ICCO INTERNATIONAL COCOA ORGANIZATION

In Conjunction With: Ministry of Agriculture, Livestock, Aquaculture and Fisheries of Ecuador

INTERNATIONAL SEMINAR ON TERMINAL MARKETS AND ECONOMETRIC MODELLING OF THE COCOA MARKET

- ANNOUNCEMENT -

15 - 19 July 2013, Sheraton Guayaquil Hotel, Guayaquil, Ecuador

Introduction

The main objective of the seminar is to strengthen the capacity of policy makers and cocoa stakeholders in their decision-making process through an improved understanding of the cocoa terminal markets and econometric models. The seminar comprises two modules: the first consists of reviewing the role and functioning of cocoa terminal markets, and the second introduces issues and technical aspects related to the econometric modelling of the world cocoa economy.

The module on terminal markets is intended for policy makers and their advisors, mainly from the Latin American & Caribbean region, with either an economic or a financial background. The module on econometric modelling is intended for quantitative economists, econometricians and statisticians. Interested parties with the relevant background / knowledge can participate in one or both modules.

The Seminar training will be delivered by ICCO staff and international experts with an in-depth knowledge of the topics involved. In relation to the module on cocoa terminal markets, the ICCO Secretariat has published several studies over the years on cocoa price determination and the functioning of cocoa terminal markets. Indeed, the Secretariat organized a well received seminar on cocoa terminal markets in London in June 2011. With regard to the module on econometric modelling, the ICCO Secretariat has built a sophisticated econometric model on the world cocoa economy and regularly publishes forecasts on cocoa supply and demand. The ICCO Secretariat organized an earlier seminar on econometric modelling in London in 2007.

Module I: Cocoa Terminal Markets

Cocoa terminal markets, also commonly referred to as futures markets, play an important role in the world cocoa economy. They facilitate the shifting of price risk, also called hedging, and provide valuable information on storage decisions. Furthermore, they act as a centre for the collection and dissemination of information on world prices.

Four distinct sections constitute the proposed module. On its completion, participants are expected to be able to: a) assess the operational and market risks faced by participants in the cocoa supply chain; b) draw the major distinctions between forward and futures contracts; c) use the concept of arbitrage to evaluate the spot-futures prices spread; d) understand the role of speculation in futures markets. Its detailed programme follows.

Origin of Futures Markets: Various types of contractual arrangements to trade cocoa will be reviewed and analysed. Emphasis will be on forward contracts, which can be considered to be the natural precursor of futures contracts. This will be followed by an introduction on the nature of futures contracts and on the institutions that facilitate their trading.

Futures Exchanges: The structure of futures markets will be explored in more detail. To begin with, the forces that shape the competitive structure of the futures industry will be described. This will include a description of the way futures exchanges compete, both with each other and with services provided in related markets. Next, the role of brokers, trading advisors and other professionals within the futures industry will be described. The final section will be devoted to market manipulation and the rules in place to deter it.

Futures Contract Prices: After covering the basic institutional features of futures markets, the fundamental factors affecting futures prices will be discussed. First, the relationship between futures prices and spot prices will be discussed. Particular emphasis will be placed on the basis, that is, price difference between the cocoa spot and futures prices. Then, the concept of storage costs will be introduced to enable an understanding of the relationship between prices of futures contracts with different delivery months, also called spreads. Finally, the connections between basis, spreads, expected spot prices and storage costs will be stressed, as they form a system of related concept in the understanding of how futures markets work.

Hedging strategies: Hedging strategies can be thought of as the financial operations by which cocoa stakeholders can offset the risk of an adverse cocoa price movement. For example, cocoa warehouses face the risk of a devaluation of their cocoa stocks if prices fall. In this circumstance, a hedging strategy based on cocoa futures and/or option contracts can mitigate the impact of a decline in cocoa prices. At the conclusion of the session, the basic principles underlying the functioning of a hedging strategy using futures contracts will be illustrated.

Case Studies: At the conclusion of this first module, the findings of two ICCO documents on cocoa futures trading will be illustrated. The first of these documents analyses whether speculative trading does have any impact on cocoa futures prices and volatility; the second assesses the alleged trading activities underlying the price rally of the July 2010 cocoa futures contract on the LIFFE exchange, and the lessons learned from these events.

Module II: Econometric modelling of the cocoa market

An econometric model is a quantitative measurement of economic relationships. In general, it can be used to improve the understanding of how markets function, forecast market development and assess the likely effects of alternative courses of action. In the context of the world cocoa economy, an econometric model is extremely useful in evaluating the economic implications of the strategic and policy decisions made by the authorities of the countries concerned with production management.

The specific objectives of the seminar are to provide an overview of the issues and technical aspects relating to the econometric modelling of the world cocoa economy and the modelling of the cocoa economy in individual cocoa producing countries. During the theoretical and tutorial sessions, each participant will be directly involved in the specification, estimation and validation aspects of econometric models on the cocoa economy.

On completion of the seminar, participants should have the basic understanding required to be able to: a) specify a cocoa econometric model; b) estimate a cocoa econometric model; c) validate a cocoa econometric

model; and d) use a cocoa econometric model for planning and forecasting purposes. The seminar's detailed programme follows.

An economic model of the cocoa market: Insights into the major characteristics of the cocoa market will be provided. Emphasis will be placed on the economic behaviour of cocoa producers and consumers, and these factors will be translated into equations. The same will be applied to characterize the behaviour of cocoa prices in relation to the size of stocks.

Econometric modelling: A strategy for estimating the parameters of supply, demand and price equations will be outlined. Emphasis will be placed on the statistical tests to be performed in order to ensure the robustness of the parameters to be estimated.

Validation and construction of the world model: Techniques to combine the estimated equations in a model will be outlined.

Practical arrangements

Both modules will be conducted over a five-day period, back to back. The seminar will be held at the **Sheraton Guayaquil Hotel**, Avenida Constitución, Plaza Del Sol, Frente Al Mall Del Sol, Guayaquil, Ecuador, 15-19 July 2013.

Registration

The registration fees for participants range between US$500 and US$1,300, with the lower fees applicable to officials coming from ICCO Member countries. *The registration form, including full details of the fees, can be downloaded from the ICCO website here.*

Accommodation

Discounted rates for accommodation at the venue, the Sheraton Guayaquil Hotel, are available for all participants at the Seminar. *(Rates include taxes and other charges, in US dollars.)*

	NORMAL RATE	**PREFERENTIAL RATE (ICCO SEMINAR)**
SINGLE	$281.72	$159.72
SINGLE + BREAKFAST	$306.12	$184.12
SINGLE CLUB LEVEL	$342.72	$220.72
SINGLE JUNIOR SUITE	$342.72	$232.92

Participants wishing to take advantage of these discounted rates should mention the Seminar when contacting Denise Guzmán at the hotel directly, at denise.guzman@sheratonguayaquil.com. She can provide further details and guidance.

For more information: please contact Dr. Michele Nardella, International Cocoa Organization, Westgate House, Ealing, London W5 1YY, UK - Email: econ@icco.org - Phone: +44 (0)20 7400 5069 / 50 - Fax: + 44 (0)20 8997 4372 – Website: www.icco.org

INTERNATIONAL SEMINAR ON COCOA TERMINAL MARKET AND ECONOMETRIC MODELS

Guayaquil, Ecuador
15-19 July 2013

DRAFT PROGRAMME

MONDAY 15 JULY

08.30	Registration & cocoa drink
Module 1: Terminal Markets	
09.30	- Opening remarks by **H.E. Mr. Luis Valverde Zúñiga** - Vice Minister of Agriculture, Ecuador - Address by **Mr. Laurent Pipitone**, Director of the Economics and Statistics Division, International Cocoa Organization (ICCO) - Keynote address and Official Opening: **H.E. Mr. Javier Ponce Cevallos** Minister of Agriculture, Ecuador
10.30	**Risks within the Cocoa Supply Chain**
	- Overview of the cocoa supply chain - Operational Risks and Market Risk in the Cocoa Supply Chain - Forward Contracts
12.30	*Lunch Break*
14.00	**Futures Contracts: Their Institutional Framework**
	- From Forward Contract to Futures Contract - Centralized Organized Exchange, Clearing House, Margin Requirements - Standardization of Contractual Terms of Futures Markets
15.30	*Cocoa break*
16:00	**Futures Contracts: Their Institutional Framework (cont'd)**
	- Open Interest and Volume - Futures market participants - "Supply" and "demand" for futures contracts
17.30	*End of session*

TUESDAY 16 JULY

Module 1: Terminal Markets

09.00	**Relationship between Futures and Spot Prices**
	- Cost of Carry Model in Perfect Market - Cost of Carry Model in the Real World - Implications for the cocoa spot price
10.30	*Cocoa Break*
11:00	**Functions of Terminal Markets**
	- Speculation: types of speculators - Hedging: long and short hedging
12.30	*Lunch Break*
14.00	**ICCO Studies on Cocoa Terminal Markets (case studies)**
	- The impact of speculative trading on cocoa prices and volatility - The July 2010 events on the London Cocoa Futures Market - Market integration and price transmission: futures and physical markets at origin
16.00	*Cocoa break*
16.30	**Closing Remarks**
17.30	*End of session*

WEDNESDAY 17 JULY

09.00	Registration & cocoa drink

Module 2: Econometric Modelling

10.00	**Welcome and introductory Remarks**
10.30	**Econometric modelling as a sequence of stage**
	- Overview of the processes and approaches in econometric modelling
12:00	**Data requirements**
	- Review of statistical data requirements
13.30	*Lunch Break*
14:30	**Statistical Inference**
	- Mean and Variance - Conditional Mean
16.00	*Cocoa break*
16.30	**Econometric Estimation**
	- Ordinary Least Square - OLSQ as Best Linear Unbiased Estimator (BLUE)
18.00	*End of session*

THURSDAY 18 JULY

Module 2: Econometric Modelling

09.00	**Econometric Estimation (cont'd)**
	- Statistical Inference using OLSQ - Violation of the BLUE assumptions (1)
10.30	*Cocoa Break*
11:00	**Econometric Estimation (cont'd)**
	- Violation of the BLUE assumptions (2)
12.30	*Lunch Break*
14:00	**An econometric model of the world cocoa economy: Price-Stock Relationship**
	- Empirical evidence and theoretical expectations - Estimation of price elasticity in relation to stocks - Practical issues: autocorrelation and outliers
15.30	*Cocoa break*
16.00	**An econometric model of the world cocoa economy: Cocoa Demand**
	- Empirical evidence and theoretical expectations - Estimation of demand's price and income elasticity - Practical issues: autocorrelation and outliers
17.30	*End of session*

FRIDAY 19 JULY

Module 2: Econometric Modelling

09.00	**An econometric model of the world cocoa economy: Cocoa Supply**
	- Empirical evidence and theoretical expectations - Estimation of supply's price elasticity - Practical issues: lack of data on cocoa stocks, autocorrelation and outliers
10.30	*Cocoa Break*
11:00	**A model of the world market**
	- The link between the estimated parameters and the real data - How to use the model to simulate the world cocoa market
12.00	**ANECACAO Guided Tour**
	- The National Association of Cocoa Exporters (ANECAO) has kindly sponsored a guided tour for all participants to one of the Historic Parks of the City
18.00	*End of session*