large.

1.7 Against this scenario, the Kisan Credit Card (KCC) has emerged as an innovative credit delivery mechanism to meet the production credit requirements of the farmers in a timely and hassle-free manner. Realising its potential in terms of simplification of loan procedures and reducing the drudgery of cumbersome documentation, the Government of India announced in 1998-99 that NABARD would formulate a model scheme for issue of Kisan Credit Cards to farmers on the basis of their holdings for uniform adoption by the banks so that the farmers may use it to readily purchase agricultural inputs such as seeds, fertilisers, pesticides, etc., and draw cash for their production needs.

1.8 The credit card mechanism was not altogether new to the sphere of agricultural banking in India. In fact, some of the leading public sector banks as well as District Central Cooperative banks in a few States had introduced agricultural credit cards even earlier. However, such schemes were niche-marketed and were the exclusive preserve of a privileged class among the farmers and the small and marginal farmers did not have much access to the credit cards. Further, there were no uniform norms in respect of such schemes implemented by different banks.

2. Salient Features of the KCC Scheme

Eligible farmers to be provided with a Kisan Credit Card and a pass book or a card-cum-pass book by various banks.

Revolving cash credit facility involving any number of drawals and repayments within the limits prescribed.

Personal Accident Insurance cover up to US \$ 1000 to the card holder for death/permanent disability at a nominal premium of US \$ 0.30 for a one year policy and US \$ 1 for a three year policy, to be shared between the bank and the card holder in the ratio of 2:1.

Entire production credit needs for the year plus ancillary activities related to crop production, to be considered while fixing loan limits.

Loan limit to be fixed on the basis of operational land holding, cropping pattern and scales of finance.

Entire loan to be disbursed in cash with discretion to farmers to source inputs of their choice

Sub-limits may be fixed at the discretion of the bank.

Card valid for 3 years subject to annual review.

Each drawal to be repaid within 12 months.

Conversion/rescheduling of loans is also permissible in case of damage to crops due to natural calamities.

As incentive for good performance, credit limits could be enhanced at intervals to take care of increase in costs, change in cropping pattern, etc.

Security, margin, rate of interest as per RBI norms.

Loan operations may be conducted through the issuing branch or at the discretion of bank, through other specifically designated branches.

Interest on the credit balance in the account is paid as per interest rates applicable to Savings Bank Account.

Withdrawals are permitted through slips/cheques accompanied by card and passbook. Crop loans disbursed under KCC Scheme for notified crops are covered under the National Agriculture Insurance Scheme of the Agriculture Insurance Company of India .

2.1 Benefits to farmers

Meets credit requirements for cultivation of crops for the whole year.

Assured and timely availability of credit to the farmer whenever credit is needed.

Adequate quantum of credit is made available to the farmer.

Provides flexibility to the farmer to draw cash from a branch other than issuing branch and to buy inputs from any supplier of his choice .

Reduction in quantum of interest paid by the farmer due to cash credit nature of loans.

Transaction costs for the farmer for availing of loan from the bank, is reduced.

Insurance cover for crops is available at a very low premium rate.

2.2 Benefits to Banks

Reduction in work load for branch staff in terms of appraisal, supervision and monitoring of loans under Kisan Credit Card Scheme.

Minimum paper work and simplification of documentation for drawal of funds from the bank.

Improvement in recycling of funds through better recovery of loans.

Increase in loan business.

Reduction in transaction costs to the bank.

Better Banker - Client relationship.

3. Implementation of KCC Scheme

The KCC Scheme is under implementation in the entire country by cooperative banks, commercial banks and RRBs. A broad idea of the extensive and vast institutional framework implementing KCC Scheme in the country can be had from the fact that in

the cooperative system, 30 SCBs and 367 DCCBs through a combined network of about 13,500 branches and more than 112,000 PACS at village level are implementing the Scheme. Similarly, 196 RRBs with their branch network of about 14,500 branches have been implementing the Scheme in their respective area of operation throughout the country. In addition to this, 28 commercial banks with their branch network of around 40,000 branches have been issuing KCC in various States.

By the end of August 2004, around 43.2 million KCCs have been issued by the banks in the country. The agency/year-wise number of cards issued by the banking system since inception of the Scheme is shown in Annexure-II.

4. Impact Analysis

4.1 NABARD has been assessing on an ongoing basis, the impact of implementation of the Scheme and it has revealed the following positive aspects:

- Wide acceptability of the Scheme among farmers and bankers.
- Timely and adequate provision of credit is ensured through KCC Scheme in a hassle-free manner.
- Elimination of repeat processing of loan proposals, as banks sanction 3 year credit limits, which is enhanced at the time of annual review, in deserving cases.
- Convenient access to credit for farmers with provision for drawal from other identified branches of the bank
- Possession of KCC is treated as a prestige symbol in the farmers' community.
- Transparency in operations of accounts.
- Average loan amount per KCC account shows an increase in the loan amount over pre-KCC period.
- KCC holders have saved precious time which would have been spent on fulfilling formalities for submission of loan application and its sanction as also in time spent in banks during each visit, due to the simplification of loan formalities made under KCC. Reduction in formalities coupled with procedural simplification and increase in validity period of KCC, has resulted in income gains
- Removal of 'kind' component has allowed the farmers to purchase fertilisers of their choice. It also enables farmers to avoid unnecessary stocking of fertilisers and purchase the same from a shop of his choice, ensuring supply of quality fertilisers. This has enabled the KCC holder to secure better purchase prices in a competitive market
- With freedom provided under KCC, increased use of fertilisers and pesticides have favourably influenced crop productivity and higher income gains.
- KCC has increased the credit accessibility levels of farmers from the institutional sector and weaned them away from money lenders who lend at higher interest rates. This has reduced the interest burden of farmers due to reduced dependence on high cost borrowings.
- Average loan outstanding in the sample KCC accounts has also been reduced due to flexibility allowed in operations. This has saved interest liability on the farm loans.

Benefits derived from KCC was more for farmers receiving loans from commercial banks, as adequate loan amounts, relaxation in lending practices, removal of 'kind' component, flexibility in operations, rate of interest, etc. were more favourable. Richer farmers with large land holdings received higher benefit on account of KCC,

due to higher quantum of loans and greater awareness about flexibility in operations under KCC.

The KCC operations helped bankers to reduce operational costs associated with lending. It also led to reduction in procedural formalities and documentation, ensured savings in stationery use and enhanced business, etc. Recovery performance of loans under KCC scheme was observed to be better than for other credit products.

4.2 The studies also revealed the following shortcomings in implementation of the Scheme:

- Banks are hesitant to extend KCC loan facility to tenant farmers/lessees, in view of legal/documentation infirmities.
- Disbursement of 'kind' component also in cash, under Kisan Credit Card is perceived by some cooperatives as a possible threat to the existing cooperative marketing structure selling agri-inputs.
- Cash disbursement is done only at the co-operative bank /branch level in some States. Hence, borrowers are required to travel long distances for drawal of cash from the branches of District Central Co-operative Banks (DCCBs).
- Some banks apprehend that the implementation of KCC Scheme results in increase of transaction costs, increased workload and additional staff requirements.
- Levy of costly service charges by Commercial Banks/RRBs, for issue of cards to farmers (US \$ 0.50 to US \$ 5) in some States.
- Some of the State Governments are reportedly levying stamp duty for loans under KCC and not for normal crop loans, thereby burdening farmers.
- Efforts to create awareness about scheme and to educate farmers on its optimal use have been minimal, resulting in shortcomings in operations and gaps in coverage of farmers under the scheme.

5. Initiatives by NABARD for enhancing KCC Coverage

(i) Personal Accident Insurance Coverage to KCC holders

NABARD in consultation with Government of India and General Insurers' (Public Sector) Association (GIPSA), introduced a Personal Accident Insurance Scheme for KCC holders in June 2001. The Scheme covers the risk of KCC holders against accidental death or permanent disability up to maximum amounts of Rs.50,000/- and Rs.25,000/- respectively. The insurance premia is nominal and is shared between the KCC issuing bank and the KCC holder in the ratio of 2:1.

(ii) Scheme for providing Financial Assistance to Cooperative Banks and RRBs for Publicity Activities

In order to generate greater awareness about the Kisan Credit Card Scheme and educate the card holders to use the cash credit facility optimally and efficiently, NABARD introduced a Scheme for providing financial assistance to Cooperative Banks and RRBs on a sharing basis, for publicity costs on a 50: 50 sharing basis.

(iii) Other Steps

- Fixing bank-wise/branch-wise/month-wise targets and periodical review.

- Organising Awareness Programmes/Sensitisation Meets for CEOs/Staff of SCBs/DCCBs/RRBs.
- Arranging functions for distribution of Kisan Credit Cards
- Use of Farmers' Clubs/Non Governmental Organisations (NGOs) for creating awareness by participating in their meetings for dissemination and publicity about the advantages of the scheme among the rural farmers.
- Attempts are being made to form Self Help Groups (SHGs) of small/marginal farmers, tenant/lessees so as to make them eligible for institutional credit through KCC
- Talks on T.V./Radio and interviews of successful KCC farmers in audio /visual media.
- A pamphlet 'Kisan Credit Card - Guide to Farmers', which is in the form of frequently asked questions (FAQs) has been brought out in Hindi and English for the use of the farmers.
- With a view to widen the outreach of KCC and its advantages/utility to the farming community, NABARD has adopted innovative methods of publicity. One such step is launching of 10 lakh Meghdoot Post Cards (at 50% subsidised costs), which has the capability to penetrate remote areas.
- NABARD is also in the process of preparing a documentary on KCC in English/Hindi, which would be dubbed into local/regional languages, for display on State Television Channels.
- NABARD, through its training centres, has been regularly conducting Training programmes, workshops, etc. for the operational staff of Cooperative Banks/RRBs, so as to sensitise them on the issue.

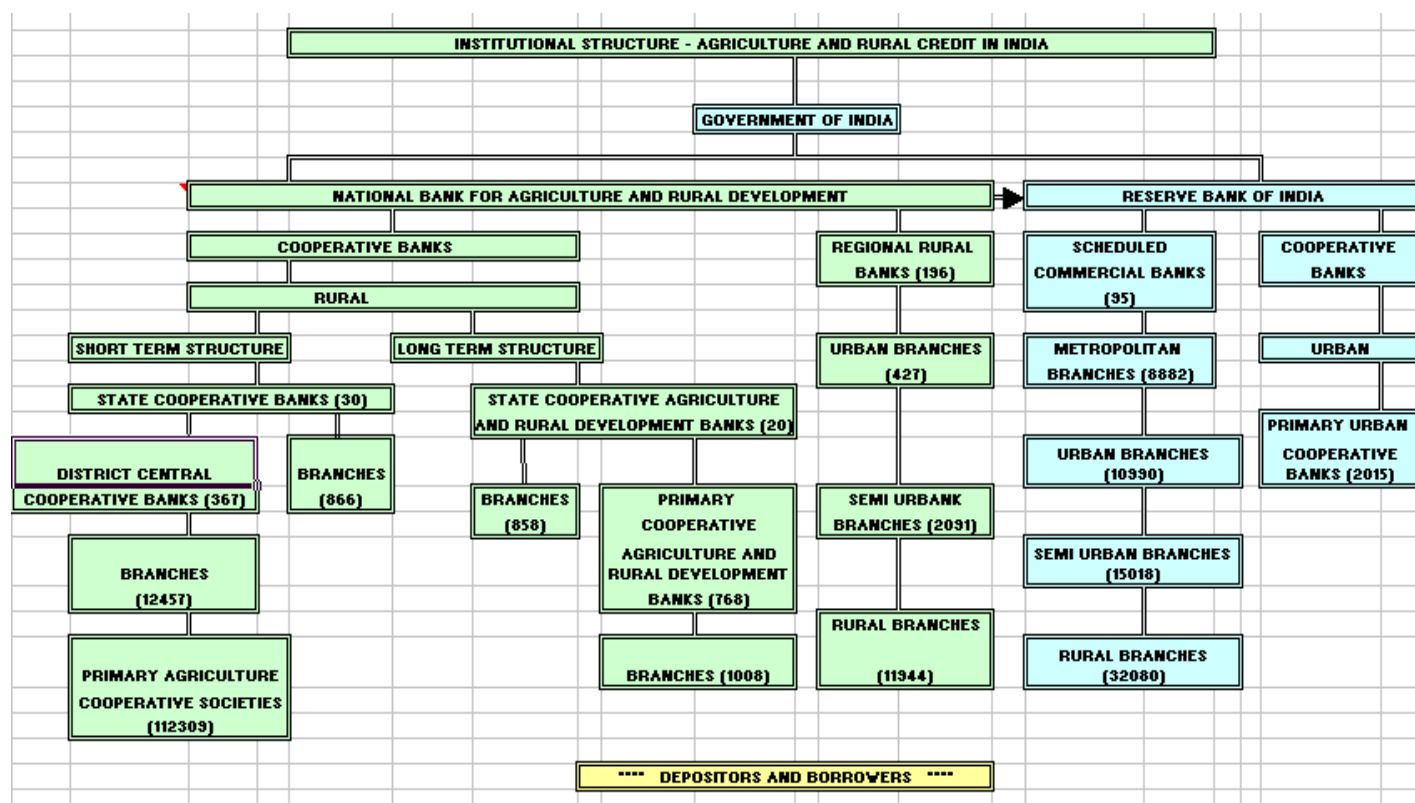
6. Perspectives

6.1 The encouraging progress in the implementation of the Kisan Credit Card Scheme clearly signifies the capacity of the Indian Banking Industry for adopting lending innovations as also easy adaptability of the farming community to new ideas. Further, the encouraging experience gained by the banking system has led to replication of the Scheme to cover some more related areas such as financing of Fishermen farmers, Weavers, Rural Artisans, Handicraftsmen, etc.

6.2 Further, taking advantage of the KCC mechanism, the scope of KCC Scheme has since been enlarged to cover both crop loans and investments credit requirements of the farmers under a single window through KCC, so as to encourage capital formation in the agricultural sector.

6.3 With the replacement of the traditional crop loans system by KCC, NABARD is examining the feasibility of incorporating the recent technological innovations and converting the KCC into a smart card facility compatible for use in the ATMs. This may facilitate the farmers to draw cash at any time to suit their requirements. Preliminary work has already been started by some of the banks. An attempt to introduce a cost effective ATM facility for KCC holders has been initiated by Indian Bank in association with NGOs/SHGs and if this experiment succeeds, the farmers could access their credit requirements actually at their doorsteps with little or no service charge.

Annexure I



Annexure II

KCC Scheme - Agency-wise Period-wise Progress up to 31 August 2004

Year	Coop. Banks		RRBs		Comm. Banks*		TOTAL	
					No. of cards issued		Rs. Million	
	No. of cards issued	Amt.Sanc.	No. of cards	Amt.sanc.	issued	Amt.Sanc.	No. of cards issued	Amt. Sanctioned
1998-1999	155353	8260	6421	110	622391	14730	784165	23100
1999-2000	3594869	36060	173301	4050	1365911	35370	5134081	75480
2000-2001	5614445	94120	648324	14000	2389588	56150	8652357	164270
2001-2002	5435859	159520	833629	23820	3071046	75240	9340534	258580
2002-2003	4578923	158410	963950	29550	2699883	74810	8242756	262770
2003-2004	4878236	98550	1274289	25990	3094108	93310	9246633	217850
2004-2005	1205953	80860	415674	9420	0	0	1621627	90290
Total	25463638	635780	4315588	106940	13242927	349610	43022153	1092340



Bolsa Nacional Agropecuaria S.A.

**THE FINANCING OF THE SMALL
AND MEDIUM SIZED FARMERS
THROUGH THE CAPITAL MARKET**

BNA



**A TOOL FOR
COMMERCIALIZATION,
FINANCING AND INVESTMENT**

A scenario for the modern commercialization of agricultural and agribusiness products.



Objective:

Integrate productive chains in order to arrange new commercialization and financing plans.

A capital market that offers:

INVESTORS:

Different options for placing their resources.



AGRIBUSINESS PRODUCERS:

Alternate instruments in order to obtain liquidity that will allow them to carry out their productive and commercialization activities.





CONSTITUENTS

With needs for:

- * Purchasing
- * Selling
- * Investing.
- * Obtaining work capital

Contacts →



BROKER'S FIRM



BACKS OPERATIONS



BNA
Bolsa Nacional Agropecuaria S.A.
COMMERCIALIZATION
SCENARIO



CCBNA (BNA CLEARING HOUSE)

A private company that ensures and guarantees the compliance of obligations derived from open market operations that are conducted through the BNA, with the important characteristic of acting as direct counterpart in negotiations.

- IS COUNTERPART
- EVALUATES RISK
- MANAGES WARRANTIES

WARRANTY SYSTEM

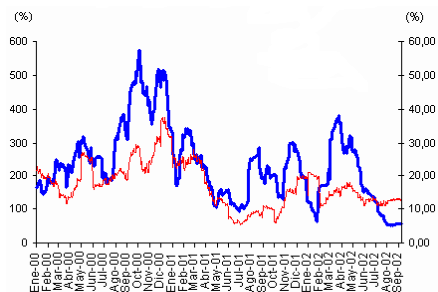
WARRANTY SYSTEM

- Basic Warranty
- Loan Warranty
- Margin/spread warranty
- The Warranty Fund

The Basic Warranty

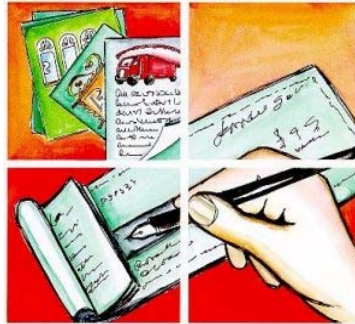
⇒ Is constituted in order to ensure compliance with the payment of known variations in the products' prices.

⇒ Depends on the historical volatility of the product's price.



The Loan Warranty

⇒ Is constituted with the purpose of covering the risk of payment in those cases where the payment has not been made after 30 days.



The Margin/Spread Warranty

⇒ Is the requirement that the Clearing House makes of the Broker and its obligation to increase the amount of the Basic Warranty, when this warranty is not enough due to effects of prices.



The Warranty Fund

⇒ Is constituted by contributions from shareholders and, in addition, is nourished by 10% of the operations entered in the Clearing House.

Warranties that are permitted

- Cash.
- Securities (high return rate) – (Fixed term Deposit Certificate).
- Bankers' Acceptance
- Letters of Credit.
- Bank Guarantees.
- The product, if the Clearing House has control of it.
- Surety Bonds (BNA Clearing House conditions)
- Trust Warranties.

NEW FINANCING TOOLS

COMMODITY DEPOSIT CERTIFICATE REPO'S



It refers to the immediate fixed term sale and repurchase of Commodity Deposit Certificates. It allows the stored product owner to have access to immediate funds in order to improve his/her liquidity, by selling the Commodity Deposit Certificates, with the commitment of repurchasing them in a period of time no greater than 180 days.

THE COMMODITY DEPOSIT CERTIFICATE

- ↪ A transfer tool.
- ↪ On commodities that are free of encumbrances or judicial seizures notified previously to the Public Warehouse.
- ↪ Nominative. Circulation restricted by the Public Warehouse.

WARRANTIES

- **ENDORSED COMMODITY DEPOSIT CERTIFICATE.**
- **A MINIMUM DISCOUNT OF 30% OF THE MARKET VALUE OF THE PRODUCT BEING REPRESENTED.**
- **WARRANTY ADJUSTMENT DUE TO FALL IN PRICES.**

CHARACTERISTICS- COMMODITY DEPOSIT CERTIFICATE REPO's

- ❖ REPO's are financial operations
 - Initial payments are not allowed.
 - Extensions are never granted.
 - Liquidating in anticipation, costs.
- ❖ Not conduct operations for the entire inventory – source of payment
- ❖ Coordinate cash flow with repurchases.
 - A fine of 5% of the amount of the initial sale.
 - Product sale at the market price so that the Clearing House can cover itself
 - Damages for the Broker and the Constituent.

ANIMALS IN CONFINEMENT “EGG-LAYING HENS”



- Commodity Deposit Certificate Price- “Hens to be slaughtered”
- Issuance of the Commodity Deposit Cert. from 20 up until 70 weeks old.
- Maximum term for the REPO: 70 weeks.
- A discount of 30% of the Commodity Deposit Certificate's amount
- The Commodity Deposit Cert must specify: race, color, age, sheds and mortality rate considered by the Public Warehouse.

FIXED TERM CONTRACTS



PURPOSES OF THE FIXED TERM CONTRACTS

- ✓ Gathers two stock exchange operations: Forward and Assignment.
 - ✓ Reduce costs.
 - ✓ Negotiate contracts.
- ✓ Finance vertically and non-vertically integrated companies.

ADVANTAGES

- ❑ The producer (Poultry raiser, Cattle raiser and pig raiser) receives work capital in an agile way and at competitive rates, in terms that go from 90 to 300 days.
- ❑ The investor receives good return rates in the short term and with a guarantee on his/her capital and interest.

REQUIRED DOCUMENTS FIXED TERM CONTRACTS

POULTRY FIXED TERM CONTRACT (CAT), PIG FIXED TERM CONTRACT (CPT).

- Mandate sale according to the BNA Clearing House regulation.
- Chamber of Commerce
- Surety Bond.
- Surety Bond at delivery.
- Authorization for removing the product.

LIVESTOCK FIXED TERM CONTRACTS (CGT)

In addition to the previous documents:

- An insurance policy against theft and terrorism .
- A certification from the operator .

CAT – POULTRY FIXED TERM CONTRACT



A sale operation with a repurchase clause for one-day old chicks plus the service of caring and fattening

CHARACTERISTICS OF THE CONTRACT

- Contracts for 20,000 one-day old chicks.
- Term: 90 days
- The poultry raiser acquires the commitment to care for them and fatten them in his/her sheds until the end of the production cycle.
- Prices are determined by the BNA Technical Department.

WARRANTIES

Seller:

- A bond that ensures the proper use of the advance payment, for 80% of the advance payment.
- An irrevocable authorization letter for removing the product.

CGT – LIVESTOCK FIXED TERM CONTRACTS



A sale operation with a repurchase clause for live cattle and the service of caring and fattening

CHARACTERISTICS OF THE CONTRACT

- Amount: 5,000 kgs. of live cattle
- Term: 120, 150, 210, 300 days
- The cattle raiser acquires the commitment to care for them and fatten them in his/her farms until the end of the production cycle
- Prices are determined by the BNA Technical Department.

WARRANTIES

Seller:

A bond that ensures the proper use of the advance payment, for 80% of the advance payment.

Insurance policy against theft and terrorism.



New Securitization plan for Livestock

“Final Feeding” (CEBA)

Comprehension of the livestock business

According to a study conducted for the Colombian cattle-raising sector, it was concluded that the final-feeding business depends mainly on:

1.1. Life cycle for the Cebú cattle.

- a. Breeding
- b. Post-weening
- c. Final-feeding

1.2. Classification of herd of Cattle according to their weight at entry:

- a. Head
- b. Body
- c. Tail

Comprehension of the livestock business

1.3. Climate

- a. High altitude areas; for milk production.
- b. Low altitude areas, for meat and milk production in double-purpose farms.

1.4. Cattle production cycles

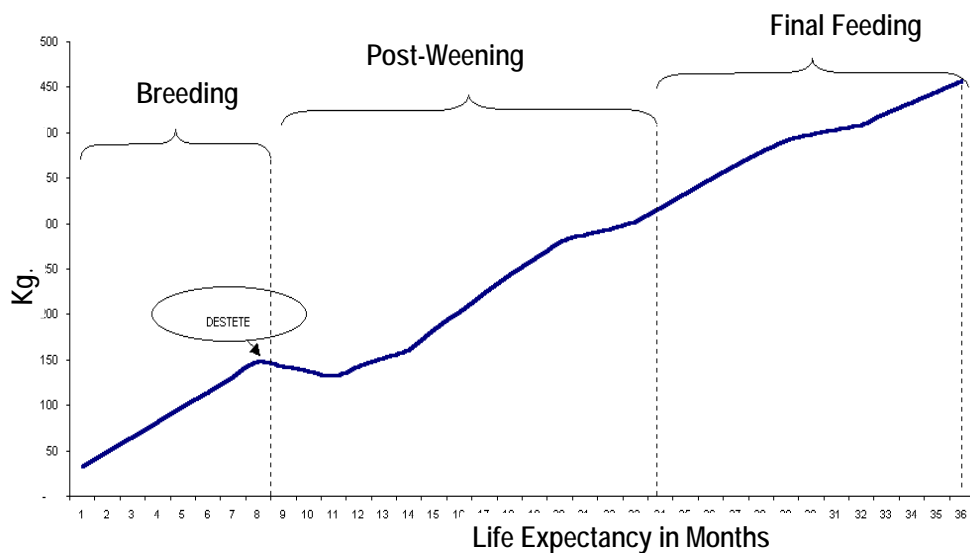
- a. Retaining Phase
- b. Sale Phase

1.5. Price Seasonal tendencies

Comprehension of the livestock business

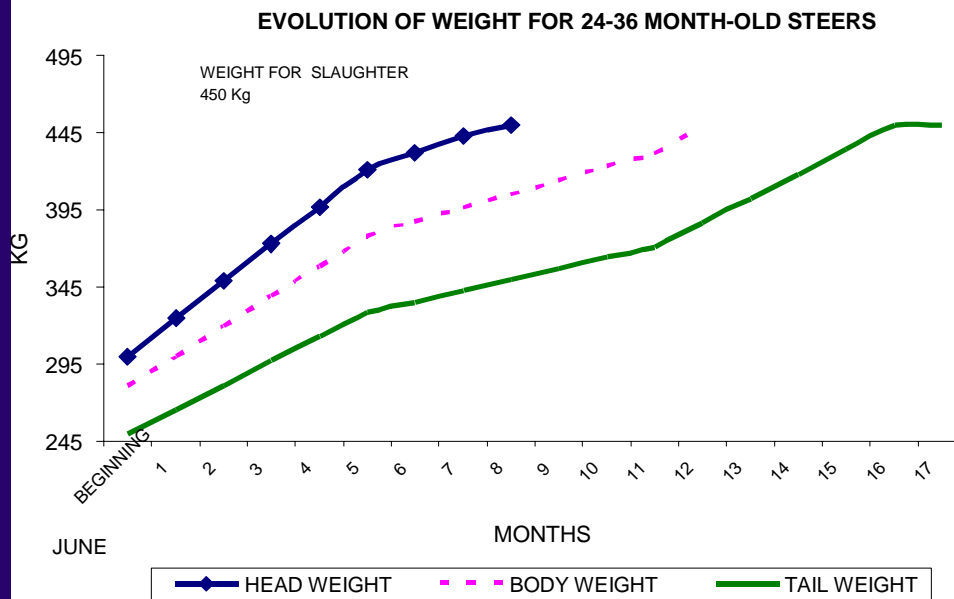
Cattle Life Cycle

Weight Behavior of an Animal in the Final - Feeding Stage



Comprehension of the livestock business

Classification of cattle herds, by entry weight



Methodology for Cash Flow Projections

1. Price Prediction:

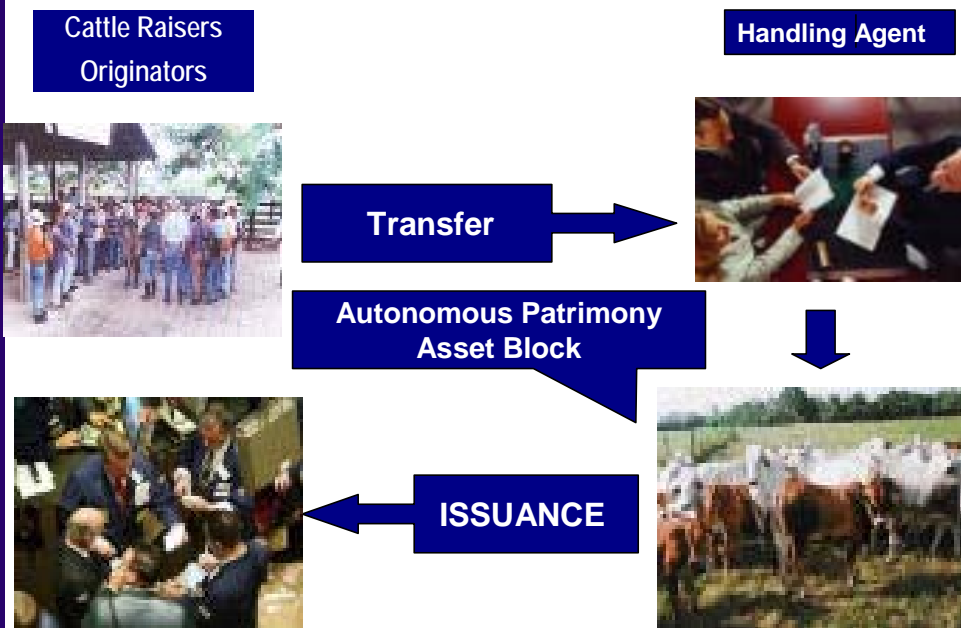
- Autoregression exponential models (ARMAX)
- Projections employing price tendencies reported by the cattle fair in Medellín. (The correlation with other market places is between 90% and 99%)

2. Weight Prediction:

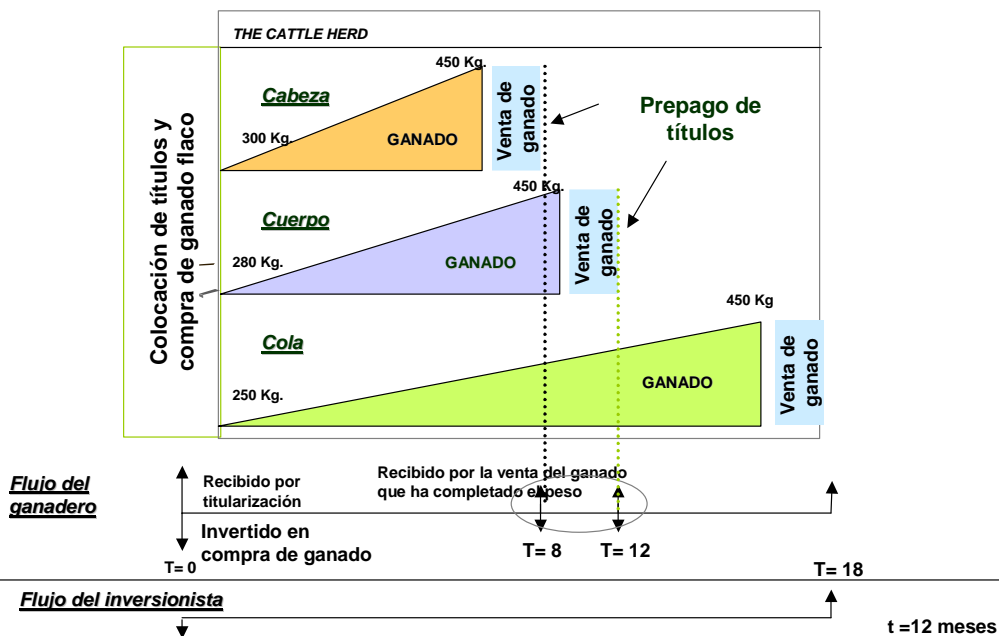
Biological Model that contemplates:

- Climate
- Cattle Location
- Number of animal heads per hectare
- Pasture coverage
- Time of the year when the final feeding process begins .

BASIC PLAN



BASIC PLAN



Securities Structure

Securities description

- **Type of Securities:**

- A Series: Credit content (Capital + Interest)
- B Series: Participation on the minimum return obtained by the least productive cattle grower.

- **Interest:** Fixed rate

- **Term:** 18 months for final-feeding livestock and 24 months for post-weaning/final-feeding livestock

- **Amortization System:** One sole payment when capital and interest is due.

- **Prepayments :** Two European Prepayment options (**Call**) (**Exercisable at the term of each option**) that are determined at the moment it is issued, in its characteristics regarding its exercise, amount and term.

Securities Structure

Financing Structure Payment Preference

Payments received for cattle sales are distributed according to the following order :

- Cattle commercialization expenses
- Taxes
- Accounts payable for TIG Autonomous Patrimony with the intervening parties .
- Other issuing, placing and maintenance expenses that are pending as of the date in which funds are received from the sale of cattle .
- Pending payments with A series securities (Premiums + Interest + Capital)
- The return of B series securities (In the case this were negative, it will be subtracted from the payable capital for the B series securities)
- B series securities capital
- Compensation for success in the managing of securitized livestock, paid to the cattle raisers managers .

Securities Structure

Returns for the Cattle raiser

The cattle raisers who manage securitized livestock receive their profit from two sources :

- **Accessory security returns:** They consist in a participation that all cattle raisers will have. As a coverage mechanism, returns will be equal to the profitability obtained by the least productive cattle raiser during the final-feeding process.
- **Efficiency Bonuses:** Cattle raisers with productivity greater than the minimum will be paid bonuses that compensate their labor .

Securities Structure

Issuance Structure

Weight Coverage

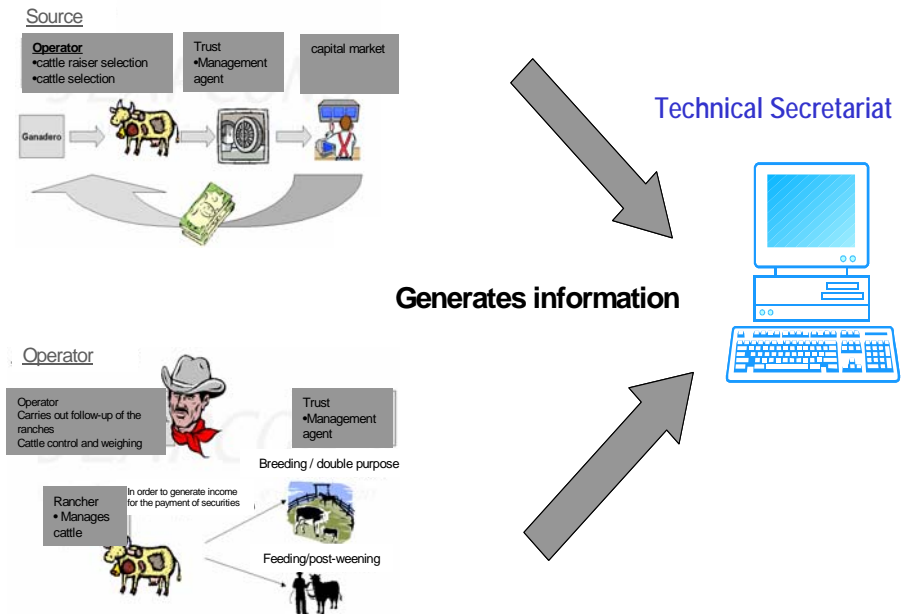
By means of incorporating additional livestock and pastures that are to be consumed in the final-feeding process, it seeks to cover the accident rate generated by the possibility that a proportion of livestock will not achieve the appropriate weight for slaughter .

Price Coverage

Comprised by a proportion of the issuance to be withheld for cattle raisers at the moment of placement, which will be attended by the residual cash flows generated by the sale of livestock ready for slaughter, prior attention of the principal series .

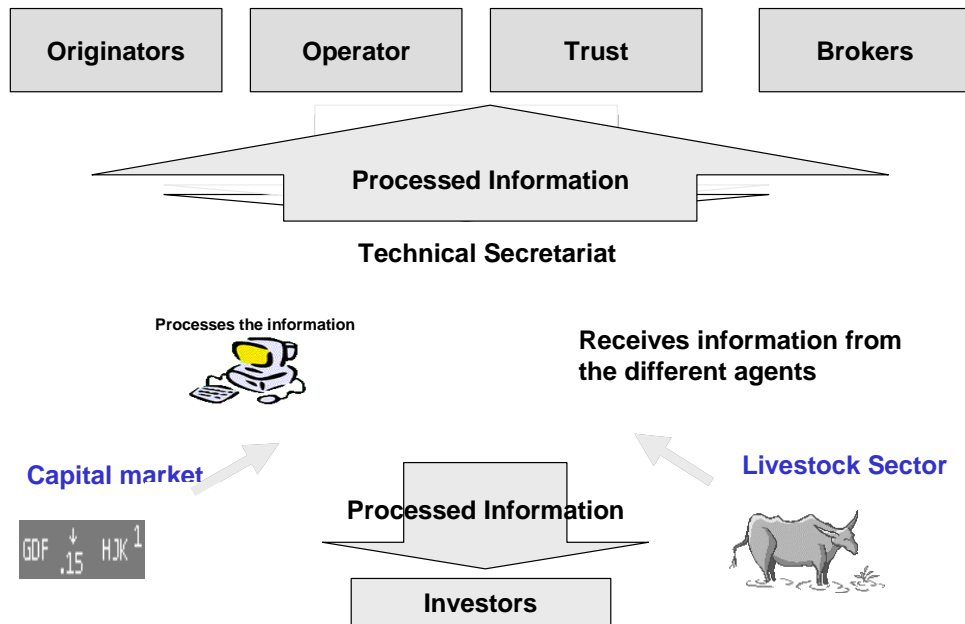
Operative Novelties

Technical Secretariat



Operative Novelties

Process Agents





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Trading in Dematerialized Warehouse Receipts: *Opportunities for banks and other financiers*

P.H. Ravikumar, MD & CEO, NCDEX Limited, India

Introduction

The provision of credit to the farmer in the Indian context has always been a puzzle for the local financial system. Despite the spread of banking into the rural areas, farmers are still reliant on the local landlord/moneylender/intermediary for finance due to other value added services that are provided to them. Typically, the local money lender provides input costs, assures a buy back safety net and in case of crop failures allows for deferral of loan repayment. For all these services he does extract a price often considered usurious. The biggest strength of the local money lender is of course is his turnaround time – whenever the farmer needs support he does it immediately and carries the risks. Attempts have been often made to substitute the local money lender cum intermediary (known as “arathiya”) without finding an alternative equally efficient means to discharge these functions.

Further, while banks do lend for the purchase of seeds, fertilizers and other inputs at the pre-harvest stage, the same is not extended liberally in the post harvest stage. This is because traditionally bank lending for agricultural crop inputs was as a part of directed lending norms from the Government evolved in an era of agricultural shortages. Storage and processing of agricultural produce was consciously sought to be discouraged in this period because they accentuated these shortages. Therefore the definition of what fulfilled directed lending norms was skewed in favour of crop (pre production) loans rather than post production loans. However, even though the country has evolved into an era where there are substantial agricultural produce surpluses (in fact exports have begun in recent past), the skewed directed lending norms continue.

In this context, it is felt that that a combination of futures trading in commodities and the evolution of a robust warehousing system, where the warehouse receipt and commodity balances are held in an electronic form through bank accounts (very similar to securities being held in an electronic account) would greatly help to improve the flow of credit to the farmers. The role of a collateral manager needs to be defined clearly here to complete the value chain in agricultural finance. Currently lending against commodities in warehouses is considered risky because of lack of credibility of the warehouse ownership and management structure, absence of robust systems for capturing data as to quality and/or quantity of the commodities stored and hassles in handling physical warehouse receipts – particularly as to having been signed by authorised signatories, properly stamped according to local laws etc. The intention is to evolve structures which mitigate these risks so that lenders perceive these sectors as profitable sectors on a risk adjusted basis.

Scheme of the Paper

The paper is broadly divided into 4 Sections. Section I examines the access of credit to farmers and the traditional modes of delivery while also analyzing the hesitation on the part of the banks to lend to this sector. Section II looks at the role of commodity exchanges in the Indian context in filling this gap by opening up opportunities to strengthen the link between the farmers and the financial system. In Section III, the role of commodity finance is examined in the global context with an overview of systems that are pursued in developed and developing countries. Lastly, in Section IV NCDEX story is described to bring to the forefront the initiatives taken by the Exchange in this direction which has led to the creation of a collateral management company, the first of its kind in the country.

Section I

Credit access

The farmer in India faces a major problem when it comes to managing cash flows. He borrows money to buy seeds, farm implements, fertilizers etc to grow his crop. This could at times be taken care of by systems similar to those in contract farming. But, the provision of credit for inputs to small holders has been problematic in developing countries. A case to be mentioned here is Africa, where in case of coffee and cocoa, production credit is rare. However, monopolies processing cotton and sugar in Africa had often facilitated the provision of in-kind credit for seeds, pesticides and fertilizer. Under these schemes, farmers sometimes have had little choice about the amount or cost of the inputs supplies; however there is evidence to suggest that in-kind credit generated positive direct and indirect benefits (Govereh, Jayne and Nyoro, 1999).

At the time of harvest, the farmer is not in a position to have 'holding capacity' and is forced to sell at the prevailing market price. Empowering farmers to hold on to the produce would need three enablers to be in place viz. – 1) warehouses in the vicinity (2) commercially acceptable warehousing, grading and assaying standards and (3) ease of raising liquidity against commodities stored in the warehouses. The problem is acute during the harvest time from a farmer's perspective because prices tend to fall in the market due to oversupply relative to demand. In such scenarios the farmer tends to lose out on receiving a better price in future when the prices would start rising. Very often the produce is sold to the local landlord/moneylender, who in turn has the holding power to store the goods and sell at a more opportune time. The critical aspect here is whether or not a farmer can be provided with a similar holding power as the trader, through changes in the operating environment?

A way out here would be to have a bank lend money to the farmer so that he maintains his cash flow while storing the goods in the warehouse against which he would be able to borrow money from the bank and repay the money once the stocks are sold in the market at more favourable prices. This kind of inventory credit is also called warehouse receipt finance, repossession finance or collateralized commodity credit. Such facilities exist in India in the form of loans against commodities. However, the volumes have been low accounting for just 1.2% of outstanding credit (RBI, 2002-03).

Lack of adequate post production financing impedes the ability of farmers to realise optimal prices for their crops. The situation is exacerbated by high opportunity cost of capital. In contrast, marketing systems of developed countries are assisted by a range

of facilities including low cost finance at rates as low as 50 bps above LIBOR and export credit guarantees.

Why do banks not lend?

There is no doubt that agriculture and commodity finance face high levels of risk: climate, economic, technological and political. These risks may be covariant affecting many borrowers in an area. In a number of cases, the belief of banks is that lending against commodities is a risky business and this supposition is self-fulfilling as they tend not to lend to this sector; or when they do give it a try, encounter failure. From a risk perspective farmers pay two types of risks – pre production and post production. The pre productions risks are insurable and costs of insurance become very relevant. For insurance companies, geographic centric historic data becomes vital to arrive at competitive premium pricing. In the absence of such data as in India, the approach is to err on the side of caution and price them at ranges clubbing all areas in the same “adverse zone of selection” group and levy premia accordingly. This results in all participants paying same level of premia which are high.

Post production, farmers run two types of risks. One is as to the extent of production and the second is as to the price that the produce is able to generate. The former (‘volumetric risk’) can be hedged through proxy contracts and the latter can be hedged through exchange traded futures and options.

Banks do have a facility for lending against commodities. However, this potential has never really been realized in the Indian context as lending against commodities is considered to be a high risk area as this sector is considered to be one of the defined ‘sensitive sectors’ in the economy and put on par with capital markets and real estate lending. The bank is firstly not sure of the credibility of the warehouse owner and its managerial ability. Instances are cited where the warehouse owner has disappeared or misappropriated the commodities stored in the warehouse. Cases of fraud have been experienced in the past which has made banks distrustful of the same. Secondly, the bank is not internally equipped to evaluate the goods stored in the warehouse and is uncertain of the quantity and quality of the goods lodged therein. Thirdly, there is doubt regarding the longevity of the goods. Agricultural commodities largely are prone to deterioration in quality as they are stored for longer periods. Hence, even though the goods are pledged to the bank, in case of default the bank may not be able to realize the value due to the deterioration in quality of the farm produce. Lastly, authenticity of the warehouse receipt which has been pledged by the farmer is sometimes in doubt. Therefore, given the high risk attached to this kind of lending banks have preferred to keep away from such credit and have also tended to charge high rates of interest on such loans. This has become an even more serious issue in light of the stringent capital adequacy norms that are to be implemented under the Basle II Accord where risk weights are to be adduced having regard to the level of risk in each lending structure as reflected by its credit rating.

Historical experiences in most developing countries which are commodity dependent show that financial institutions are weak in managing operational risks arising out of commodity based lending. They are reluctant to outsource such management function simply because there are no credible agencies to whom such outsourcing can be effected. Consequently, rural finance has been limited because it is not cost-effective and the recovery rate, even in the Indian context, has not been very satisfactory (in FY02, the share of non-performing loans in priority sector to total loans to priority sector was 14.3% compared with 7.3% in case of the ratio of non-performing loans in non-priority sector to total loans to non-priority sector).

Two solutions to improve the lots of farmers here are (a) to have institutions geared to provide information, suite of products to farmers and manage more effectively the inherent risks in lending structures in commodity lending and (b) using technology to modify the warehouse receipt system. The former implies the growth of commodity derivative markets with an array of instruments such as futures, swaps, options in order to facilitate management of risks arising from commodity price volatility and establishment of collateral management entities. The latter entails strengthening and probably supplanting existing warehouse receipt system through use of technology and evolving approaches similar to electronic security accounts. The approach here would be to segregate to risks in physical management of commodities and issues like storage, grades and sustenance of grades from accounting aspect and tradability of warehouse receipts.

Traditional credit approaches

Commodity lending has not been a preferred choice for banks in the Indian context as this has never been emphasized by policy pronouncements. In fact, till recently, the Reserve Bank of India had consciously discouraged banks from lending against commodities by prescribing very high margins under a system entitled “selective credit control”. This was introduced more on account subsisting shortages in commodities and particularly agro commodities to clamp down on speculative hoarding as traders were in a position to take finance from the banks and hold on to the goods and push up the prices. Selective credit controls were hence imposed by the RBI in a bid to curb such speculative activities which also helped in controlling the growth in credit as it served as a monetary policy instrument. Under this scheme banks would insist on certain (usually very high level of) margins against which lending against commodities would be undertaken. However, today this is not too relevant as we are no longer in an era of shortages.

While under the directed lending policy structures, banks are obliged to lend to agricultural sector identified as a high priority area to the tune of 18% of their aggregate credit, policy definitions of what constitutes agriculture exclude almost the entire post production loans. Because of policy level disincentives to lend against commodities and since normally banks secure their loans by taking security over either fixed assets or the inventory and receivables but given the issues in managing physical volumes of commodities stored in warehouses, issues relating to their grades/standards and deterioration during process of storage as well as price fluctuations and consequent erosion of cover to the lending banks, till recently banks did not look to this segment as a profitable source of lending business. Some significant aspects of the credit delivery to this segment have been described in Annex 1.

Role of conventional intermediaries (traders or *arathiyas*)

Traders have traditionally performed a very important role in the value chain in agricultural commodities. Being the first point of contact with the farmer, they have been the intermediaries who have picked up the produce from the farmer and also provided him with finance right from the sowing process to the harvest time, albeit at what are generally considered as usurious rates of interest. They also provide insurance and buy back facilities under a system analogous to the contract farming. . Usually, they had prior knowledge of area under cropping, expected level of productions and hence the expected direction of price movements. They would therefore pace their purchases according to these expectations and derive full benefit

of expected price movements. In fact they were in a sense able to determine the direction of the price movements. These intermediaries have had the holding power to store the produce and sell in the market when the prices are more favourable thus making a profit on this transaction. Lack of awareness, inability to access prices and evolving factors put the farmers in a position where their bargaining strength was almost negligible.

The governmental response was to announce minimum support price (MSP) for some key commodities and facilitate sale by farmers to government owned entities at the announced prices. However, these procurement efforts did not spread out uniformly across the country and remained confined to a few pockets. Procurement prices became subject to political pressures and MSP at levels higher than market determined prices led to migrating farmers to grow crops which they would not have otherwise grown. This led to a situation where in cereals the country build up surpluses but in cash crops like pulses and edible oils there were continued shortages, forcing need to continuously import these products.

Therefore, while the role of such an intermediary cannot be contested, there is need to search for one where on balance the farmer would get a fair deal in this chain. In this context, it is felt that commodity exchanges and neutral aggregators would play an important role in delivering better returns to the farmers while the banking system could innovate with structured products to complete the value chain. The need for aggregators is important because individual farmers may not be able to access the commodity exchange platforms and hedge his price risk; entities like producers' cooperatives, bank branches and agricultural extension service providers and warehouse service providers could play this role effectively.

Section II

Role of commodity exchanges

Commodity exchanges play a major role in offering a price discovery mechanism and enabling players to hedge their price risk. Farmers can through an aggregator pool their produce together and sell forward on the exchanges and thus realize better prices. They would be aware of both the spot and futures process and could take an informed decision whether to sell at current prices or sell forward. For a farmer to exercise such informed judgement, it is absolutely necessary that exchanges put in place networks to reach both spot and futures prices to farmers in a simple and easily accessible fashion. In this context, exchanges need to invest in the necessary infrastructure to carry these prices to the villages. They would need to partner with entities like post offices, bank branches, warehouses, and retail chains besides the ubiquitous "mandis" (local market places where farmers come to sell their produce) which can be used to display prices on a real time basis. But, to make the system credible it is essential to improve the creditworthiness of the farmers by shifting lending risk to the commodity away from the farmer so that the performance risk of the farmer is reduced and complete the chain of institutional finance (Varangis and Larson, 1996). They would also need to bring crop insurance companies to provide an integrated solution to farmers from the stage of sowing to harvesting/storing/selling.

It must be mentioned that commodity futures exchanges have become important in developing countries only in the 1980s as governments have in the past resorted to direct intervention in agri markets to protect the interests of farmers. This was based on the Prebisch-Singer view of ever diminishing commodity terms of trade and a

perfectly elastic supply of labour from the rural sector associated with the Lewis dual economy model. Commodity markets have become important due to trade liberalization which has strengthened the relationship between domestic and world prices, improvements in technology and growth in demand for commodity instruments from institutional investors (Larson, Varangis and Yabuki).

The importance of risk management was evident in Mexico after the Gulf war. The Mexican government used a complex combination of futures, options and swaps to hedge six months of its oil exports. This ensured the government a fixed and predictable revenue allowing policy makers time for adjustment when prices fell. Another example of the use of innovative finance with a risk management instrument was in case of the Ashanti Gold Mines in Ghana. With the help from the IFC, Ghana was able to arrange for finance of its largest gold mines through forward sale of gold. This was possible due to Ghana's policy of liberalization of the financial sector and changed regulatory structure which made it attractive for investors.

In India, the commodity exchanges have been in operation for over a century. However, due to a near total ban on forward trading for over 40 years (between 1960's and 2000), forwarding trading activity in commodities became virtually nil in formal markets but went underground into informal/illegal markets and remained confined more to the unorganized markets. As this ban was gradually relaxed in the last few years, regulated commodity exchanges sprung up which were owner driven and non-demutualized being run by the trading community on its own. Hence, the farmers never derived the benefit of price discovery mechanism on these local commodity exchanges. However, in 2002, this ban was completely relaxed and an initiative taken by the government which led to the establishment of national level online multi-commodity exchanges which were to be demutualized. The basic aim has been to bring these opportunities closer to the farmer and strengthen the linkages therein.

Need for aggregators

In order to enable the farmers to access this entire value chain they need to be able to access the commodity exchanges with the banks playing a support role in the provision of finance to them and insurance companies covering the pre harvest crop risks. Given the levels of literacy, the current financial strength of many of these farmers, it would be unrealistic to expect each of them to access the exchange platforms. There is therefore a need to have an aggregator at the ground level who can work with them, pool their requirements and canalise their requirements on to the exchange platforms to realize this objective. For this the aggregator has to be a neutral player who does not have any trading interest but earns a fee from such transactions. Producers' cooperatives are ideal to fill this role; unfortunately, the cooperative movement is strong and well developed in India only in select pockets. The alternative therefore would be a bank branch. The bank branch is an ideal candidate for undertaking this function and considering that there are about 70,000 bank branches in India and at least one in each of the basic administrative unit of the government (the "block"), with 70% of them being located in rural and semi-urban areas, there is reason to believe that this job can be accomplished in an unbiased manner so that the links between commodity exchanges and the farmers are established. In fact, the futures sale proceeds from the exchange can be canalised through the bank branch to credit enhance their lending structure. At the same time the banks can also provide the finance for the farmers against such collateral and hence complete the value chain.

Larson, Varangis and Yabuki, (1998) argue that a key issue in making available hedging instruments to small producers and farmers would necessarily mean building the necessary institutions that will allow retailing of risk management instruments to them. The system needs to allow for aggregation of price risks of these producers. In some cases, the government puts in place an aggregator: ASERCA in Mexico hedges cotton prices, national Coffee Association of Guatemala, ANACAFE facilitates credit lines to producers requiring that coffee is hedged to ensure there is guarantee of repayment. In fact, ANACAFE has also trained banks to join the credit stream.

Varangis and Larson (1996) have also argued that large private traders and Therefore, while the role of such an intermediary cannot be contested, there is need to search for one where on balance the farmer would get a fair deal in this chain. Banks are ideally suited to play the role of an aggregator in developing countries.

In terms of instruments that suit farmers, options would be the ideal instruments. In the Indian context, current laws (Forward Contract Regulation Act, 1952) specifically forbid exchanges from offering exchange traded options. The advantage for a farmer in case of an option is that enables him to have an upside and fully protects him from downside. In fact, the government can use these for procurement by underwriting the option premium if at all warranted. This would ensure that the benefits of MSP and procurement are uniformly available across the markets and the government leaves the issue of physical procurement, transport and storage to the market forces. It still achieves at far lower cost overall the policy objective.

Section III

The collateral-based-finance system

Inventory financing has been seen as potentially a route to be used for lowering finance costs particularly for farmers(Larson, Varangis and Yabuki, 1998). But, for this, there is need for the accompanying infrastructure to be in place. To enable farmers have better access to the financial system. The warehousing system in the country is to be strengthened. The warehouse receipt needs to be a credible and preferably a negotiable instrument recognized by the regulatory systems. To make the warehouse receipt credible it is essential to have the goods stored in a warehouse certified by accepted certification agencies/assayers so that there is a guarantee that the goods stored in the warehouse meet certain (benchmark) specifications and have a defined longevity. These attestations would be from credible agencies which in turn are paid a fee for this purpose. The guarantee will ultimately have to be provided by an independent entity, namely the commodity exchange which will ensure that the farmer does not suffer on account of default of the buyer on the settlement date.

In fact, the bank or the farmer (borrower) should sell forward the inventory on the commodity exchange so as to lock into a price which is more favourable and assured to all the concerned parties of the transaction. This will act a security to the bank. In such a system the bank is guaranteed of the product, its quality as well as its life-time and can go ahead and provide finance to the farmers on more favourable terms. The pay-out from the exchange could be canalised through the bank and in that sense escrowed. Banks would be better off as the counter party risk shifts from the buyer to the exchange or its clearing corporation which would be far better credible agencies. Overall, for the bank the risk is reduced- and hence they would be induced to lend more funds at more favourable interest rates. Under the proposed BASLE II norms, the bank under this structure would need to commit lesser risk capital than otherwise as these assets get upgraded from say a B- to AA rating with the collateral being

provided by the borrower in the form of the warehouse receipt. The farmers will be better off as they pay lower interest rates which more than makes up for the certification costs imposed by the assayers.

Theoretical rationale for the warehouse receipt system: Developed countries

Warehouse receipts are widely used in industrialized countries as secure collateral to obtain financing for commodities. Their use has been limited in developing countries due to lack of appropriate legal and institutional involvement. The potential benefit of this system in these countries is however considerable especially when the financial institutions are weak. The working of the system is as follows. From his own initial working capital, a local buyer makes crop purchases. He then places the same in a bonded warehouse. The warehouse registers the delivery and issues a receipt for the crop. The receipt can be used to obtain credit from local banks. The warehouse could operate as a bank itself entering into repurchase agreements with the local buyers. The warehouse buys the commodity from the local buyer and gives him the option to repurchase the commodity in the near future at a slightly lower price. The spread between the two could be the interest on a standard loan. When the receipts are standardized, then banks can also create a secondary market with other financial institutions. The warehouse has now certified the quantity and quality of the crop. The financial institution, which can be the warehouse itself, can then also hedge the price of the commodity through exchange traded futures, exchange traded options or OTC options, etc. The combination of the warehouse receipt and the price hedge makes the collateral substantially secure. When coupled with robust insurance, the security is comprehensive. The warehouse is bonded and insured and guarantees the physical collateral. The price hedge guarantees the lender against this collateral. Five areas require specific action: standardization of receipts, clear rules on right to collateral, banking rules, regulations and risk management environment.

Coulter (1998) talks of 5 alternatives in which agricultural commodities can be held as security.

- An independent collateral manager can be used with no involvement in the trade. Banks here feel secure about the transaction as there is no conflict of interest as far as the collateral manager is concerned.
- A slight variation of the above is the practice called 'field warehousing' where the collateral manager is ceded with full control of a warehouse on the borrower's premise.
- The collateral manager can be a highly reputable and creditworthy trader who stores commodities belonging to farmers or other traders who are less well known to the bank, but nevertheless qualify for secured lending.
- Alternatively, the borrower may store the commodity in his own warehouse under the supervision of a surveillance company.
- Lastly, access to the warehouse may be controlled directly by the bank through a 'dual key' arrangement. For grains, however this system is unwieldy, requiring both the banker and the borrower to be present every time a bag is moved out.

Coulter and Shepherd (1995) also conclude that the most important lesson from inventory credit is that it should be treated as a business proposition where all the parties, the bank, borrower and commodity market gain. When the governments tried to force the same in Africa, the schemes failed as it did not make business sense to the concerned parties. Commodity markets should have the necessary infrastructure and

technological skills in storage management and pest control and should also have business skills and independence from political pressure which will provide a reasonable guarantee of stock integrity. Their reputation is important in getting banks seriously involved and therefore, it is important to involve some international companies or leading national enterprises involved to establish these services.

Market research (Rabobank International)

During 2002, Rabobank International conducted an in-depth client needs research project with its leading customers and target companies active in the production, trade and consumption of soft commodities in light of the new Basle II norms to be implemented soon. The results were:

- Most corporates relied on traditional short-term working capital limits to finance commodity inventories.
- As a result of the introduction of Basle II regulations and the trend towards use of risk adjusted return on capital models by banks, it was expected that the cost of clean lending will increase substantially. Therefore, over reliance on working capital loans may not be sustainable for a long period of time.
- There was a growing interest in diversifying sources of finance away from clean loans to structured finance based on collateralized lending.

In this context, Seibel (2003) has argued that governments need to make determined efforts to create conducive policy environments with new legal forms for local financial institutions, deregulated interest rates and prudential regulation and supervision of financial institutions. This has to be paralleled by a deregulation of forex and the trade regime.

Requirements for banks

Apart from having more control over commodities, banks will need to have a closer look at the financial situation of the warehouse owner, the insurance it has taken out against theft, fire etc. but also liabilities, the quality of the warehouse operations, the quality of the insurance companies etc. Credit rating of warehouses akin to financial instruments rating by credit rating agencies will substantially improve secondary market liquidity for collateralised lending structures. All these items have an impact on the processing capabilities of banks. Only banks with that have invested in BIS II models, efficient monitoring systems and have in-depth knowledge of the commodities it finances will be able to continue their activities in commodity finance.

Section IV

NCDEX Limited and its initiatives

NCDEX (National Commodity and Derivatives Exchange Limited) is a national level multi-commodity commodity exchange dealing with 24 products and commenced operations on 15th December 2003. The primary function of the exchange is to enable price discovery and strengthen the process of price dissemination so as to reach out to the farmers in particular so that they have a view of both the spot and futures prices that are prevailing in the country.

When NCDEX commenced its operations, the spot markets and knowledge of spot prices for specific commodities were available in a vast number of “island like” local market places (“mandis”). The earliest that one could know the spot prices of commodities with any reliability was with a gap of almost 12 to 24 hours. In a developing futures market, credible spot price knowledge is an essential ingredient (though not the sole) for taking a future price view.

In this context, NCDEX has pioneered a system of polling of spot prices from local mandis (market places) thrice a day for all the commodities that are traded on the exchange. Universes of local traders specialising in trading of specific commodities has been created. Using internet the polled prices were pooled into a central data base where they are “boot strapped” (Annex 2). The data is statistically cleansed and disseminated through various channels along with the futures prices on a near real time basis. To enable the farmer to become aware of these prices, the Exchange has already implemented the following price dissemination strategies:

- Television channels including Doordarshan, the national government run channel which has a reach of over 99% of the enabled television viewership.
- New agencies such as Reuters, Bloomberg, Telerate, Telequote etc.
- Dedicated farmers call centre (Kisan call centre) – a government sponsored initiative where the farmers can call up a number 1551 anywhere in the country and make any enquiry regarding agriculture. All price related information is sourced from the Exchange.
- Rural kiosks of ITC Limited called e-chaupals (a meeting place in English) disseminate prices of the exchange.
- Some banks are already in the process of carrying the prices in some of their branches on a pilot basis.

NCDEX is also working towards having post offices, radio stations and all rural branches of banks carry these prices so as to enable the farmer to be aware of them so as to sell the crop at the best possible price and time base don this information. Farmers could also choose their cropping pattern based on this information.

While having the knowledge of prices is critical to enable the selling schedules of farmers, the issue is of the farmer procuring finance in the interim period he holds on to the crops. While the Exchange has already tied up with 11 mandis (market places), banks and the State warehousing corporation in the state of Madhya Pradesh in India, whereby the farmers who harvest soybean during the season can store the produce in a certified warehouse of the exchange and procure immediate finance of 80-85% of value of the produce from the banks and repay them when they receive their money after selling forward on the Exchange. However, in order to make this chain all pervasive, the exchange has set up a national level collateral management company to oversee such operations as warehousing is not a core function of an exchange.

Collateral Management Company

NCDEX has taken an initiative in setting up a new company to take care of the issues of warehousing, collateral management matters as well as facilitate commodity finance by banks. This company, functioning as a one-stop solution provider, would provide all related activities associated with physical commodity delivery. Today, a farmer who harvests his crop has to sell it in the spot market at the prevailing price as he needs money and cannot sell forward even though he knows that the prices would

improve in future – which is the typical post-harvest tendency. Banks are not willing to lend against commodities held over in warehouses (except warehouses in the state sector) as they are not certain of the quantity, quality, grades, and longevity of the crop stored even if it is kept in a warehouse due to the credibility factor.

Now, this problem would be overcome on account of NCDEX's initiative in setting up this collateral management company, whose main objective would be to facilitate banks moving from a balance sheet lending perspective or individual farmer credit risk lending approach to a commodity based lending perspective. This is sought to be achieved by bringing under it an entire chain of warehouses. These warehouses would be accredited, credit graded based on certain specific factors (like credit rating of financial instruments or five/four star or other star ratings for hotels). The warehouse receipt itself would either be issued by this collateral management company or credit enhanced by it. Once certified by this company or issued under its umbrella, the warehouse receipt would become credible marketable lending instrument for banks. Further, world renowned assayers/certification agencies would pre-certify the goods kept in the warehouse which details would be specified in the warehouse receipt. The lending bank would now be certain about the authenticity of the produce stored in the warehouse and would be in a position to lend money to the farmer at better (lower) rates as the quality of the farmer gets transformed automatically from a lower (say, triple B grade) to a higher (say, a double A) credit rating. Banks would also have to commit lower capital for such assets with a lower credit risk in accordance with the proposed Basle 2 norms and farmers would get the finance at lower rates. This would be a win-win situation for all the players concerned.

Holding of commodity balances in electronic form in bank accounts and delivery

NCDEX has already worked successfully to network accredited warehouses and enabled holding of commodity balances in electronic form and dematerialized the warehouse receipt (in partnership with electronic depository called National Securities Depository Limited (NSDL)). This has since been extended to include the other Indian depository called the Central Depository Services (India) Limited (CDSL) so as to enable smooth physical commodity settlements. The Exchange was the first to facilitate holding of commodity balances in an electronic form very much like cash in a savings bank account and securities in an electronic custodial account. Physical delivery in an electronic form (demat mode) has already taken place in Castor seed, guar gum, gold, silver, wheat, pepper and guar seed. Efforts are currently under way to popularize the idea of holding commodity balances in an electronic form by retail investors and private banking groups/portfolio managers just as in equities which is already in vogue today.

Concluding remarks

Lending against commodities has always been a grey area in the global and Indian context on account of the risks which are attached given the uncertainty of their prices. For organised sector participants to fully derive benefits of lending to this sector, they need to efficiently perform all the functions (insurance, credit, buy back, quick turn around time etc) that the informal sector participants today perform. For the farmers to have fair prices for their produce, they need to have access to price information, facilitating institutions on the ground and a set up which provides liquidity to them against their produce. Financial institutions have a very important role to play provided they are able to mitigate their risks. The existence of commodity exchanges provides avenues to hedge price risk for all concerned parties. In this context, NCDEX has taken some novel initiatives in creating a system for disseminating both spot and futures prices, offering price hedging platforms, warehousing involving assaying of the goods, and a collateral management company which will jointly serve the purpose of providing credit to the farmers (producers).

Already in commodities like guar seed, guar gum and castor, the market today talks of “NCDEX quality” for which premium is offered. It needs to add suite of products (options in particular) and facilitate credit and insurance products to the ground level participants which is on the anvil. Next two or three years should see a transformation in Indian agriculture. As farmers realise the full potential of price knowledge, they will decide the choice of future crops based on futures prices and not on past prices. That would mean migrating farmers to demand led cropping pattern since futures prices will indicate to the emerging demand trends. That would herald the withdrawal of government’s price support mechanism. While strategic buffer and public distribution requirements for those below poverty line can still be handled by the governmental procurement agency/structure, the balance procurement currently done by these agencies can be left to market infrastructure which should bring substantial reductions in the amount spent by the exchequer to store and move the procured produce. A major portion of the budgetary support (currently at over USD 500 billion) can be freed for alternative purposes. The freed subsidy can then be profitably deployed for strengthening rural infrastructure and in softer sectors like health and education.

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Annex 1: Lending to Agriculture in India

Direct Agricultural advances are given by banks directly to farmers for agricultural purposes. These include short-term loans for raising crops i.e. for crop loans. In addition, advances up to Rs. 500,000 to farmers against pledge/hypothecation of agricultural produce (including warehouse receipts) for a period not exceeding 12 months, where the farmers were given crop loans for raising the produce, provided the borrowers draw credit from one bank. Direct finance also includes medium and long-term loans (provided directly to farmers for financing production and development needs) such as purchase of agricultural implements and machinery, development of irrigation potential, reclamation and land development schemes, construction of farm buildings and structures, etc. Other types of direct finance to farmers includes loans to plantations, development of allied activities such as fishery, poultry etc and also establishment of bio-gas plants, purchase of land for agricultural purposes by small and marginal farmers and loans to agri-clinics and agri-business centres.

Indirect finance denotes finance provided by banks to farmers through other agencies. Important items included under indirect finance to agriculture are as under credit for financing the distribution of fertilisers, pesticides, seeds, etc, financing distribution of inputs for the allied activities such as, cattle feed, poultry feed, etc, loans to Electricity Boards for systems improvement scheme under Special Project Agriculture (SI-SPA), deposits held by the banks in Rural Infrastructure Development Fund (RIDF) maintained with NABARD etc, loans to *arathiyas* (commission agents in rural/semi-urban areas) for meeting their working capital requirements on account of credit extended to farmers for supply of inputs and lending to Non Banking Financial Companies (NBFCs) for on-lending to agriculture.

The Government of India has also established the concept of a farmer credit card, called 'kisan credit card', which has been floated to cover even term loans besides consumption needs. Public sector banks have issued over 14.5 mn cards till mid 2004.

Annex 2: Process of Bootstrapping

The bootstrap technique is a non-parametric method for computing the test statistics, i.e. (i) Computing the reference rate as an average of the polled rates after an appropriate amount of trimming to minimise noise. (ii) Computing a measure of dispersion i.e. the confidence intervals for the trimmed means. In order to arrive at an efficient estimate of the reference rate, from the bid and offer rates collected from a known sample of traders, the outliers or extreme values are identified. This is required so that the reference rate, which is a mean of the polled rates, is not unduly influenced by extreme observations, which are likely to be noisy.

A user is also interested in knowing the efficiency of this mean value. That is to say, he is interested in knowing the probability that the estimated trimmed mean lies in a given range. Thus, the standard deviation of the mean has to be estimated. Since the spot market is heterogeneous, constrained by limited participants and dealers, the underlying distribution of the offer and bid rates is not normal and hence the usual measures of efficiency of the mean rate, i.e. the standard deviation, is not valid.

The bootstrap method does not make any assumptions about the distribution from which the trimmed mean is drawn. The bootstrap method facilitates construction of the entire distribution for the mean and hence all the required parameters can be calculated from this constructed distribution. Since the observations are drawn at random and the number of simulations is very high, the probability of any extreme observations affecting the mean value and its standard deviation is extremely minimal.

The bootstrapping technique involves generating multiple data sets based on the rates polled, wherein the number of iterations required is determined dynamically and could be very high. Based on the means generated from these multiple data samples, the standard deviation is calculated. The bootstrapping technique is also used to identify the outliers in the polled data. This is done by trimming the data set of its extreme values and again using a bootstrapped sample to calculate the standard deviation. Bootstrapping ensures that the data sets are drawn at random and this guards against the possibility of cartelisation and of extreme observations influencing the mean. The mean corresponding to the lowest standard deviation is finally reported.