

Improving the functioning of commodity markets in developing countries: Practical experience

Common Fund for Commodities

Improving the functioning of commodity markets

- A practical way to provide assistance to poor commodity producers
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Outline

- Common Fund for Commodities
- Policy instruments for improving market efficiency
- Practical experience
 - ◆ I. Warehouse receipts
 - ◆ II. Commodity Exchanges
 - ◆ III. Price Risk Management

Common Fund for Commodities

- an intergovernmental financial institution
- 106 Member Countries
- Finances commodity development projects sponsored by ICBs
- FAO IGGs on Grains and Rice are designated ICBs

CFC Financing

- 8 to 10 projects per year
- Up to USD3mln per project, average USD1mln
- Grant, Loan, or a combination
- Special programme for development of market structures:
The First Account Net Earnings Initiative

Available development instruments

- "to assist Developing Countries ... effectively participate in the global commodity market"
- Areas:
 - ◆ physical market development;
 - ◆ market infrastructure;
 - ◆ institution-strengthening;
 - ◆ enhancement of commodity market risk management commodity trade financing;
 - ◆ commodity market development policy;
- Translates into projects

I. Warehouse inventory credit

- an agreement to use commodity stock as collateral
- can be facilitated by warehouse receipts
- Functioning warehouse receipts produce multiple benefits beyond inventory credit

Warehouse receipts: the benefits

- systematic control and quality certification
- access to credit
- financing bridge - lowering financing charges to the borrower
- reduces domestic commodity price fluctuations by allowing farmers to profit from them
- dematerialization of commodity transaction

WRS and Exchange

- Dematerialization of commodity transactions separates the trades from the physical movement of commodity stocks. It makes WRS useful for commodity exchange because of:
 - ◆ reduced transaction cost
 - ◆ easy trades settlement
 - ◆ effective price discovery
 - ◆ attractive to speculators
- dematerialization of commodity transaction is also the most "advanced" result of the use of warehouse receipts

WHR projects funded by CFC

	Location	CFC contribution, USD	Start	Completion
1	Ghana*, Ethiopia, Zambia	1,180,000	1998	2004
2	Russia, Bulgaria**	936,150	1999	2002
3	Cameroon, Côte d'Ivoire, Nigeria	2,238,000	2000	2005
4	Tanzania, Uganda (cotton)	3,609,000	1999	2006
5	Tanzania, Uganda, Zimbabwe (coffee)	3,711,000	1999	2006

Selected WHR comparison

	Cameroon	Ethiopia	Tanzania	Russia	Zambia
Main commodity	Cocoa	Grain	Coffee, Cotton	Grain	Grain
Legislation	Available	Introduced	Introduced	Civil code	None
Warehouses	Private	Public (EGTE)	Private, Coop	Private	Private
Quality control	CMA	Public	CMA	Public	Association
Financier	International	Local	Local, International	Local	Local
Negotiable	No	No	Limited via auction	No	No
Supervision	CMA	WRICIO	Commodity Authority,	Banks	ZACA
Market Information system	Yes	Yes	Yes	No	ZACA
Warehouse receipt	Double	Double	Double	Double	Double

Security of warehouse receipts

- Threats include forgery, fraud at the warehouse, quality deterioration or other peril
- ACDI/VOCA 5-level model:
 - ◆ - warehouse licensing
 - ◆ - commodity quality examination
 - ◆ - physical storage inspection
 - ◆ - warehouse bonding
 - ◆ - indemnity fund
- PLUS: legal protection and inspectors' liability

Security of warehouse receipts: a practical example

- TCCC coffee warehouse, Tanzania
- WHR in carbon copy triplicate shows:
 - ◆ depositor,
 - ◆ coffee origin,
 - ◆ quantity in bags and kilos,
 - ◆ grade, class and moisture.
- can be cross-checked against:
 - ◆ weighing card
 - ◆ delivery note
 - ◆ delivery tally
 - ◆ moisture meter report

Security of warehouse receipts: a practical example

Triplicate - Co-op Union

Player MSIM 2005/2006

COPY
COFFEE RECEIPT T.C.C.C. No. B 31878

Name USAMBARA CO-OPERATIVE UNION (PFLU) LTD

Bag marked USAMBARA

No. of bags 156 in words MAA MOJA HUNDISI NA SITATU

DATE	TIME	LOBBY NO.	WEIGHT CARD	SAFARI REPORT OR TALLY NO.	SERIAL NUMBERS
<u>06-03-2006</u>	<u>1:35</u> <u>USIK</u>	<u>T483AFH</u>	<u>0045928</u>	<u>14390</u> <u>14392</u>	<u>—</u>

Signature by [Signature] (23)

Meter No 12.7

WEIGHTED BY	CHECKED BY
<u>[Signature]</u>	<u>[Signature]</u>

LOBBY FULL	<u>13320</u>	Kg
LOBBY EMPTY	<u>5370</u>	Kg
LOADED	<u>7950</u>	Kg
LESS BAGS <u>(26)</u>	<u>156</u>	Kg
NETT WEIGHT	<u>7794</u>	Kg

REMARKS ON RECEIPT

SUPERINTENDENT - PARCHEMENT STORE

Receiving clerk

Weighting and tally

Supervisor

Security of warehouse receipts: a practical example

No. 14397 Weighing Card No.

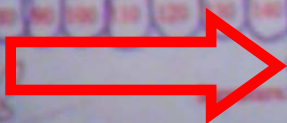
PURCHAMENT DELIVERY TALLY

Date	Wagon Lorry	Safari Re. No.
5/3/006	T-483 AEH	USAMBARA
Number		

Total Kgs
 Tare Weight
 Net Kgs

SL-6777
 Tally Clerk
 156 BAGS
 STORE 01A1-3 INPNA

Tally clerk



USAMBARA CO-OPERATIVE UNION (1994) LTD.
 P.O. Box 26 SOFI Telephone: 19

DELIVERY NOTE No. 4370
 Date 6 03 2006

M/s T.C.C.U. Ltd
 Box 3053
 Mushi

Please receive the following goods:-

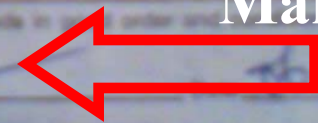
156 Bags of purchment coffee pe I
 Gross weight 7948 kg.
 Net weight 7792 kg.
 Empty bags 156 kg.

~~CA 31878~~
 156
 VEHICLE No T-483 AEH

Received the above mentioned goods in order and

Signature

Manager



Security of WHR – project summary

	Camero on	Ethiop ia	Tanzani a	Russia	Zambi a
Warehouse licensing;	X	X	X	X	X
Commodity quality examination	X	X	X	X	X
Physical storage inspection	X	X	X	X	X
Warehouse bonding	-	-	-	-	X
Indemnity fund	-	-	-	-	-
Legal protection	-	X	X	-	-
Liability of inspectors	X	-	X	-	-

WRS: Practical Lesson 1

- Establishing a system of warehouse receipts in all cases involves:
 - ◆ warehouse licensing
 - ◆ system of commodity quality certification and control
 - ◆ physical storage inspection

WRS: Practical Lesson 2

- Measures in 1 are essential, but normally insufficient to convince the banks.
- One or more supplementary measures required:
 - ◆ financial protection: bond or indemnity
 - ◆ legal protection from competing claims
 - ◆ professional liability of inspectors responsible for the basic elements of WRS

WRS: More Lessons

- International banks require a dedicated warehouse receipts legislation. Local banks more flexible.
- The cost of financial protection mechanisms is, in most cases, prohibitive - a significant limiting factor if compulsory.
- Robust operational volume is critical for success
 - ◆ USD30,000 py admin costs
 - ◆ Fee of USD0.50 per tonne
 - ◆ need 60,000 tonnes turnover - equivalent to some USD4mln worth of collateral value

WRS: Role of cooperatives

- Reaching individual smallholder farmers is costly: working via coops more efficient
- Coops have volumes, and can build the necessary management capacity
- In most cases coops are an essential “interface” in making WRS accessible to farmers

WHR Model – example of benefits to farmer

Assumptions

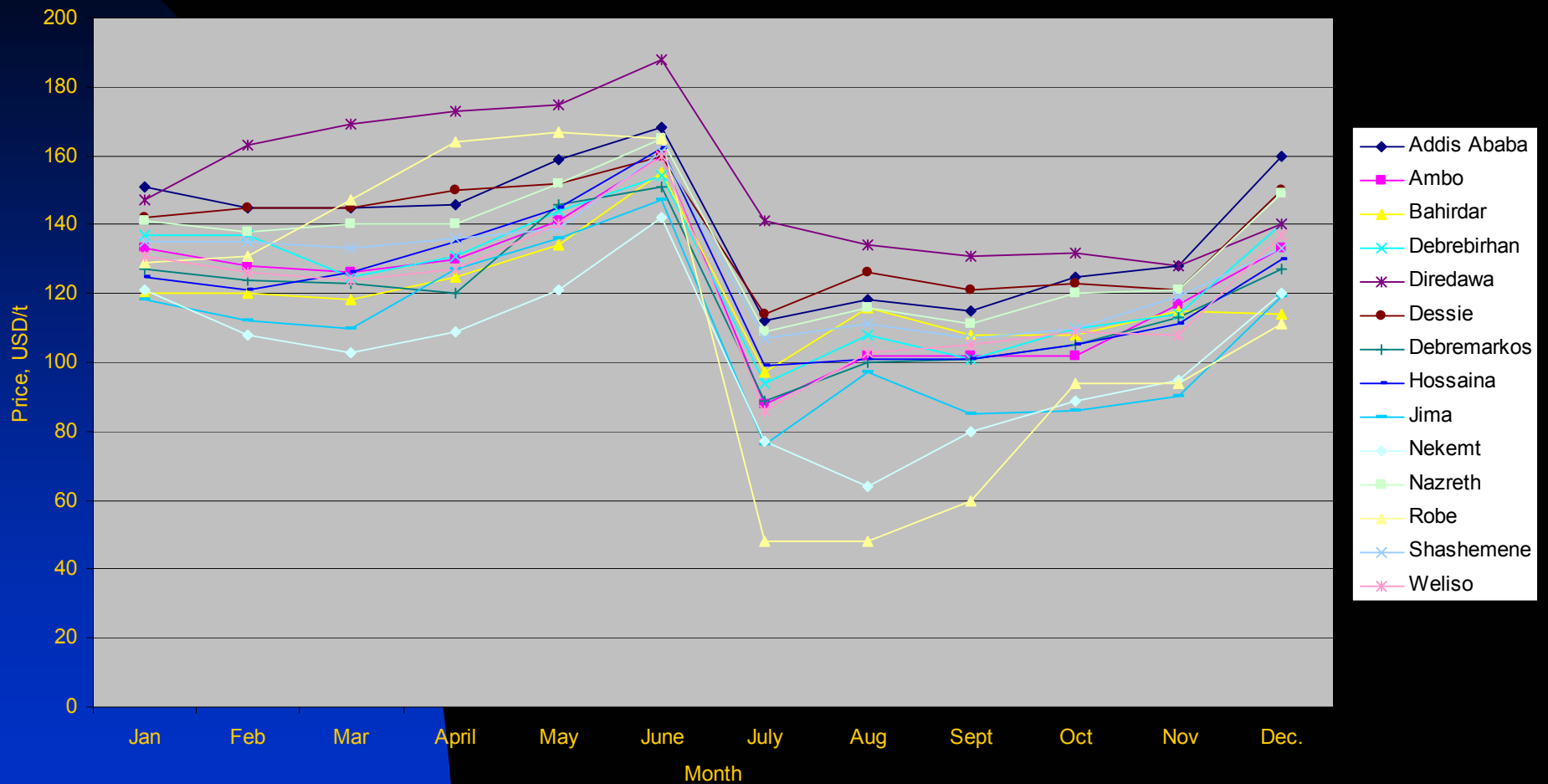
- Maize price \$75 low, \$115 high
- Warehouse 10,000 tonnes
- Warehouse capacity utilization 60%, rising to 80%
- Bank interest rate 20%
- Collateral value discount 30%
- WHR fee \$0.50 per tonne

WHR model – operation

- Without WHR the farmer forced to sell at harvest time – discount due to market flooding. Payout is 100% of low price less costs
- With WHR: farmer borrows to cover cash needs; 1st payout (loan) is 70% of low price
- Sell at high price; 2nd payout is 100% of high price less 1st payout less costs, fees and interest
- Total payout with WHR is 100% of high price less costs, fees and interest

Maize prices: Ethiopia

Maize prices Ethiopia, 2002/03



WHR model

Years	Uni	Warehouse Receipt Fees			Warehouse Capacity		TOTAL 5 years
		Fees (\$/t) \$ 0.50		Tonnes 10,000		Bank Data	
		Crop Price Range		Collateral Value: 70%			
		Max. (\$/tonne)	\$ 115.00	Interest Rate:	20%		
1	2	3	4	5			
Warehouse capacity	US	10,000	10,000	10,000	10,000	10,000	
Market price maize low	D	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	
Warehouse Capacity Utilization	%	60%	70%	75%	80%	85%	
Stock market value high		\$ 690,000.00	\$ 805,000.00	\$ 862,500.00	\$ 920,000.00	\$ 977,500.00	
Stock market value low		\$ 450,000.00	\$ 525,000.00	\$ 562,500.00	\$ 600,000.00	\$ 637,500.00	
If using WHR	US						
WHR fees per tonne	US	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	
Total WHR fees	D	\$ 3,000.00	\$ 3,500.00	\$ 3,750.00	\$ 4,000.00	\$ 4,250.00	
<i>Payoff Without WHR</i>	US						
	D	\$ 450,000.00	\$ 525,000.00	\$ 562,500.00	\$ 600,000.00	\$ 637,500.00	\$ 2,775,000.00
With WHR							
Collateral value (% of current market value)	%	70%	70%	70%	70%	70%	
Initial distribution (1st payoff)	US	\$ 315,000.00	\$ 367,500.00	\$ 393,750.00	\$ 420,000.00	\$ 446,250.00	\$ 1,942,500.00
costs WHR	D	\$ -3,000.00	\$ -3,500.00	\$ -3,750.00	\$ -4,000.00	\$ -4,250.00	\$ -18,500.00
Bank annual interest rate	US	20%	20%	20%	20%	20%	
Interest for 3 months	US	\$ -14,690.07	\$ -17,138.41	\$ -18,362.59	\$ -19,586.76	\$ -20,810.93	\$ -90,588.76
Straight amortization of warehouse	US	\$ -10,000.00	\$ -10,000.00	\$ -10,000.00	\$ -10,000.00	\$ -10,000.00	\$ -50,000.00
Settlement (2nd payoff)	D	\$ 209,310.13	\$ 245,861.79	\$ 264,137.61	\$ 282,413.44	\$ 300,689.27	\$ 1,302,412.24
<i>Total payoff with WHR</i>	US						
	US	\$ 524,310.13	\$ 613,361.79	\$ 657,887.61	\$ 702,413.44	\$ 746,939.27	\$ 3,244,912.24
Net benefit of WHR per coop	D	\$ 74,310.13	\$ 88,361.79	\$ 95,387.61	\$ 102,413.44	\$ 109,439.27	\$ 469,912.24

Getting a warehouse into WRS



6/21/2007

WHR model - conclusions

- Strong positive return if price variation exceeds WHR fees and bank interest charges
- Including initial investment of \$100,000 to meet WRS standards, IRR of 80% over 5 years on a 10,000 t warehouse
- Sensitive to:
 - ◆ Warehouse size (min 5,000 t preferred)
 - ◆ Price level and variation (min 25% in the model)
 - ◆ Bank interest rates

II. Commodity Exchange Development

- CFC considered a number of proposals
- One proposal passed eligibility criteria and received approval:

Capacity Building and Sensitization
for Agricultural Commodity
Exchange in Africa (ACEA)

Malawi

Malawi case: objectives

- establish a commodity exchange which has integrity, is owned by stakeholders, is based on mutual benefit and is accessible to all
- Improve market information and market access for smallholders;
- facilitate marketing and procurement of commodities
- bring liquidity into the agricultural market

ACEA and WHR

- ACEA demonstrates that WRS is essential for exchange
- ACEA envisioned introducing a private WRS in Malawi (similar to Zambia's ZACA)
- ACEA now collaborates with WB to establish a national WHR system

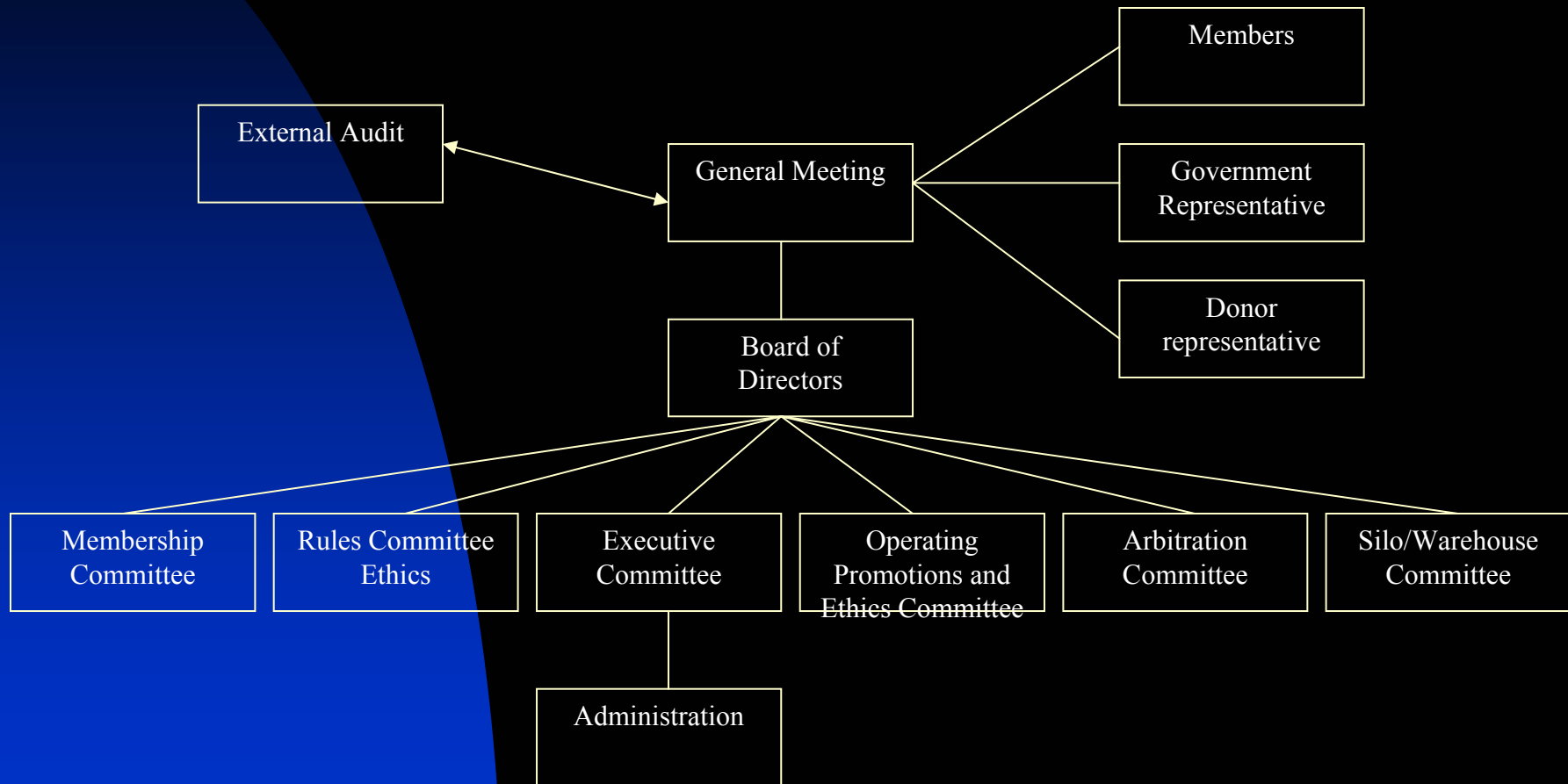
ACEA Project Approach

- The project support the establishment of the Exchange through:
 - ◆ Sensitization: convince potential users about benefits
 - ◆ Training: explain how exchange can be used
 - ◆ Capacity building: make sure Exchange has the capacity to deliver

ACEA: stakeholder groups

- exchange members and brokers: the companies and individuals holding trading seats, who trade on the exchange floor;
- users of the exchange: buy or sell commodities by giving orders to brokers;
- exchange technical staff: employees of the exchange

ACEA: Organization



CFC Study on Commodity Exchange in Africa

- commissioned in 2005 to examine the conditions and make proposals for the establishment of commodity exchange in West Africa
- Carried out by Day-Robinson International Consulting Ltd.

W.Africa study: infrastructure

- The study identifies a number of infrastructure preconditions:
 - ◆ legal and regulatory system conducive for exchange-based trading;
 - ◆ improvement of collateral management and storage of tradable commodities;
 - ◆ systematic provision of market information;
 - ◆ concerted effort on issues of quality and traceability of locally produced commodities.

W.Africa study: Viability of Exchange

The first and foremost driver of Exchange viability is the demand for exchange-traded products. The willingness of any one country to host the Exchange is a positive, but insufficient factor in making such an exchange viable

W.Africa study: essential practical measures

- development of tradable warehouse receipts;
- development of standardised contracts based on recognized quality standards;
- development of operating rules and procedures for the exchange, taking into account the legal environment and existing trading practices.

Commodity Exchanges: observations from CFC experience

- Exchange must be driven by demand for exchange services:
 - ◆ Price discovery
 - ◆ Easy contract settlement
 - ◆ Liquidity
 - ◆ Performance guarantees etc.

... Observations from CFC experience ...

- Becoming a credible market player takes time
- Newly created Exchange must be supported financially, by its Members, Donors, or both, before it could reach the volumes ensuring financial viability
- During this growth period, cost control is a factor of crucial importance: financing of redundant exchange capacity erodes the willingness of donors and Members to finance growth of the Exchange

... Observations from CFC experience

- Support can be given to exchange through:
 - ◆ sensitization of traders, to raise the volumes of trade
 - ◆ training of exchange staff, Members, and traders to make the rules and mechanisms understood
 - ◆ capacity building so that Exchange could discharge its functions competently

III. Price risk management for producers

- Started ~1998-2000 within the Interinstitutional Task Force for Commodity Price Risk Management (ITF)
- Different from insurance of food import cost – CRMG project in Malawi
- 1 CFC project started (Côte d'Ivoire), 2 awaiting startup in East Africa

PRM – element of commodity market development

- the most advanced part of commodity market development, which makes use of all other developments to help farmers manage their risks and their production in an efficient and effective way

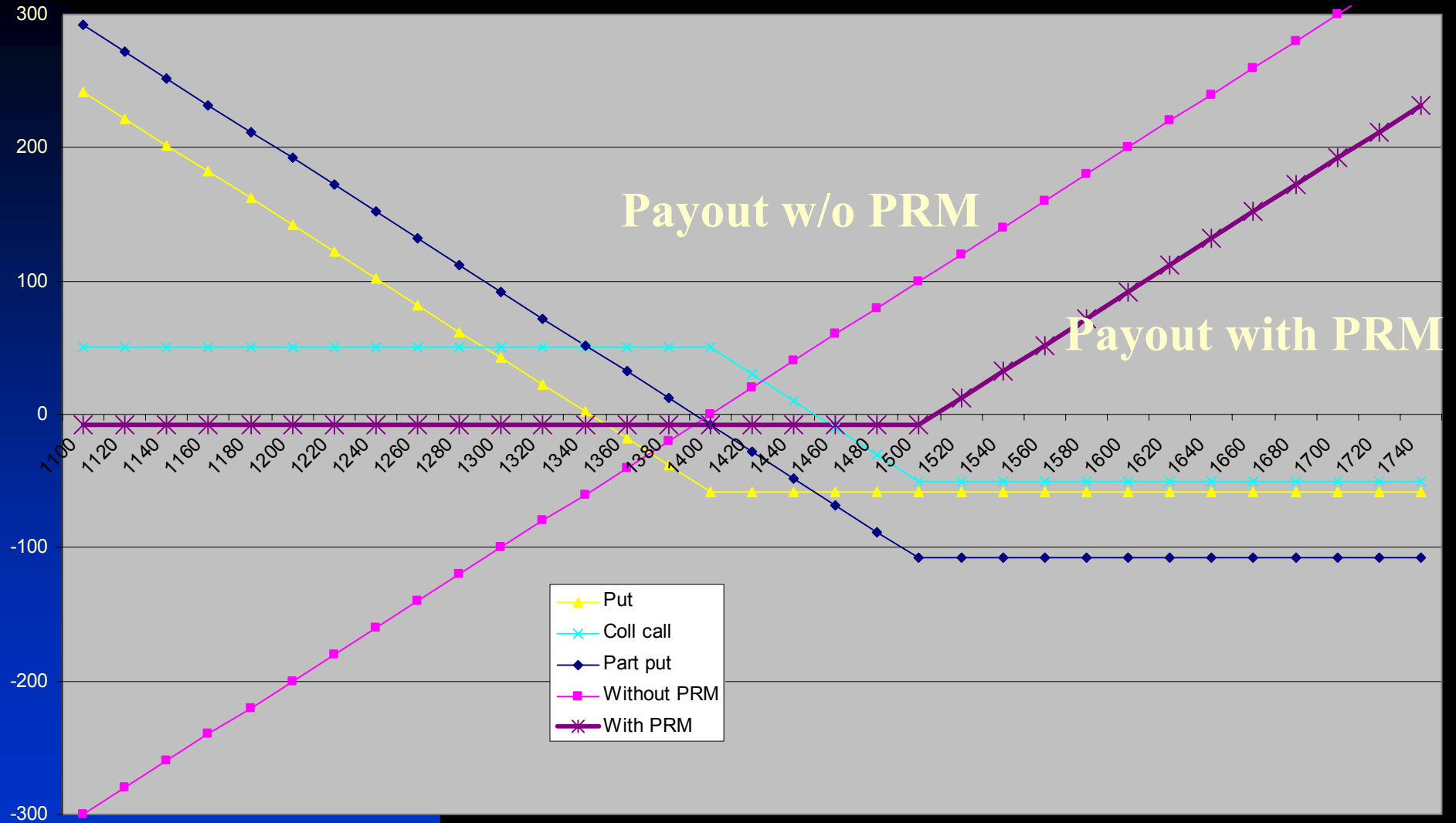
Côte d'Ivoire cocoa project: making PRM accessible to farmers

- put option - the simplest and most reliable price risk management instrument meeting the needs of producers
- Innovation of the project – to provide PRM to coops rather than to larger lenders and traders

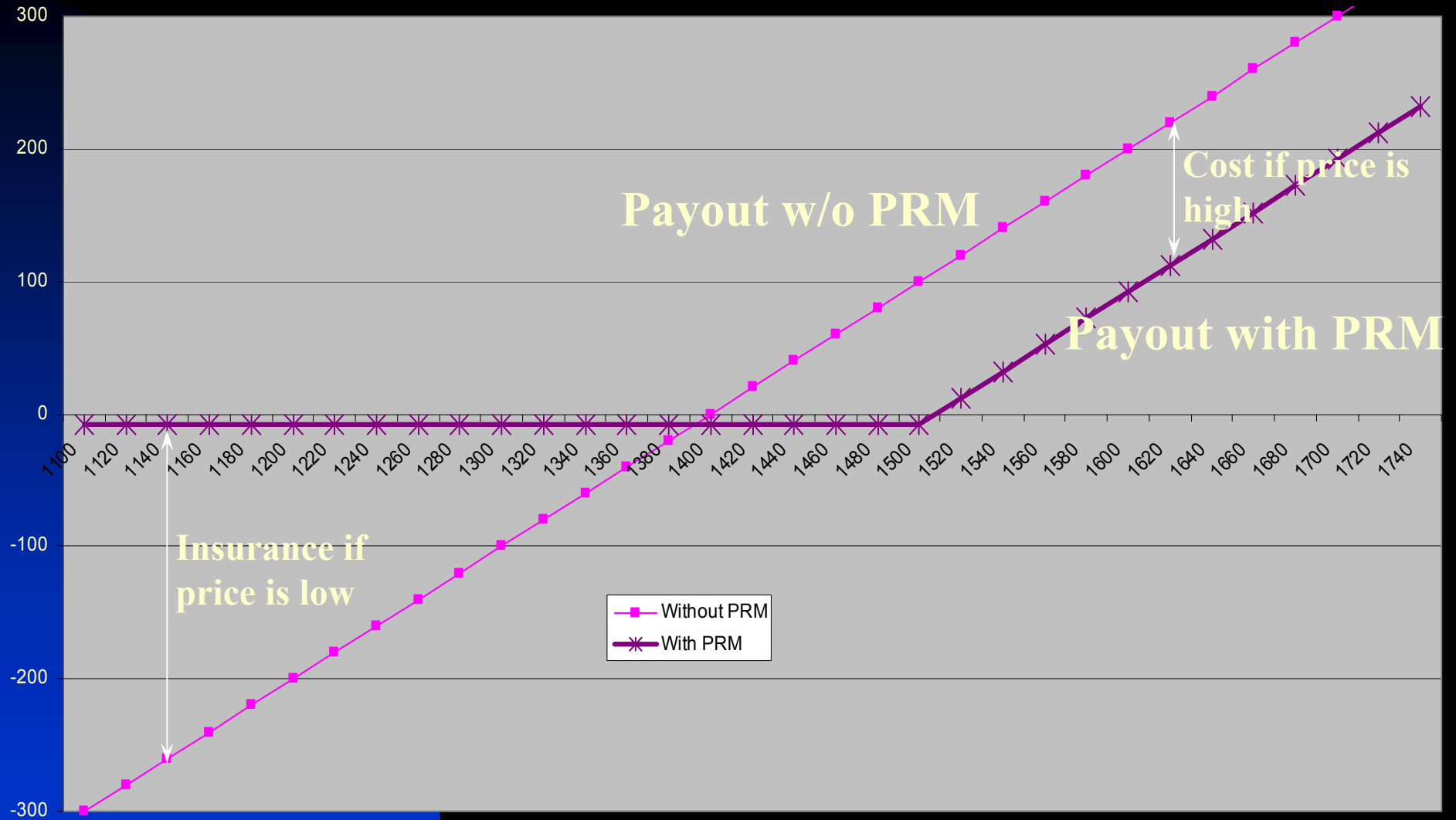
Participatory option - affordable variety of put

- Price of internationally available options prohibitive to coops
- Solution (CPM Group):
 - ◆ subsidize the purchase of a put by selling a call
 - ◆ Limit the exposure by buying a call at higher strike

Participatory option



Participatory option



PRM using participatory option: challenges

- Must help coops select correct level of price insurance
- coops managers to be trained in financial management and control
- performance risk – sale of call options by the coop! - must be underwritten by a bank. In the project received guarantee from BCC up to USD500,000
- specific parameters of the hedge to give coops the risk management product which meets their needs

PRM: Lessons 1

- Risk management depends strongly on the unique features of the local commodity market. Cannot have universal recipe for all:
- Distribution of costs in supply chain and who pays for price insurance (Cote d'Ivoire experience);
- Involvement of the Government
- Compatibility of PRM with tax and trade regimes

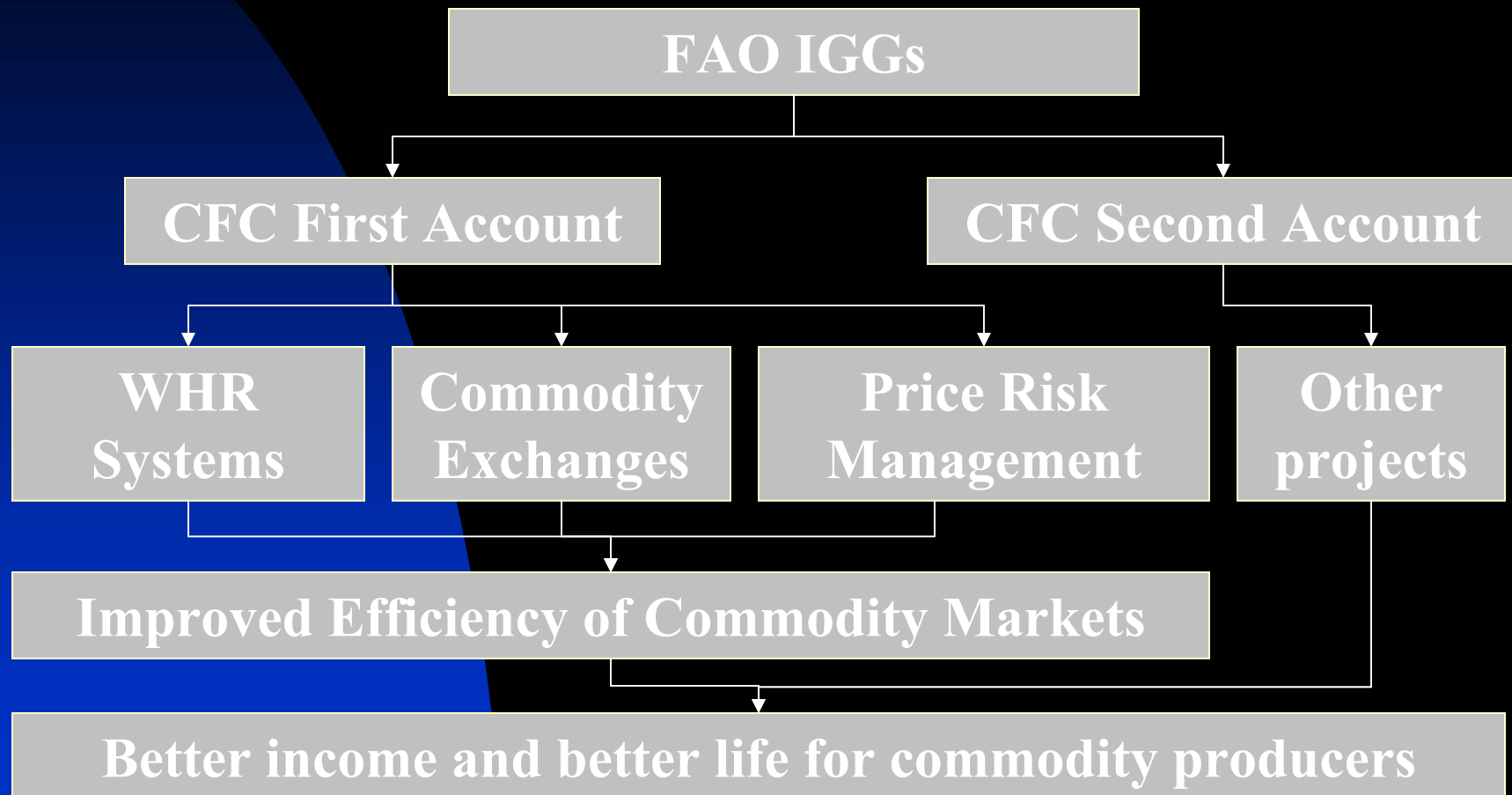
PRM: Lessons 2

- Typical “communication problems”:
 - ◆ Farmers want the floor price set at high price level, not a “survival minimum” below the current price
 - ◆ Farmers feel cheated in the case of high price – get “nothing” and face a deduction to pay the option settlement
 - ◆ Farmers have little incentive, and coops have little leverage to enforce members to deliver commodity as promised: in the case of higher prices could result in defaults on delivery on forward contracts

PRM: Lessons 3

- Currency risk a significant factor if risks laid off in international markets
- Imperative to determine the correct level of insurance: will not find demand otherwise
- Must be able to show benefits of financial PRM vs. “traditional” risk management

How it all works



Thank you!

For further information:

<http://www.common-fund.org>