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**THE COFFEE, SUGAR AND COCOA EXCHANGE AND ITS IMPACT ON
EXPORTS FROM LATIN AMERICA AND THE CARIBBEAN**

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INTRODUCTION

The goal of this study is to analyze the effect of the New York Coffee, Sugar and Cocoa Exchange on the expansion of exports of these products from Latin America and the Caribbean.

The dependence of the countries of Latin America and the Caribbean on exports of basic products is well known. Among these, coffee, sugar and cocoa are very important. The export value of these products in 1987 was estimated to be 13% of the region's total exports of more than US\$ 91 billion.

International prices for basic products run in marked cycles --most of the time being very low-- and are notably volatile. The context in which the prices for the region's products are determined are the futures markets for basic products, mainly in the United States. For this reason, ECLAC decided to analyze the functioning of the New York Coffee, Sugar and Cocoa Exchange, how prices are determined, its representativeness with regards fundamental aspects and its effects on the coffee, sugar and cocoa industries of Latin America and the Caribbean.

Given the present conditions of the international markets --where coffee has fallen to very low levels of around 80 cents a pound because the economic clauses of the International Coffee Agreement terminated, and where the price of cocoa has been low for the last five years, and where sugar, even though present prices are high, is being affected by competition from substitute sweeteners, both caloric and artificial, and the protectionist policies of the industrialized countries-- it is vitally important that our countries understand how the New York Coffee, Sugar and Cocoa Exchange functions and how to operate in it, in order to sell their products at higher prices and increase their export revenues.

Coffee is one of the most popular drinks in the world. It was originally grown in Kaffa, Ethiopia, where it was used as a seasoning. The Arabs spread it everywhere, approximately 1 300 years before our era, through their intense trade. Coffee bushes grow in subtropical climates, therefore almost exclusively in underdeveloped countries.

There are two main types of coffee: the arabica, which has a mild taste, and the robusta, which is strong. The arabica is more common, grown mainly in

high tropical zones of the Eastern Hemisphere. Robusta coffee is produced in low, hot areas in Africa and Asia. Brazil and Colombia are the major producers of arabica coffee, which usually represents a third of the world production for export, and Indonesia and the Ivory Coast are the biggest producers of robusta coffee.

Unlike coffee, sugar is produced in almost every country in the world. It can be made from sugar cane or sugar beets; both provide an identical final product. World output is 63% cane-produced and 37% beet-produced. Sugar cane is thought to have originated in India more than 2 500 years ago. Cane is grown in tropical and subtropical climates and beet in temperate climates. For this reason, cane is mainly grown in underdeveloped countries and beet in developed countries. Another characteristic worth mentioning is that cane takes some 15 months to reach the harvest stage, while beets need only six months. This is why the reaction time to high prices in the international market is much quicker for beet products. The main growers of sugar cane are Cuba, India and Brazil, and of beets, the European Economic Community and the Soviet Union.

Cocoa originated in Mexico at the time of the Aztec Empire. The conquistadors brought it to Spain in the 16th century. For a long time it was only consumed as a drink, but when it began to be more widely grown and its quality improved, it was made into chocolate, possibly in 1828. Cocoa is strictly a tropical crop that needs a lot of water. For this reason, it is confined to areas within 20 degrees north and south of the equator. Cocoa takes from four to five years after planting to mature, and between eight and 10 years to reach its maximum output. During the last century it was only grown in America, but at the beginning of the 20th century production began in Africa, which is now the largest productive zone with close to 55% of the total. The main producing countries are the Ivory Coast, Brazil, Ghana, Nigeria and Malaysia.

This study is divided into six chapters. The first looks at the background and general characteristics of exchanges, the difference between physicals and futures markets, the organization and advantages of exchanges, the constitution of and the participants in the New York Coffee, Sugar and Cocoa Exchange (CSCE), the mechanics of operating in the exchange and the

evolution of the volumes traded on the New York Exchange over the last several years.

Chapter II analyzes the role of the CSCE in fixing prices, studying how this is done, the relation between prices in the commodities market and in the exchange, between spot and futures prices and the characteristics of futures contracts. It also looks at the degree of participation of the region's industries in the CSCE.

Chapter III observes the modes of operating in the exchange and how to analyze the futures market. The advantages and disadvantages of using the services of commission houses and traders are evaluated. A summary is given of the alternatives and requirements for participating in the exchange, as well as of how the barriers to participation are perceived. Finally, the possible use of the exchange in the trade strategies of the region's industries is studied.

Chapter IV analyzes the questions raised by the countries of Latin America and the Caribbean regarding the representativeness and the volatility of prices, the degree of speculation and the relation between speculation and variation in prices.

Chapter V treats of the importance of the production and exports of coffee, sugar and cocoa for the countries of the region, analyzing the share of their export earnings in relation to total earnings.

The last chapter offers some recommendations for a better use of the Coffee, Sugar and Cocoa Exchange.

I. THE NEW YORK COFFEE, SUGAR AND COCOA EXCHANGE

1. Background information on exchanges

The Industrial Revolution at the end of the 18th and beginning of the 19th century produced the necessary conditions for creating futures markets. Trade in merchandise indispensable for the industrial production of other goods grew considerably within a period of a few years. The time needed to convert raw materials into finished products was markedly reduced. As the artisan was replaced by the machine, the need grew for raw materials to keep those machines working. The demand for raw materials multiplied several times in only a few years time.

The exchanges originated in the medieval fairs. The fairs were places where merchants came together, where each merchant had a better chance of finding a buyer for his wares. They were spot markets, with immediate delivery. The potential buyer negotiated the price with the seller, and after examining the merchandise, decided whether or not to buy. If the decision was to buy, he paid the price and took possession of the merchandise and transported it by his own means.

Even though the term spot is used today, it now has another meaning. Commercial contracts with immediate delivery, like those of the fairs, are rare today.

As the volume of goods on the market grew, it became more difficult to make spot contracts. Some merchants incurred the expenses of transporting large quantities of their merchandise through countryside and cities with no certitude that they could be sold. This gave rise to selling through samples. The seller showed samples of his wares to buyers and these, by examining the samples, closed their purchases.

The merchandise was later delivered to the place decided on, which was not necessarily the same place where the fair was held. This kind of operations can be considered the origin of futures operations.

Even though this operation could be considered a futures operation in its general aspects, because of delivery after making the purchase, it did not have the same characteristics as futures operations today. In those operations

in the fairs, the seller could refuse to deliver later if a sudden price increase allowed him to sell at a better level, or the merchandise actually delivered could differ from the samples shown to the buyer, etc. The buyer, in turn, could also fail to fulfill his commitment for a lack of resources or for having lost interest in the merchandise by the time of delivery, etc.

The exchanges tried right from the beginning through their internal organization to avoid precisely this kind of adverse contingency.

When was an exchange operation as we now know them first carried out? The answer to that question is lost in the past. Nevertheless, some authors say the first futures market took place in Japan around the year 1600.

The first exchanges like those of today were established in England, Holland, Germany and the United States in the second half of the 19th century.

2. General characteristics of exchanges

a) Objectives

Exchanges for products were generally created by the joint action of an important group of merchants or intermediaries, trading a certain product in a determinate city. The actual location of the exchange was sometimes influenced by the proximity to the main centre of production, as in the case of the Chicago Board of Trade, situated in the centre of a large grain producing area. More frequently, the location of the exchange was determined by the importance of the city in question as a trade centre, even though the product traded was not for the exclusive consumption of the city or the country, or produced in the area. That is the case, for example, of the New York Coffee, Sugar and Cocoa Exchange.

The modern exchanges were conceived and established as a new instrument for carrying out security functions in the merchandise markets and providing protection against different risks that the market operators could not guarantee through the ordinary insurance companies or in some other way. Some authors consider, however, that seeing the futures exchange only as an organization for eliminating the risks inherent in future price changes for products is a rather narrow viewpoint. They hold that the exchange was created mainly to provide the most effective mechanism created up to that time to fix

the price of products, thus facilitating their movement through all the stages of production and distribution; and it is within this context of efficient trading of products that the exchange allows sellers and buyers of the physical product (the grower, the distributor and the manufacturer), if they so wish, to carry out operations which protect them against the negative effects of price fluctuations.

3. Physicals and futures markets

The futures exchange could be considered an auxiliary market organized as a complement to and not a substitute for the physicals market. The two markets carry out different and separate functions through somewhat similar but distinct techniques. Nevertheless, both markets are related and one needs the other in order to serve the producer, the consumer and the public interest in an efficient manner.

a) The Physicals Market

The basic purpose of buyers and sellers in the physicals market is to effect or receive the actual delivery of the product. With the standardization of quality and contract forms, transactions on the physicals market are carried out for both immediate or spot delivery and for future or later delivery. Most trade in this market is for future delivery. Traders in the physicals market, as mentioned above, normally do not gather in a common trade centre. They carry out their operations by telephone, telex or cable, mainly through brokers or operators. Moreover, even though they trade for immediate and future deliveries, the details of their operations are not published, since they are confidential and do not have to be revealed without the consent of the buyer and seller.

b) The Futures Market

The main objective of traders in the futures market is not primarily to effect or receive deliveries, but rather to use the exchange as a means of protection or for speculation —for operations to earn profits through price fluctuations in the market.

Therefore, even though the conditions of the exchange contract stipulate the real delivery of the merchandise, deliveries are normally avoided by

cancelling the obligations --a purchase is cancelled by a sale and vice versa. That is a sensible practice that avoids unnecessary, costly and illogical deliveries and returns.

The operators in the exchange really do come together in one trade centre: the trading "floor" of the exchange (or another place designated by the exchange), but unlike the physicals market, they negotiate exclusively (as a rule) contracts for the future delivery of the product in specific months. Given the centralized nature of the commodity exchange and the facility with which the contracts can be bought and sold, the price of any sale whatsoever in the exchange is an almost faithful reflection of the state of supply and demand of that moment for contracts of that particular future delivery. Consequently, even though all world trade for a specific product (for which an exchange exists) is not realized through the exchange itself, the international transactions generally are dominated by the prices set on the exchange.

International trading in sugar, for example, is not done only on the London and New York exchanges, but it usually follows the prices set in those institutions. In this regard, the physicals and futures markets, although they are clearly separate and independent, constitute in effect one market, with two separate departments or divisions (for those products that enjoy the advantages of an exchange because, as we will see below, not all products are suitable to be traded in an exchange).

Finally, while trade in physicals functions under any economic system, the exchange market can only function in a competitive free-market economy, that is, within an economic system where the government basically does not interfere with the forces of supply and demand. Once government measures neutralize market forces, the use of exchanges becomes either unnecessary for hedging operations, or very dangerous for speculative operations.

4. Organization of exchanges

Each exchange has its own particular organization, Board of Directors and bylaws. The bylaws can govern aspects such as: the different kinds of members accepted in the exchange and their respective rights and duties, as well as

the commissions they must pay according to the type of membership they have and the kind of transactions they carry out; the months designated for futures trading; the conditions for contracts for negotiated futures; the limits within which any one day's trading can move; trading hours and the supervision of the members' conduct.

In some countries, the government monitors and controls the exchanges through an agency created especially for that purpose; in others, the rules are more flexible and the exchanges are registered like any other firm or company, subject, therefore, to the same laws as corporations.

5. Advantages of the Exchange

The advantages of the exchange for producers, traders and users can be summarized as follows.

a) Risks of inventory losses are reduced

Risks of losses resulting from the lower prices are reduced, as mentioned above, through hedging carried out on the exchange.

b) Financing is easier and more economical, due to the reduction of risks

Financing becomes less costly and easier to arrange because the solvency of the borrower is not affected by a drastic drop of the market price, if the value of the merchandise has been protected by hedging. As a general rule, banks demand from their clients collateral worth more than the amount of the loan being sought. If a raw material is given as collateral, for example, sugar, coffee or some other primary product, the bank would run a relatively large risk that the price of the product could fall without covering the cost of the loan. But if the product has been duly protected, it becomes an excellent collateral with little risk. Therefore, the bank will not only be more disposed to lend the funds needed but also be able to grant the loan with more favourable conditions.

c) Better market knowledge, as a result of regular and representative prices

The third advantage comes from the concentration of sellers and buyers in the exchange, and from the periodical reports the exchange issues regarding transactions. Normally, to know the price of an article not traded on an

exchange, producers or sellers have to be contacted. That can take a considerable amount of time, depending on where the manufacturers are and the means of communication in question. However, through an exchange, precise reports on prices for different dates can be obtained at any given moment.

- d) The fulfillment of the obligations agreed upon in a futures contract by the other party is guaranteed

The three previous advantages would be useless without the fourth advantage (the guarantee that the contract for future delivery will be fulfilled). The exchange, either directly or through its clearing house, guarantees financially the fulfillment of all futures contracts.

6. Constitution of the New York Coffee, Sugar and Cocoa Exchange (CSCE)

The Coffee, Sugar and Cocoa Exchange began operations in 1882 with the name Coffee Exchange of the City of New York, trading only that product. In 1914 it extended its operations to include sugar, replacing the European markets closed by the war. In 1916 it changed its name to the New York Coffee and Sugar Exchange, Inc.

The New York Cocoa Exchange opened in 1925, the first cocoa exchange in the world.

The two exchanges united in 1979 to form the present Coffee, Sugar and Cocoa Exchange (CSCE). The reason for coming together was to increase trade in these three food products in one corporation, despite the fact that each is still traded separately according to its own rules and conditions.

The CSCE is non-profit corporation, administered and regulated by its members through the Board of Managers. It has 777 members, 527 of which are full members and 250 associate members.^{1/} To become a member one must have a good business reputation, fulfill certain financial requirements, and be sponsored by two members of the Exchange.

The members are representatives of the commercial and industrial sectors of the coffee, sugar and cocoa industries, as well as brokers and commission houses, all located in developed countries. The countries of Latin America and

the Caribbean that produce and export these products are not represented. The CSCE has only two members from Latin America and the Caribbean.^{2/}

The Board of Managers, made up of 21 individual members elected for a period of one year, supervises the overall operation of the Exchange and meets monthly. There are also several committees responsible for different aspects of trade in the Exchange, for example, arbitrage, business conduct, delivery and storage procedures, finances, margins, membership, options, among others.

The general administration of the CSCE is carried out by a president and his staff.

7. Participants in the CSCE

The participants in the CSCE can be placed into three groups:

a) Producer/Trader/User

This group includes the enterprises or individuals who have the actual coffee, sugar or cocoa or who are going to need them. They use the Exchange for hedging operations or to fix prices for their physicals contracts. Members of this group are the producers, exporters, traders,^{3/} toasters, refiners, industrialists, etc.

b) Speculators

This groups includes the enterprises or individuals who do not possess the physical product and have no interest in possessing it. They enter the Exchange for profit. They are local speculators (who operate on the floor of the Exchange and are members), individuals (traders), and the so-called speculative funds (large investment funds formed by a number of people).

Local speculators enter and exit the Exchange the same day and do not run any great risk. They are called daily speculators. They are content to earn three or four points per operation. Since they do not have to pay commissions nor deposit margins, those points can add up to a healthy profit by the end of the day. Naturally, the speculators do not always come out ahead, but given their experience and ample information, they have more of a chance to gain rather than to lose money. Moreover, the rest of the speculators adopt a position and maintain it for several days, weeks or months. The small speculators, since they are not familiar with the coffee, sugar and cocoa

markets, follow the advice of the commission houses. These houses and speculative funds elaborate strategic plans and objectives and, based on price tables and complex computer programmes, determine when to enter the Exchange and when to exit.

The Exchange needs speculation, since it contributes to a greater flexibility in transactions and also facilitates hedging. If a coffee, sugar or cocoa producer who wished to hedge could find a refiner, toaster or industrial consumer who also wanted to do the same thing, there would be no need for a speculator. But this normally does not happen. Therefore the speculator makes hedging possible by assuming the opposite position, or risk, than the producer/exporter.

c) Commission houses

In order to operate in the Exchange, the producer/trader/user, as well as the speculator, must do so through a member. The commission houses are members and operate in the Exchange for third parties, that is, they do not take their own positions but rather charge a commission, which is negotiable, for each contract bought or sold (including the later exit from the Exchange by means of the opposite operation). Normally the commission is very small in relation to the value of the contract. Of course, other members do not have to work through commission houses.

The Clearing House

The Clearing House also participates in the CSCE but in a different way. It is an organization independent of the Coffee, Sugar and Cocoa Exchange, established to clear all the operations carried out in the Exchange, regulate payments and deliveries and assume all the obligations derived from contracts and options. The Clearing House is an organization created by the Exchange, through which all the operations carried out on the "floor" of the Exchange are carried out. It is also responsible for guaranteeing the suitable conduct of the Exchange's delivery procedures, as well as the adequate financing of trade. The Clearing House becomes the buyer for each seller of a futures contract, and a seller for each buyer, and assumes the responsibility for protecting buyers and sellers against economic loss by guaranteeing the payment for each contract. In other words, in order to guarantee the fulfillment of a futures contract, the Clearing House acts as the principal in

the contract for each party (the contract, then, is fulfilled not by one party with the other, but by each party with the Clearing House).

Each day after closing, the Clearing House calculates the quantities that each member could be losing, which must be deposited as margins that same day, since it has the faculty to sell the contracts for which such deposits have not been made. The members of the Clearing House must also be members of the CSCE. Thus if one of the parties fails to fulfill the contract, the other party is not affected, since the contract was made with the Clearing House acting as a principal.

The Commodity Futures Trading Commission

Also worth mentioning is the "vigilante" of the CSCE, the Commodity Futures Trading Commission. It is a regulatory agency of the United States Government which guarantees that the futures exchanges operate cleanly, with no manipulations and other disloyal practices which prevent the market from reflecting supply and demand. Any change of regulations that the CSCE or any other exchange might decide to make has to be approved by this Commission before being put into practice.

The Commission follows the daily development of prices on the CSCE and the other exchanges in the United States, especially for the futures positions that are about to expire. It analyzes whether they are commercial or speculative operations and which enterprises or persons are going to deliver and receive the physical product. Large positions are followed very closely. When prices do not reflect the conditions of supply and demand, the Commission's analysts examine the possible explanations, even the presence of large traders who could have a significant impact on future prices. In those cases, the Commission contacts the Exchange to analyze the situation and decide how to act.

The Commission is especially careful about foreign participation in the exchanges in the United States. Rule 21.03 grants the Commission power to obtain basic information about the market for futures and options. A foreign trader or broker must submit to the Commission all information about his accounts. Without this information, the Commission can prohibit it from carrying out other operations, unless it cancels its position on the exchange. The application of this rule is limited to situations in which the Commission

considers the market is being manipulated and when the books and files of the foreign trader or broker are not at the disposition at all times for inspection in the United States by a representative of the Commission.

8. Mechanics of operating in the Exchange

What is traded in the CSCE is a contract for the future delivery of coffee, sugar or cocoa, carried out under special rules, according to an established model, in which the conditions like the unit of the contract, the quality and the date of delivery are agreed upon beforehand. The only thing left to the option of the parties is the total quantity and the price.

Only members can trade on the CSCE. The client, therefore, must always place his buy or sell orders with a member.

The most common operations include the participation of four persons: two members, each representing a client. The members carry out the operation between themselves.

There are many ways to buy and sell contracts on the Exchange. Some of the most common and most important are: an order at a fixed price for the same day; an open order at a fixed price; a market order; and orders subject to other conditions.

The most common type of order placed by persons who follow the Exchange closely, either speculators or hedgers, are market orders and fixed-price orders for the same day. Those who for one reason or another cannot follow the movements of prices hour-by-hour on the Exchange generally place open orders and orders subject to certain conditions.

Brokers who operate in the name of their clients use a certain number of documents to record all the operations carried out for their clients. The first document issued for a client is a sheet that contains general information about the client and his firm.

When an order is made, the broker sends the client the closed contract, which, as we mentioned, is a simple model that contains the date of the operation, the quantity negotiated, the price and the delivery month.

When the operation is paid for, the broker sends his other contract. If the first operation was a sale, this second contract will be a contract to

buy. He will also enclose a statement of purchases and sales showing all the contracts bought, with the prices paid and all the contracts sold, with the prices received, as well as the profit or loss. Also the statement will indicate the broker's commission.

At the end of the month, the broker sends an account statement to his client, showing the open positions, credits for payment of deposits and margins plus the credits of profits and losses, and last, the balance for the month (be it in favour of the client or the broker).

Once an operation is closed, each member of the CSCE registers it with the Clearing House. From that moment on, each member deals exclusively with the Clearing House, which, as we mentioned above, places itself between the seller and the buyer of futures contracts, assuming the position contrary to the two parties.

The member of the Clearing House must make a deposit for each contract registered as a guarantee that the conditions of the contract will be fulfilled. Besides the initial deposit, the member is asked to make daily deposits known as margins. The margin is the quantity which at any given moment is lost by any open contract as a consequence of a difference between the price of the operation and the current market price.

The initial deposit varies from time to time, according to the price levels for coffee, sugar and cocoa. It runs approximately 10% of the value of a contract. At the end of 1988, the deposit for sugar was US\$ 1 000 per contract, coffee US\$ 4 000, and cocoa US\$ 1 500. We should clarify that the deposit for the first two futures positions is a bit more, the same as for a speculative operation in the CSCE; the deposit for a hedging operation is smaller.

As an example, we can take a country like Colombia which normally exports 300 000 metric tons of sugar. Suppose it decides to hedge on the CSCE for a third of those exports. To protect 100 000 metric tons of sugar would mean selling on the CSCE approximately 2 000 contracts (exactly 1 968, since each contract is for 50 long tons). An initial deposit of US\$ 2 million would have to be made. Suppose the sale was made at 10 cents a pound. If the price rises, say to 10.10 cents a pound, Colombia's position is losing, since if it now has to buy the 2 000 contracts to exit from the Exchange, it would have to pay 10

points a pound more than the price for which it sold them. The CSCE would demand additional margins for those 10 points per contract, for a total of US\$ 224 000. Colombia does not lose the initial deposit nor the additional margins, since when it liquidates its position, the losses on the Exchange, if there are any, are compensated for by the higher price for the physical sugar.

9. Main characteristics of the CSCE

The following contracts are traded on the CSCE:

coffee: "C" Contract;

sugar: N° 11 Contract (sugar for the world market) and N° 14 Contract (for the U.S. market);^{4/}

cocoa: Cocoa Contract;

options: for coffee, sugar and cocoa.

The main characteristics of these contracts are as follows.

a) The Coffee "C" Contract

This contract deals with arabica-type washed coffee beans to be delivered in the months of March, May, July, September and December, over an 18-month cycle. The coffee under this contract will therefore have had to be produced during the 18 calendar months preceding the first month of quotations.

Coffee is traded in lots, also called contracts, of 37 500 pounds each. The price is quoted in cents per pound. The minimum fluctuation is one one-hundredth of a cent (one point), or US\$ 3.75 per contract.

In order to avoid unusual price fluctuations, the coffee contract has certain fixed daily limits: the first two positions are unlimited; the rest of the positions are limited to 6 cents a pound above or below the closing price of the previous day. If the limit in the same direction is reached two consecutive days, the limit is extended by 3 cents a pound. This new limit (9 cents a pound) will be in effect till the fluctuation is below the original limit (6 cents) for two consecutive days, thus reverting to this original limit. The Board of Managers can change these limits at its discretion.

Transactions begin at 9:45 (New York time) at the opening call and continue till 14:28 o'clock. At 14:30 the closing call begins. Both the

opening and the closing call begin with purchases and sales in the closest futures position, till there are no more, and then move to the next position. This continues till all the active contracts are closed. The CSCE then publishes the closing or settlement price for each futures position, based on the average prices during the closing call.

The prices on the CSCE for coffee are CIF (cost, insurance and freight) Port of New York (with a discount of 125 points if it is the Port of New Orleans) for the following sources: Costa Rica, El Salvador, Guatemala, Kenya, Mexico, Nicaragua, Papua New Guinea, Tanzania or Uganda, with the following differentials: 200 points (2 cents a pound) are added for Colombian coffee; 100 points are subtracted for Honduran and Venezuelan coffee; 300 points subtracted for coffee from Burundi, India and Rwanda; 400 points discounted for coffee from the Dominican Republic, Ecuador and Peru; and 600 points subtracted for Ethiopian coffee.

The CSCE establishes that the quality of the coffee should have a good size, shape and colour, according to criteria established by the Exchange itself. It also establishes discounts if these conditions are not met. These quality requirements are very strict, and exporters from Latin America and the Caribbean usually receive a discounted price, at times considerably so, (we will analyze this in detail elsewhere in this study). The Exchange has established methods for verifying the quality of the coffee (for sugar and cocoa as well), methods for sampling, and how licenses are granted to enterprises and individuals to carry out the respective tests.

b) Sugar N° 11 and N° 14 Contracts

These contracts cover centrifugal raw cane sugar, on the basis of a polarization of 96 degrees, produced with the 18 calendar months preceding the delivery month. The months for quoting are January, March, May, July, September and October (November replaces October for N° 14 Contracts).

Each lot traded under both kinds of contracts is 112 000 pounds of sugar (50 long tons). The price is quoted in cents per pound. The minimum fluctuation is one point (one one-hundredth of a cent), or US\$ 11.20 per contract.

N° 11 and N° 14 Contracts have fixed daily limits, to avoid unusual price fluctuations. The first two positions are unlimited. The limit for the rest of

the positions are 50 points (US\$ 0.005) a pound above or below the closing price of the previous day. If the limit in the same direction is reached two days in a row, the limit is increased by 50 points, and continues in that way till it reaches 200 points. The maximum limit (200 points) will be in effect till a movement of less than 150 points is reached on two consecutive days, at which time the limit will go back to 150 points, and continue lowering in that way till it returns the original 50-point limit.

Transactions begin at 10:00 o'clock for the N° 11 Contract (9:45 for the N° 14 contract) with the opening call, and continue till 13.43 o'clock (for both contracts). At 13:45, the closing call begins (the N° 14 Contract begins after the N° 11 is closed). Both calls begin with operations for the nearest future, till all the supply and demand is met and that contract is closed, and continue with the following month till all active contracts are closed. The CSCE publishes a closing or settlement price for each futures position, based on the average price from the closing call.

The CSCE also publishes a spot price for the N° 11 Contract, that is, for quick delivery (up to 60 days). It calculates that price by calling every day five members (different ones each day) of the Exchange active in sugar trading (traders, users, refiners, etc.) and asking them what do they consider to be the difference between the price of sugar for quick delivery and that for the first futures position. Once this is done, the CSCE discards the highest and the lowest differentials and averages the remaining three prices.

Unlike Coffee and Cocoa Contracts, Sugar N° 11 Contracts are FOB (free on board), ports in the following countries: Argentina, Australia, Barbados, Belize, Brazil, Honduras, Colombia, Costa Rica, Dominican Republic, El Salvador, Ecuador, Fiji, French Antilles, Philippines, Guatemala, India, Jamaica, Malawi, Mauritius, Mexico, Nicaragua, Peru, South Africa, Swaziland, Taiwan, Thailand, Trinidad and Tobago, United States of America and Zimbabwe.

The N° 14 Contract, to the contrary, is CIF-based, taxes and surcharges paid, foreign and U.S. cane sugar, Ports of New York, Baltimore, New Orleans, Savannah or Galveston. We should clarify that owing to the import quotas adopted by the United States in 1982, only quota sugar uses N° 14 Contract to fix prices or to hedge.

The premiums and discounts for the quality of the sugar are much more severe for the N° 14 Contract than for the N° 11. For the latter, only a polarization of 96 degrees is demanded, normal in world sugar trade, with the following premiums and discounts:

- between 96 and 97 degrees of polarization, add 1.5% of the base price;
- between 97 and 98 degrees of polarization, add an additional 1.25%;
- between 96 and 95 degrees of polarization, subtract 1.6% from the base price.

Fractions of a degree are calculated using the same proportions.

On the contrary, for sugar for the U.S. market, certain minimum characteristics are established for moisture, ash, size of the grain, color and dextran, which is unusual in world trade and which causes most of the sugar exported by countries in Latin America and the Caribbean to receive discounts from the Exchange price.

Also the premiums for a higher polarization are less than those for the N° 11 Contract and the discounts larger, as follows:

- between 96 and 97 degrees of polarization, add 0.5% of the base price;
- between 97 and 98 degrees of polarization, add an additional 2.2%;
- between 98 and 99 degrees of polarization, add an additional 1.2%;
- between 96 and 95 degrees of polarization, subtract 5.5% from the base price;
- between 95 and 94 degrees of polarization, subtract an additional 2.75% from the base price.

c) Cocoa Contract

This contract covers cocoa beans in good condition, specifying their origin, description, condition, grade and count.^{5/} Operating months are: March, May, July, September and December, on an 18-month cycle.

Each lot traded weighs 10 metric tons, quoted in US dollars per metric ton, with a minimum fluctuation of US\$ 1, or US\$ 10 per contract.

Like the Coffee and Sugar Contracts already mentioned, the Cocoa Contract has fixed daily limits on prices to avoid excessive fluctuations due to speculation: the first two positions are unlimited and the limit for the rest in US\$ 88 per metric ton above or below the closing price from the previous day. If the limit in the same direction is reached two days in a row, the

limit is increased to US\$ 132 per metric ton. This new limit will remain in effect till fluctuations of less than US\$ 88 are obtained on two consecutive days, thus returning the limit back to the original amount (US\$ 88). The Board of Managers can change these limits at their discretion.

Transactions begin at 9:30 o'clock with the opening call and continue till 14:10. The closing call begins at 14:15. Both calls begin with purchases and sales in the closest futures position till these are finished, and then move on to the next position, till all the contracts are closed. The CSCE then publishes the closing or settlement price for each futures position, based on the average price from the closing call. The price of cocoa is CIF-based, Ports of New York, Delaware River or Hampton Roads, for delivery only to Exchange-approved warehouses. The following differentials are established according to the countries and/or zones of origin.

Group A: add US\$ 160 per metric ton for the main harvest of Ghana, Ivory Coast, Lomé, Nigeria and Sierra Leone.

Group B: add US\$ 80 per metric ton for Arribo (Ecuador), Bahía (Brazil), Cameroon, Sri Lanka, Chiapas (Mexico), Costa Rica, El Salvador, Ghana (middle harvest), Granada, Guatemala, Hispaniola (Dominican Republic), Honduras, Ivory Coast, Jamaica, Java (Indonesia), Liberia, New Guinea, New Hebrides, Nicaragua, Nigeria, Panama, Samoa, Surinam, Tabasco (Mexico), Trinidad and Tobago, Venezuela, Victoria (Brazil) and Zaire.

Group C: same price. Bolivia, Haiti, Malaysia, Para (Brazil), Peru, Sánchez (Dominican Republic), and all the other regions not specified.

Discounts are also established, varying between US\$ 22 and US\$ 272 per metric ton, and grade. Beans with noticeable defects in size and shape, as well as those more than a certain quantity per kilogram, cannot be placed on the Exchange. The quality requirements for cocoa demanded by the Exchange are very severe. Normally the price actually obtained is less than the one quoted on the Exchange.

d) Coffee, sugar and cocoa options

The Commodity Futures Trading Commission (CFTC) in 1982 authorized trading on the CSCE of an options contract for sugar related to the Exchange's N° 11 Contract. Cocoa options were authorized in March 1986 and coffee

options in October of the same year, both related to their respective futures contracts on the CSCE.

Operating in options does not imply receiving a physical product, as is the case for futures contracts already commented on in detail. The options buyer has the right but not the obligation of buying a lot of sugar, cocoa or coffee at a determinate price during a determinate period. The seller has the obligation of delivering to the buyer the lot of sugar, cocoa or coffee if the buyer so requests before the option expires.

The buyer pays the seller a premium for undertaking this obligation at the time of agreeing on the transaction.

The buyer of the option is obligated to enter the corresponding futures exchange to buy or sell sugar, cocoa or coffee for delivery during the option month, at the execution price specified in the option.

Option prices are expressed in U.S. cents per pound, with a minimum variation of one point (US\$ 0.001) for sugar and coffee and 1 US\$ per metric ton for cocoa. There are no maximum fluctuations.

The contractual unit is a futures lot: the Sugar N° 11 Contract (50 long tons), Cocoa Contract (10 metric tons), and the Coffee "C" Contract (37 500 pounds).

Sugar options operations can take place for the six first positions of the months of March, May, July, October and December/March; for cocoa and coffee in the months of March, May, July, September and December.

The last trading day is the second Friday of the month prior to the option month for sugar, and the first Friday for cocoa and coffee.

At the beginning of trading for any option there are five striking prices. One of them is central, corresponding to previous day's closing price for the related futures position, but adjusted upward to round it off in cents without decimals for a purchase option or downward for a sell option, for sugar and coffee. There are two prices above and two below this central price at intervals that depend on the level of futures prices, according to this table:

Futures prices	For first two positions	For the rest of the positions
Sugar		
Less than 10 cents	At intervals of half a cent	At intervals of 1 cent
Between 10 and 40 cents	At intervals of 1 cent	At intervals of 2 cents
Above 40 cents	At intervals of 2 cents	At intervals of 4 cents
Cocoa		
Below US\$ 3 600	At intervals of US\$ 100	At intervals of US\$ 100
US\$ 3 600 or above	At intervals of US\$ 200	At intervals of US\$ 200
Coffee		
Below US\$ 2	At intervals of 5 cents	At intervals of 5 cents
US\$ 2 or above	At intervals of 10 cents	At intervals of 10 cents

The execution period of the option runs from the moment of purchase to expiration. When the Clearing House, which plays the same role as it does for futures contracts, executes an option, it will apply this execution to any of the option underwriters who might be short in this kind of option.

Taking an options position while maintaining a futures position limits potential losses (payment of the premium) and can increase possible gains.

We should mention that in a stable market, most options should expire without being effected. On the contrary, when the market is rising, more purchase options are executed, and when the market is falling, more sell options are executed.

10. Evolution of the CSCE

The volume traded on the CSCE has increased notably in recent years, especially in 1986 and 1987.

The total number of lots traded on the Exchange reached 4.6 million in 1985, the fourth time it surpassed 4 million in the 103 years of its functioning. The following year registered 5.8 million lots, rising to 6.3 million in 1987. The growth between 1978 and 1987 was 339%.

The biggest volume traded on the CSCE is the Sugar N° 11 Contract, representing 61.6% of the total number of lots traded in 1987. An average of 15 353 lots were traded daily, compared to only 4 110 in 1978. This contract has the most liquidity, which is beneficial for sugar exporters in the countries of Latin America and the Caribbean, since they can enter and exit from the Exchange easily.

The Coffee "C" Contract is the second most important item on the CSCE in volume. In 1987, 965 000 lots were traded, 15.4% of all trading on the Exchange, a figure slightly below that of the previous year when a record 1.1 million lots were traded. The average daily volume in 1987 was 3 843 lots, compared to 662 in 1978.

Cocoa Contracts are only slightly behind coffee, with 895 000 lots traded in 1987, 14.3% of the total traded on the CSCE. The daily average in 1987 was 3 568 lots, as opposed to 910 in 1978.

Sugar, coffee and cocoa options have also shown extraordinary growth. A record of 472 000 contracts were negotiated in 1987, 81% more than the previous year. Options already represent 7.6% of the total volume of the CSCE and this share will probably increase.

Sugar options are by far the most numerous and dynamic. Around 90% of all options on the Exchange are for sugar. Nevertheless, coffee and cocoa options, in their first complete year, recorded volumes of 26 500 and 13 900 contracts respectively. Even though these figures are low in comparison with sugar, it can be predicted that the use of these options will increase over the next few years, due to their effectiveness as a tool for reducing risks.

There is little trading in the Sugar N° 14 Contract, only 1.1% of the total volume, since, as we already mentioned, this covers imported sugar subject to quotas in the United States. (These imports have steadily declined in recent years, reaching their lowest level in 100 years).

The following tables show the volumes traded on the CSCE by contract over the last 10 years. (Table I.1 to I.3).

Table 1.1

COCOA: VOLUME TRADED ON THE CSCE
(Number of contracts)
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	20.694	21.481	21.095	19.670	14.886	18.376	13.459	18.686	18.509	18.717	18.565	18.594	222.723
1979	19.439	17.626	16.430	14.784	21.250	23.282	18.160	21.125	16.929	25.555	22.321	15.282	232.183
1980	23.600	41.036	25.066	23.897	26.170	29.673	34.158	27.265	45.437	43.945	39.770	28.945	388.971
1981	32.916	43.352	37.056	52.875	32.691	54.479	55.525	53.557	43.764	63.751	53.674	39.011	562.651
1982	42.498	44.744	53.468	52.581	38.332	50.693	45.504	45.457	61.137	67.652	48.243	56.744	607.053
1983	88.429	97.636	82.115	91.851	83.275	135.536	102.212	112.031	103.023	70.032	97.781	98.619	1 162.540
1984	151.282	119.645	102.622	103.415	113.757	107.219	75.294	101.732	75.294	69.322	74.357	33.927	1 127.752
1985	86.748	83.988	94.863	72.564	64.716	62.989	74.583	57.842	52.912	58.358	53.056	37.954	800.573
1986	52.774	61.836	70.859	74.249	57.525	77.335	79.029	65.963	75.673	64.729	54.090	45.703	777.765
1987	67.268	61.641	73.341	67.954	68.521	93.849	111.728	66.990	71.591	70.164	81.605	60.813	895.465

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

Table 1.2

COFFEE: VOLUME TRADED ON THE CSCE
(Number of contracts)
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	11.125	10.341	17.202	12.049	12.194	11.112	11.346	18.526	13.526	14.615	14.589	17.334	163.959
1979	21.463	25.243	24.205	36.298	35.885	39.137	43.046	40.088	50.054	51.949	38.488	15.282	449.800
1980	70.277	77.143	112.558	93.108	145.830	87.149	80.217	66.054	69.731	37.528	35.310	32.029	906.934
1981	38.671	34.086	44.963	31.035	39.384	46.094	50.759	50.482	44.368	44.235	49.468	41.757	515.302
1982	47.560	50.976	63.168	52.708	51.062	41.428	42.779	38.457	44.583	39.967	46.247	37.500	556.435
1983	30.567	32.884	44.211	37.399	44.917	45.575	26.065	32.818	22.579	38.999	34.428	36.999	427.441
1984	33.327	47.767	46.793	46.833	51.174	42.891	34.956	48.979	43.159	29.703	37.457	36.094	499.133
1985	48.733	54.809	52.367	58.531	38.755	54.725	42.422	39.425	23.615	58.870	83.845	94.671	650.768
1986	113.305	95.509	76.787	82.308	75.176	87.323	78.670	106.366	93.465	112.685	89.713	61.835	1 073.142
1987	69.564	81.427	78.671	104.350	71.189	86.564	77.621	106.182	77.207	85.315	72.846	53.650	964.586

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

Table I.3

SUGAR: VOLUME TRADED ON THE CSCE
(Number of contracts)
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	61.854	70.103	86.634	79.359	65.623	98.323	75.940	116.271	115.808	99.632	75.243	71.983	1 016.773
1979	72.961	107.951	76.267	82.804	64.899	132.200	121.474	142.006	200.926	255.858	278.485	256.919	1 792.750
1980	381.805	354.441	338.118	245.233	309.417	277.884	271.884	279.149	317.170	295.673	250.627	255.379	3 576.742
1981	223.217	237.286	212.519	240.420	212.708	241.736	192.142	203.404	247.160	138.529	137.768	183.438	2 470.327
1982	166.913	209.386	199.263	217.689	138.377	177.657	176.541	144.980	150.639	140.262	160.656	154.657	2 037.020
1983	207.678	249.392	198.034	261.939	396.435	396.267	272.150	329.129	283.827	214.897	231.784	160.436	3 201.968
1984	192.551	219.725	252.489	227.150	175.268	213.491	163.955	228.279	263.419	234.008	154.735	124.579	2 449.549
1985	273.316	265.967	215.540	210.026	193.527	237.904	263.842	338.816	323.387	224.866	216.340	249.398	3 012.929
1986	308.044	268.053	382.053	519.027	343.746	289.900	281.124	235.555	328.830	258.744	173.612	195.126	3 583.814
1987	387.630	381.393	323.047	381.972	278.857	313.001	248.133	235.263	367.074	331.074	268.226	337.851	3 853.499

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

11. The seasonal nature of trading in the CSCE

An analysis of the volumes traded monthly on the CSCE during the period 1978-1987 leads to the following observations.

For cocoa, June is the high volume month, with 9.34% of the total. December is the low volume month, with 6.73% of the total. The difference between the highest and lowest volume is 2.61 percentage points.

For coffee, March is the high volume month with 9.14% of the yearly total, and January the low with 7.44%, leaving a difference between the two of 1.70 percentage points.

For sugar, September is the high month with 9.79% of the total for the year, and November the low with 7.59%, 2.20 percentage points below.

A look at tables I.4 to I.6 clearly shows that the volume of cocoa, coffee and sugar traded on the CSCE has a balanced distribution throughout the year, with little percentage differences from one month to the other. The lightest trading on the CSCE is at the end of the year, possibly due to the traditional holidays at that time. December is the lightest month for cocoa,

the fourth lightest for coffee, and the second lightest for sugar, after November.

Table I.4

COCOA: VOLUME TRADED ON THE CSCE
Percentages
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	9.29	9.64	9.47	8.83	6.68	8.25	6.04	8.39	8.31	8.40	8.34	8.35	100.00
1979	8.37	7.59	7.08	6.37	9.15	10.03	7.82	9.10	7.29	11.01	9.61	6.58	100.00
1980	6.07	10.55	6.44	6.14	6.73	7.63	8.78	7.01	11.68	11.30	10.22	7.44	100.00
1981	5.85	7.70	6.59	9.40	5.81	9.68	9.87	9.52	7.78	11.33	9.54	6.93	100.00
1982	7.00	7.37	8.81	8.66	6.31	8.35	7.50	7.49	10.07	11.14	7.95	9.35	100.00
1983	7.61	8.40	7.06	7.90	7.16	11.66	8.79	9.64	8.86	6.02	8.41	8.48	100.00
1984	13.41	10.61	9.10	9.17	10.09	9.51	6.67	9.02	6.68	6.15	6.59	3.01	100.00
1985	10.84	10.49	11.85	9.06	8.08	7.87	9.32	7.23	6.61	7.29	6.63	4.74	100.00
1986	6.79	7.95	9.11	9.55	7.40	9.94	10.16	8.48	9.73	8.32	6.95	5.62	100.00
1987	7.51	6.88	8.19	7.59	7.65	10.48	12.48	7.48	7.99	7.84	9.11	6.79	100.00
Average	8.27	8.72	8.37	8.27	7.51	9.34	8.74	8.33	8.50	8.88	8.34	6.73	

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

Table I.5

COFFEE: VOLUME TRADED ON THE CSCE
Percentages
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	6.79	6.31	10.49	7.35	7.44	6.78	6.92	11.30	8.25	8.91	8.90	10.57	100.00
1979	4.77	5.61	5.38	8.07	7.98	8.70	9.77	9.57	8.91	11.13	11.55	8.56	100.00
1980	7.75	8.51	12.41	10.27	16.08	9.61	8.84	7.28	7.69	4.14	3.89	3.53	100.00
1981	7.50	6.61	8.73	6.02	7.64	8.95	9.85	9.80	8.61	8.58	9.60	8.10	100.00
1982	8.55	9.16	11.35	9.47	9.18	7.45	7.69	6.91	8.01	7.18	8.31	6.74	100.00
1983	7.15	7.69	10.34	8.75	10.51	10.66	6.10	7.68	5.28	9.12	8.05	8.66	100.00
1984	6.68	9.57	9.37	9.38	10.25	8.59	7.00	9.81	8.65	5.95	7.50	7.23	100.00
1985	7.49	8.42	8.05	8.99	5.96	8.41	6.52	6.06	3.63	9.05	12.88	14.55	100.00
1986	10.56	8.90	7.16	7.67	7.01	8.14	7.33	9.91	8.71	10.50	8.36	5.76	100.00
1987	7.21	8.44	8.16	10.82	7.38	8.97	8.05	11.01	8.00	8.84	7.55	5.56	100.00
Average	7.44	7.92	9.14	8.68	8.94	8.63	7.81	8.93	7.57	8.34	8.66	7.93	

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

Table I.6

SUGAR: VOLUME TRADED ON THE CSCE
Percentages
1978-1987

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1978	6.08	6.89	8.52	7.80	6.45	9.67	7.47	11.44	11.39	9.80	7.40	7.08	100.00
1979	4.07	6.02	4.25	4.62	3.62	7.37	6.78	7.92	11.21	14.27	15.53	14.33	100.00
1980	10.67	9.91	9.45	6.86	8.65	7.77	7.60	7.80	8.87	8.27	7.01	7.14	100.00
1981	9.04	9.61	8.60	9.73	8.61	9.79	7.78	8.23	10.01	5.61	5.58	7.43	100.00
1982	8.19	10.28	9.78	10.69	6.79	8.72	8.67	7.12	7.40	6.89	7.89	7.59	100.00
1983	6.49	7.79	6.18	8.18	12.38	12.38	8.50	10.28	8.86	6.71	7.24	5.01	100.00
1984	7.86	8.97	10.31	9.27	7.16	8.72	6.69	9.32	10.75	9.55	6.32	5.09	100.00
1985	9.07	8.83	7.15	6.97	6.42	7.90	8.76	11.25	10.73	7.46	7.18	8.28	100.00
1986	8.60	7.48	10.66	14.48	9.59	8.09	7.84	6.57	9.18	7.22	4.84	5.44	100.00
1987	10.06	9.90	8.38	9.91	7.24	8.12	6.44	6.11	9.53	8.59	6.96	8.88	100.00
Average	8.01	8.57	8.33	8.85	7.69	8.85	7.65	8.60	9.79	8.44	7.59	7.62	

SOURCE: Elaborated with data from the Coffee, Sugar and Cocoa Exchange, Inc.

II. DESCRIPTION AND ANALYSIS OF THE ROLE OF THE EXCHANGE IN THE COFFEE, SUGAR AND COCOA INDUSTRIES IN LATIN AMERICA AND THE CARIBBEAN

1. Role of the CSCE in fixing prices

a) Price mechanisms

Like the other futures exchanges in the United States, the CSCE is regulated by the Commodity Exchange Act. The agency that supervises the compliance with this law is the Commodity Futures Trading Commission.^{6/}

The statutes and rules of the CSCE have been registered with and approved by the Commission, which follows daily operations very closely. Transactions of more than 25 lots of coffee or cocoa and 200 lots of sugar must be reported in detail to the Commission.

The prices of coffee, sugar and cocoa for future delivery are determined by supply and demand on the trading floor of the Exchange, where the product is offered and sold at open outcry. It is important to emphasize that the CSCE does not sell or buy coffee, sugar or cocoa, nor does it determine the prices at which they are traded. It is simply the place where coffee, sugar and cocoa producers and processors, as well as speculators, meet to buy and sell, through, of course, a member of the Exchange.

As an example, we can mention that if a member of the CSCE receives from two clients similar orders, one to buy and the other to sell, he cannot carry out the operation without going to the floor of the Exchange to offer both orders. If no one accepts them, then he can offset them.

The Commission follows the operations of each contract on the CSCE, especially those about to expire, trying to detect any attempt to manipulate or distort prices. It can audit commission houses without prior notice to ensure that they have not violated any of the regulations.

The Commission has intervened on several occasions in some exchanges when it thought they were manipulated. It intervened in the CSCE twice during the last decade for coffee contracts, because a group of exporting countries had bought an excessive number of lots to raise prices.

The first intervention was in 1977 when El Salvador and Brazil decided to sustain the prices on the CSCE. When the July 1977 position expired, the price

fell considerably, inflicting heavy losses on many participants in the Exchange. Moreover, both countries received a huge quantity of physical coffee. The Commission opened an investigation of the Compañía Salvadoreña de Café, accusing it of manipulation. The Commission, together with the CSCE, later intervened with an emergency call in the December contract, since 75% of the open positions were in the hands of three Latin American enterprises.^{7/}

Towards the end of the 1970s, a group of Central and South American countries formed the Compañía Pancafé, S.A., in order to stabilize prices by intervening in the futures and physical markets. Pancafé made massive purchases of futures, till the Commission decreed that transactions in the Coffee "C" Contract should be limited to liquidations. The delivery period of the physical coffee from the December position was extended by 25 days and the quality norms were relaxed so that enough coffee could be delivered to cover Pancafé's purchases.^{8/}

b) Physical market prices and Exchange prices

Trade on the Exchange is based on the fact that prices on the physical and futures markets maintain a relatively parallel movement. Although small differences can occur, mostly as a consequence of the Exchange's greater sensitivity to small changes in the conditions of supply and demand, generally prices in both markets tend to move together. The parallel movement of prices on the physical and futures markets is ensured by the fact that buyers (or sellers) of futures contracts have the right to demand delivery (or require that it be accepted) of coffee, sugar or cocoa.

Any discrepancy between the two prices would attract arbitrage operations,^{9/} which imply operations in both markets that cancel one another out and bring the prices back in line. If, for example, futures prices were higher at a given moment than prices for later delivery of standard quality product in the physical market, profits could be obtained through arbitrage operations by selling for future delivery on the Exchange, while simultaneously buying for future delivery on the physical market, and when the deferred delivery date came due, fulfilling the futures contract by delivering the goods bought for deferred delivery on the physical market.

The pressure to buy physical goods and sell futures would raise prices on the physical market to the level of futures prices. On the other hand, if at a

given moment, the prices of physicals prices were higher than futures prices, it would be to the advantage of holders of purchase contracts about to expire on the Exchange that they ask for actual delivery of the sugar and resell it on the physical market instead of liquidating their position by selling futures. Therefore, even though actual delivery is relatively rare on the Exchange, as we already mentioned, the possibility of fulfilling the contract by actually delivering is extremely important to keep the two market prices together.

c) Relation between prices for immediate delivery and futures

The prices quoted by the exchanges show a characteristic pattern of the relation between prices for immediate delivery and prices for future delivery in the different delivery months. The difference between the futures contract price and the price of the real product on the physical market is called the basis. Normally, it should be expected that the difference between futures prices and the spot price, that is, the basis, will increase for the more distant contract months, reflecting the incidence of the increases on the so-called carrying charges of the merchandise or the cost of storing stocks of the product.

The costs of carrying the merchandise include: storage, insurance, interest, losses, etc., necessary to keep the physical product from the actual date up to the expiration of the futures contract. Consequently, as the position approaches the expiration date, the gap between that position and the spot price tends to close. Those carrying charges of the merchandise added to the costs of making the shipment, establish the upper limit of the degree to which the price of a contract on the Exchange or a futures contract for later shipment can exceed the spot price of the product on the physical market.

Any larger difference would not last long, since it would offer gains without risks to those who do arbitrages, who would buy physicals and sell futures simultaneously. Such arbitrage operations would raise the spot price of the product and lower the futures price, thus restoring the normal price relation between the two markets. Prices for distant positions higher than prices for immediate shipment are said to have "premiums".

However, the difference between the prices of futures contract and the price for immediate shipment can be less than that maximum or even negative. A

situation like that is called "backwardation", or, in terms of the coffee, sugar or cocoa market, a situation in which the prices of the products are found at a "discount" in relation to the prices for immediate shipment.

Under those conditions, the traders would try to sell their stocks immediately and substitute for them by buying futures contracts with the appropriate date and retain these latter up to their expiration (at least until a more favourable opportunity arises). However, at any one moment only a given volume of potential arbitrage exists because the stocks carried for trading are limited. Thus arbitrage operations can be insufficient for bringing about the change needed to re-establish the normal price relation between the two markets.

If that happens, a discount situation (backwardation) could go on for several months and only disappear after the factors which initially provoked it have been eliminated. This happens as the result of a situation in which there is relative scarcity of supply at the time, but a scarcity which the market expects to ease in the future. This expectation can be based on estimates of an extremely large harvest or indications that any of the factors restricting actual supply (strikes or threats of strikes that affect production or shipment, etc.) will not take place in the future.

The close relation between immediate-delivery and futures markets arises from the fact that the same product is negotiated on both markets. Therefore, no buyer would acquire the product on one market if he could buy it for less on the other. In the same way, no seller would sell on one market if he could get better prices on the other. There are times when the product quoted on the Exchange does not comply with the exact specifications of the buyer, and naturally, he would be willing to pay a slightly higher price for the quality he wants.

It can also happen that the merchandise in the hands of a seller does not comply with the norms of the Exchange, in which case the seller has no choice but to sell the merchandise on the physical market. In this kind of situation, besides the place where the product is sent for shipping, the relation between the two markets is maintained, since the standard contracts used in the Exchange include the most common qualities and conditions.

d) Spot and futures prices

To analyze the evolution of the relation between spot, immediate delivery and futures prices, we take monthly data for a six-year period for cocoa and sugar. It was not possible to acquire the spot prices for coffee.

For cocoa, we use the spot prices for Brazil, the Dominican Republic and Ecuador published by the Cocoa Merchants Association of America and compared them to the futures prices published by the CSCE for the harvest years from 1982/1983 to 1987/1988. (See Table II.1).

We should point out first that spot and futures prices behaved in the same way; they rose the first two years and fell the following four. However, they did not do so in the same proportion. From 1982/1983 to 1987/1988 the spot price for Brazilian cocoa fell by 9.6%, taking average prices, Dominican cocoa by 8.3%, and Ecuadorean by 9.9%, while futures prices quoted on the CSCE dropped by 11.7%.

With regards to price differences, Brazilian cocoa receives a premium in relation to Exchange prices, that is, the spot price is higher, fluctuating in the period we are analyzing between US\$ 134 and US\$ 261 the metric ton. According to the rules of the CSCE, Brazilian cocoa has a premium of US\$ 80 per metric ton over the price on the Exchange. However, as we can see, the premium is much greater than the one specified and is due to the strong demand today for Brazilian cocoa for its recognized quality. Dominican cocoa, on the other hand, quoted at the same prices as those of the CSCE, most of the time recorded negative premiums, that is, discounts; these fluctuated between a premium of US\$ 37 the metric ton in 1984/5 and a discount of US\$ 41 the metric ton in 1982/3. Cocoa from Ecuador, which has a premium of US\$ 80 the metric ton according to the rules of the CSCE, recorded premiums of US\$ 9 and US\$ 127 the metric ton.

The differences in percentages between spot and futures prices were relatively small. Brazilian cocoa recorded the largest, between 7.48% and 11.43%; Dominican between -2.20% and +1.69%; and Ecuadoran between 0.45% and 5.42%. This analysis is based on the average differences of each of the six harvest years. The monthly averages present larger fluctuations in certain months, owing to seasonal rises or declines in demand or supply, particularly in the case of Brazilian coffee.

Table II.1
 COCOA: PHYSICALS AND FUTURES PRICES
 1982/83 - 1987/88
 (Dollars per metric ton)

Harvest years	Prices received for:			Futures prices CSCE	Bra.	CSCE Differences with				
	Brazil	D.R.	Ecuador			DR Absolute	Ecu.	Bra.	DR Relative	Ecu.
1982/83										
Oct.	1.620	1.527	1.534	1.561	59	-34	-27	3.78	-2.18	-1.73
Nov.	1.526	1.388	1.427	1.429	97	-41	-2	6.79	-2.87	-.14
Dec.	1.671	1.501	1.539	1.534	137	-33	5	8.93	-2.15	.33
Jan.	1.857	1.660	1.700	1.711	146	-51	-11	8.53	-2.98	-.64
Feb.	2.026	1.815	1.873	1.850	176	-35	23	9.51	-1.89	1.24
Mar.	1.940	1.724	1.779	1.766	174	-42	13	9.85	-2.38	.74
Apr.	1.951	1.756	1.821	1.795	156	-39	26	8.69	-2.17	1.45
May	2.131	1.939	2.022	1.980	151	-41	42	7.63	-2.07	2.12
Jun.	2.347	2.147	2.265	2.200	147	-53	65	6.68	-2.41	2.95
Jul.	2.348	2.150	2.269	2.196	152	-46	73	6.92	-2.09	3.32
Aug.	2.355	2.152	2.264	2.198	157	-46	66	7.14	-2.09	3.00
Sept.	2.213	2.022	2.141	2.050	163	-28	91	7.95	-1.37	4.44
Average	1.999	1.815	1.886	1.856	143	-41	30	7.70	-2.20	1.63
1983/84										
Oct.	2.162	1.975	2.101	2.013	149	-38	88	7.40	-1.89	4.37
Nov.	2.306	2.118	2.262	2.141	165	-23	121	7.71	-1.07	5.65
Dec.	2.671	2.476	2.631	2.469	202	7	162	8.18	.28	6.56
Jan.	2.791	2.556	2.750	2.539	252	17	211	9.93	.67	8.31
Feb.	2.703	2.480	2.686	2.443	260	37	243	10.64	1.51	9.95
Mar.	2.717	2.490	2.614	2.491	226	-1	123	9.07	-.04	4.94
Apr.	2.715	2.471	2.556	2.487	228	-16	69	9.17	-.64	2.77
May	2.894	2.623	2.688	2.619	275	4	69	10.50	.15	2.63
Jun.	2.716	2.375	2.456	2.385	331	-10	71	13.88	-.42	2.98
Jul.	2.473	2.136	2.219	2.141	332	-5	78	15.51	-.23	3.64
Aug.	2.542	2.252	2.322	2.173	369	79	149	16.98	3.64	6.86
Sept.	2.639	2.374	2.444	2.300	339	74	144	14.74	3.22	6.26
Average	2.611	2.361	2.477	2.350	261	10	127	11.09	.44	5.42
1984/85										
Oct.	2.562	2.219	2.282	2.200	362	19	82	16.45	.86	3.73
Nov.	2.620	2.246	2.307	2.218	402	28	89	18.12	1.26	4.01
Dec.	2.489	2.163	2.185	2.105	384	58	80	18.24	2.76	3.80
Jan.	2.389	2.173	2.191	2.130	259	43	61	12.16	2.02	2.86
Feb.	2.400	2.194	2.236	2.205	195	-11	31	8.84	-.50	1.41
Mar.	2.428	2.292	2.297	2.180	248	112	117	11.38	5.14	5.37
Apr.	2.434	2.349	2.407	2.239	195	110	168	8.71	4.91	7.50
May	2.349	2.209	2.268	2.118	231	91	150	10.91	4.30	7.08
Jun.	2.223	2.044	2.137	2.017	206	27	120	10.21	1.34	5.95
Jul.	2.271	2.126	2.149	2.110	161	16	39	7.63	.76	1.85
Aug.	2.327	2.130	2.172	2.165	162	-35	7	7.48	-1.62	.32
Sept.	2.391	2.213	2.231	2.233	158	-20	-2	7.08	-.90	-.09
Average	2.407	2.197	2.239	2.160	247	37	79	11.43	1.69	3.63

Table II.1 (continued)
 COCOA: PHYSICALS AND FUTURES PRICES
 1982/83 - 1987/88
 (Dollars per metric ton)

Harvest years	Prices received for:			Futures prices CSCE	Bra.	CSCE Differences with				
	Brazil	D.R.	Ecuador			DR Absolute	Ecu.	Bra.	DR Relative	Ecu.
1985/86										
Oct.	2.406	2.208	2.221	2.259	147	-51	-38	6.61	-2.26	-1.68
Nov.	2.340	2.132	2.133	2.158	182	-26	-25	8.43	-1.20	-1.16
Dec.	2.452	2.250	2.249	2.249	203	1	0	9.03	.04	.00
Jan.	2.387	2.215	2.219	2.218	169	-3	1	7.62	-.14	.05
Feb.	2.274	2.111	2.133	2.105	169	6	28	8.03	.29	1.33
Mar.	2.167	1.999	2.038	2.006	161	-7	32	8.03	-.35	1.60
Apr.	2.035	1.866	1.890	1.873	162	-7	17	8.65	.37	.91
May	1.961	1.766	1.801	1.795	166	-29	6	9.25	-1.62	.33
Jun.	1.958	1.756	1.805	1.795	163	-39	10	9.08	-2.17	.56
Jul.	2.097	1.904	1.960	1.931	166	-27	29	8.60	-1.40	1.50
Aug.	2.127	1.940	1.985	1.964	163	-24	21	8.30	-1.22	1.07
Sept.	2.278	2.095	2.137	2.108	170	-13	29	8.06	-.62	1.38
Average	2.207	2.020	2.048	2.038	168	-18	9	8.26	-.90	.45
1986/87										
Oct.	2.150	1.983	2.030	1.997	153	-14	33	7.66	-.70	1.65
Nov.	2.075	1.928	1.953	1.927	148	1	26	7.68	.05	1.35
Dec.	2.032	1.903	1.915	1.887	145	16	28	7.68	.85	1.48
Jan.	1.980	1.907	1.913	1.898	82	9	15	4.32	.47	.79
Feb.	1.943	1.885	1.897	1.870	73	15	27	3.90	.80	1.44
Mar.	2.014	1.934	1.956	1.922	92	12	34	4.79	.62	1.77
Apr.	2.151	1.976	1.999	1.982	169	-6	17	8.53	-.30	.86
May	2.162	1.964	1.998	1.980	182	-16	18	9.19	-.81	.91
Jun.	2.104	1.902	1.952	1.918	186	-16	34	9.70	-.83	1.77
Jul.	2.236	2.039	2.094	2.048	188	-9	46	9.18	-.44	2.25
Aug.	2.119	1.954	2.006	1.955	164	-1	51	8.39	-.05	2.61
Sept.	2.080	1.930	1.991	1.920	160	10	71	8.33	.52	3.70
Average	2.087	1.942	1.975	1.942	145	0	33	7.48	.00	1.72
1987/88										
Oct.	1.974	1.851	1.912	1.850	124	1	62	6.70	.05	3.35
Nov.	1.977	1.868	1.907	1.856	121	12	51	6.52	.65	2.75
Dec.	1.943	1.821	1.858	1.810	133	11	48	7.35	.61	2.65
Jan.	2.030	1.909	1.939	1.903	127	6	36	6.67	.32	1.89
Feb.	1.853	1.748	1.758	1.717	136	31	41	7.92	1.81	2.39
Mar.	1.737	1.638	1.646	1.601	136	37	45	8.49	2.31	2.81
Apr.	1.718	1.600	1.625	1.570	148	30	55	9.43	1.91	3.50
May	1.800	1.667	1.695	1.638	162	29	57	9.89	1.77	3.48
Jun.	1.734	1.584	1.621	1.563	171	21	58	10.94	1.34	3.71
Jul.	1.778	1.606	1.646	1.570	208	36	76	13.25	2.29	4.84
Aug.	1.639	1.434	1.483	1.391	248	43	92	17.83	3.09	6.61
Sept.	1.497	1.237	1.309	1.190	307	47	119	25.80	3.95	10.00
Average	1.807	1.664	1.700	1.638	168	25	62	10.28	1.55	3.76

SOURCE: Elaborated by the consultant with USDA and CSCE data.

For sugar, we use the spot prices published by the CSCE (from 1983 to 1988), calculated by calling every day several enterprises related to the production, use and trade of sugar, and asking them, in their opinion, what is the difference in prices for quick delivery and the first futures position on the Exchange. An average is then taken.

Sugar shows less of a relation between spot and futures prices, with the former having risen by 19.9% and the latter by 6.7%.

Price differences are greater for sugar. In absolute terms, they varied between 43 cents and 76 cents a pound, and in relative terms, between 6.23% and 14.69%. Monthly variations reached 33%, while the largest for cocoa was 18%. (See Table II.2).

Sugar is one of the basic products with high variability in prices, owing to the complex relation between supply and demand and its tendency towards disequilibrium. That could explain the large difference at certain times between spot and futures prices. In 1988, for example, several months showed discounts, since sugar for quick shipment was very scarce.

e) The futures contract

What is traded on the CSCE is the right of conveyance of property of coffee, sugar and cocoa on a future date. A contract for the physical product concedes the conveyance of property on a date which can be immediate or future.

There are several differences between a futures contract and a contract for later delivery on the physical market. Futures contracts have a standard form and only a few blanks have to be filled in. Contracts for later delivery have to be adjusted to the requirements of the buyer and seller with respect to the quality, quantity, the date and place of delivery of the product, as well as the conditions of the sale (form of payment, whether it is FOB or CIF, etc.).

Futures contracts, which have a few simple models, only have to be filled in with the date, the buyer and seller, the quantity, price and delivery month of the product. The rest of the conditions, as complex as for any other purchase/sale contract, are incorporated in the rules of the Exchange. The obligations and rights of the parties in a futures contracts do not appear in the contract itself. The contract only mentions a few rules and states that

Table II.2
SUGAR: SPOT AND FUTURES PRICES
1983 - 1988
(U.S. cents per pound)

YEARS	CSCE PRICES		FUTURES/SPOT	
	SPOT	FUTURES	Absolute	Relative
1983				
Jan.	5.98	6.75	.77	12.88
Feb.	6.40	6.88	.48	7.50
Mar.	6.18	6.96	.78	12.62
Apr.	6.71	7.66	.95	14.16
May	9.23	10.22	.99	10.73
Jun.	10.80	11.28	.48	4.44
Jul.	10.54	11.16	.62	5.88
Aug.	10.52	11.12	.60	5.70
Sep.	9.48	10.62	1.14	12.03
Oct.	9.67	10.82	1.15	11.89
Nov.	8.51	9.49	.98	11.52
Dec.	7.81	8.53	.72	9.22
Average	8.49	9.29	.81	9.49
1984				
Jan.	6.95	8.02	1.07	15.40
Feb.	6.56	7.20	.64	9.76
Mar.	6.42	7.35	.93	14.49
Apr.	5.96	6.65	.69	11.58
May	5.56	6.09	.53	9.53
Jun.	5.47	5.83	.36	6.58
Jul.	4.51	4.86	.35	7.76
Aug.	4.01	4.50	.49	12.22
Sep.	4.06	4.84	.78	19.21
Oct.	4.65	5.78	1.13	24.30
Nov.	4.40	5.41	1.01	22.95
Dec.	3.33	4.44	1.11	33.33
Average	5.16	5.91	.76	14.69
1985				
Jan.	3.59	4.29	.70	19.50
Feb.	3.65	4.72	1.07	29.32
Mar.	3.78	4.19	.41	10.85
Apr.	3.37	3.68	.31	9.20
May	2.77	3.24	.47	16.97
Jun.	2.74	2.91	.17	6.20
Jul.	3.16	3.46	.30	9.49
Aug.	4.35	4.49	.14	3.22
Sep.	5.12	5.48	.36	7.03
Oct.	5.01	5.46	.45	8.98
Nov.	5.54	5.89	.35	6.32
Dec.	5.34	5.77	.43	8.05
Average	4.04	4.47	.43	10.66

Table II.2
SUGAR: SPOT AND FUTURES PRICES (continued)
1983 - 1988
(U.S. cents per pound)

YEARS	CSCE PRICES		FUTURES/SPOT	
	SPOT	FUTURES	Absolute	Relative
1986				
Jan.	4.87	5.81	.94	19.30
Feb.	5.54	6.08	.54	9.75
Mar.	7.07	7.61	.54	7.64
Apr.	8.36	8.60	.24	2.87
May	7.64	8.05	.41	5.37
Jun.	6.38	6.76	.38	5.96
Jul.	5.58	6.02	.44	7.89
Aug.	5.53	5.80	.27	4.88
Sep.	4.67	5.88	1.21	25.91
Oct.	5.42	6.50	1.08	19.93
Nov.	5.93	6.67	.74	12.48
Dec.	5.66	6.26	.60	10.60
Average	6.05	6.67	.62	10.17
1987				
Jan.	6.48	7.14	.66	10.19
Feb.	7.33	7.76	.43	5.87
Mar.	7.51	7.83	.32	4.26
Apr.	6.64	6.95	.31	4.67
May	6.71	7.14	.43	6.41
Jun.	6.40	6.79	.39	6.09
Jul.	6.05	6.47	.42	6.94
Aug.	5.57	5.94	.37	6.64
Sep.	5.77	6.41	.64	11.09
Oct.	6.60	7.28	.68	10.30
Nov.	7.29	7.52	.23	3.16
Dec.	8.25	8.39	.14	1.70
Average	6.72	7.14	.42	6.23
1988				
Jan.	9.64	9.65	.01	.10
Feb.	8.40	8.38	-.02	-.24
Mar.	8.52	8.54	.02	.23
Apr.	8.49	8.64	.15	1.77
May	8.85	9.05	.20	2.26
Jun.	10.52	10.36	-.16	-1.52
Jul.	14.01	12.76	-1.25	-8.92
Aug.	11.10	10.31	-.79	-7.12
Sep.	10.19	9.70	-.49	-4.81
Oct.	10.29	9.81	-.48	-4.66
Nov.	10.82	10.44	-.38	-3.51
Dec.	11.28	11.30	.02	.18
Average	1018	9.91	-.26	-2.60

SOURCE: Elaborated by the consultant with data from the U.S. Department of Agriculture and the CSCE.

the whole contract is governed by the rules of the Exchange. Since all operations have the rules of the Exchange in common as part of their conditions, that implies that such uniformity allows for a rapid transfer of the futures contract. The transfer itself is not effected, but rather a contrary operation which cancels the previous one.

The reason for buying a futures contract --either for hedging or speculation-- is unimportant; those who buy for either purpose are reduced to a common denominator by the nature of the contract itself. The contract is a legal agreement established between the buyer or seller, as the case may be, and the Clearing House, by which one party agrees to deliver or receive within a determinate date a certain quantity of quality coffee, sugar or cocoa, under the conditions of delivery determined by the rules of the respective contracts.

The contract, if it is allowed to expire, is fulfilled by cash payment on the date of delivery according to the settlement price of that date in exchange for the delivery of the physical coffee, sugar or cocoa.

2. The degree of participation of the coffee, sugar and cocoa industries of Latin America and the Caribbean in the CSCE

The countries of Latin America and the Caribbean that export coffee, sugar and cocoa generally operate on the Exchange mainly in two ways: through a hedging operation when they think prices might fall; and to fix an export price through so-called executable orders, when they think prices will probably rise. These countries almost never use options to complement either of these operations since options are relatively new on the CSCE. (These ways of operating will be studied in detail in Chapter III).

In spite of the significant increase in volume traded on the CSCE over the last few years, the countries of the region that export coffee, sugar and cocoa use hedging operations to a limited extent.

Only a few countries have used them recently, and very sporadically. They are used mostly for coffee, because the exporters of that product are large trading companies, which, besides knowing very well the mechanism of the

Exchange and having sufficient financial resources, do not want to take the risk of a strong drop in prices. Countries that hedge are Brazil, the Dominican Republic, Ecuador (coffee), Costa Rica, Guatemala and Chile (sugar), among others.

The main reasons for not using hedging operations are the following.

- Exchange controls

This could be the main reason for not using the Exchange for protection from a drop in international price, since it is very difficult for the enterprise or export agency to convince the Central Bank to allow it to take the foreign exchange out of the country to cover the initial deposit demanded by the Exchange and the additional margins that it will ask for if the price does not evolve as expected.

- Little knowledge of the hedging operation

This is also a strong reason with regards participation in the Exchange. Those responsible for trading in our countries prefer not to hedge because they do not understand its advantages or the mechanism they have to follow to do so: contact a member of the Exchange, deposit the initial and additional margins, pay commissions, etc.

- Lack of financing

This affects almost all the countries of the area, since owing to our heavy external debts, U.S. banks are not very interested in financing their entry into the Exchange. However, since the loan would be guaranteed by the physical product, some banks could probably be found to grant the credit. Also financing could be found in local banks in our countries.

- Others

Other reasons could be grouped together here: a lack of suitable communication systems; different time zones between some of the countries of the area and New York; a lack of confidence in the method for determining prices on the Exchange; local laws that prevent the exporter from using the Exchange, etc.

To the contrary, the countries of Latin America and the Caribbean that export coffee, sugar and cocoa use much more executable orders than hedging operations to fix prices on the Exchange. In most of the countries, however, executable orders have a limited use in relation to total exports, but,

apparently, only four or five countries do not use them at all, selling only at a fixed price.

The main reason for the greater use of executable orders is that when they are carried out by a trader who buys the physical product, no initial deposits or margins are required, since the trader finances the whole operation in the Exchange. To operate with a commission house, deposits and margins would have to be financed and commissions paid. Nevertheless, the use of the services of a commission house has certain advantages, and placing executable orders with traders has certain disadvantages, which we will analyze in detail in Chapter III.

It is risky to estimate the degree of participation of the coffee, sugar and cocoa industries of Latin America and the Caribbean 10/ without visiting each country and asking all the agencies and enterprises related to the export of these basic products what is their degree and form of participation. From the consultant's interviews in New York and Washington with executives of commission houses and traders and the New York Coffee, Sugar and Cocoa Exchange, it could be estimated that no more than 25% of the region's exports directly use the Exchange.11/

However, we can say that close to 100% of the area's coffee, sugar and cocoa exports use the Exchange indirectly, since almost all sales are made to traders (except for Cuba with its special agreements with socialist countries) and these immediately carry out hedging operations on the CSCE.

III. BENEFITS DERIVED FROM USING THE EXCHANGE FOR THE INDUSTRIES OF LATIN AMERICA AND THE CARIBBEAN

1. Modes of operating

The countries of Latin America and the Caribbean that produce and export coffee, sugar and cocoa operate on the New York Exchange in two main ways: hedging operations or fixing prices through executable orders. We will explain each of these.

a) Hedging operations

Hedging operations arise from the need for protection against the risk of price changes implicit in owning or having a product.

In this kind of operation, an exporter sells a determinate number of lots on the Exchange for a quantity of his product near or equal to the amount he wished to protect (it could be his whole production, all of his exports, or part of these). By doing so, he is fixing the price of the product and insuring himself against a drop in prices. The exporter makes this kind of operation when he thinks that the price is more likely to fall than rise.

Later, when he sells his physical product, he will have to simultaneously liquidate his position on the Exchange by buying the same amount of futures contracts as he sold. The coffee, sugar or cocoa is almost never actually delivered on the CSCE; less than 1% of the total volume traded on the CSCE is actually delivered there. (See Tables III.1 to III.3).

Hedging fixes the price of the product and insures against a drop, but at the same time it loses the chance of receiving a higher price. However, if one thinks he made a mistake, he can quickly rectify the situation by liquidating the position on the Exchange and take only a few losses. If he had sold the product directly to a buyer, it would be very difficult to get out of the deal.

A disadvantage of hedging is that a perfect operation is rarely achieved, where the price of the sale of the physical product and the price of lifting the hedge coincide, and where the gains or losses on one market are totally offset by the losses or gains on the other market. When this fails to happen and both prices do not coincide, the hedging operation can result in losses,

Table III.1
 DELIVERIES ON THE EXCHANGE AGAINST COCOA CONTRACTS
 BY PORT OF ENTRY AND COUNTRY OF ORIGIN
 1987
 (Number of contracts)

PORT	MAR.	MAY	JUL.	SEPT.	DEC.	TOTAL
NEW YORK						
Arribo 1/	87	60	105	40	1080	1372
Hispaniola 2/	—	—	—	17	—	17
Honduras	—	2	15	1	—	18
Subtotal	87	62	120	58	1080	1407
DELAWARE RIVER						
Arribo 1/	74	221	289	60	563	1207
Indonesia	—	2	2	—	—	4
Ivory Coast	—	—	—	—	15	15
Honduras	—	—	2	—	—	2
Mexico	—	—	—	—	3	3
Subtotal	74	223	293	60	581	1231
HAMPTON ROADS						
Arribo 1/	85	87	203	32	4	411
Honduras	—	—	9	3	—	12
Ivory Coast	—	—	—	121	16	137
Malaysia	—	—	—	33	210	243
Subtotal	85	87	212	189	230	803
TOTAL	246	372	625	307	1891	3441

SOURCE: Coffee, Sugar and Cocoa Exchange, Inc.

1/ Ecuador.

2/ Dominican Republic.

Table III.2

DELIVERIES ON THE EXCHANGE AGAINST THE COFFEE "C" CONTRACT
BY PORT OF ENTRY AND COUNTRY OF ORIGIN
1987

(Number of contracts)

PORT	MAR.	MAY	JUL.	SEPT.	DEC.	TOTAL
NEW YORK						
Colombia	6	11	291	41	1	350
Costa Rica	125	157	38	8	8	336
Dominican Republic	10	4	—	18	14	46
Ecuador	32	4	—	44	24	115
El Salvador	73	44	1	—	37	155
Ethiopia	133	84	494	560	661	1932
Guatemala	402	280	270	53	56	1061
Honduras	133	145	381	895	814	2368
India	21	2	—	25	17	65
Mexico	383	188	342	1179	139	2231
New Guinea	5	9	—	—	—	14
Peru	7	19	2	54	69	151
Venezuela	23	5	9	—	—	37
Subtotal	1353	952	1828	2888	1840	8861
NEW ORLEANS						
Colombia	11	6	5	1	—	23
Costa Rica	16	30	9	—	—	55
Ecuador	20	8	—	36	36	100
El Salvador	9	4	—	—	—	13
Ethiopia	2	9	7	—	2	20
Guatemala	217	243	177	34	71	742
Honduras	34	39	68	249	211	601
Mexico	436	231	362	1011	169	2209
New Guinea	4	2	—	—	—	6
Peru	6	—	1	11	12	30
Venezuela	7	5	—	—	—	12
Subtotal	762	577	629	1342	501	3811
TOTAL	2115	1529	2457	4230	2341	12672

SOURCE: Coffee, Sugar and Cocoa Exchange, Inc.

Table III.3

DELIVERIES ON THE EXCHANGE AGAINST THE SUGAR N° 11
CONTRACT BY COUNTRY OF ORIGIN

1987

(Number of contracts)

	JAN.	MAR.	MAY	JUL.	SEPT.	OCT.	TOTAL
Argentina	—	733	6	2	24	4	769
Costa Rica	—	83	—	—	—	—	83
Dominican Republic	—	181	20	—	—	100	131
El Salvador	—	—	—	—	—	—	—
Guatemala	—	1279	10	191	—	547	2027
Honduras	—	398	36	3	—	100	537
Mexico	—	434	—	151	—	—	585
Thailand	—	1941	—	—	—	—	1941
TOTAL	—	5049	72	347	24	751	6243

SOURCE: Coffee, Sugar and Cocoa Exchange, Inc.

but we should add that these are generally small in comparison with the greater risks from pronounced market fluctuations and the consequent losses, if hedging is not used.

If an exporter could close a sale of his physical product for delivery in the following months when he thinks the price might fall in the future, then he would not need to hedge. However, he normally has to wait some time to be able to sell his product on favourable terms. It is recommendable that during the waiting period he reduce or avoid the risk of a decline in prices. In that way, in most cases, hedging is done by using a futures contract as a temporary substitute for a contract to sell.

The traders, as the enterprises that trade basic products on a world level are called, are the biggest hedgers. They buy physicals and sell futures contracts at closely related prices, since both markets normally quote very similar prices for the different positions.

b) Executable orders (E.O.)

A coffee, sugar or cocoa exporter can sell his product at a fixed price or can fix the price later. If he thinks the price will drop, he takes the first option, but if he thinks it will rise, he will prefer to fix the price

later. To do so, he will use a formula, for example, the average price of the first position for the Coffee "C" Contract during the fortnight prior to the month of shipment. However, the exporter cannot even attempt to influence this average by using this formula. Through executable orders, the exporter who knows the Exchange well and follows it closely, can significantly improve the price he will obtain for his coffee, sugar or cocoa.

Through the E.O. the exporter agrees with the buyer that the sale price of the physical product will be fixed on the Exchange, against a specific futures position; the sale price will be the average futures sale price.

The exporter contacts a commission house, or the same trader who bought the physicals, to begin to fix the export price, either by individual lot or by the number of lots he wishes, till he reaches the total sale. The commission house or trader then executes the order on the Exchange on its own account. The date for beginning to fix prices is generally from the moment the contract is closed and the expiration date is normally the last day of trading on the Exchange of the related futures position.

The exporter agrees with the buyer on the quantity of lots to be sold, the month of shipment (which should coincide with the position on the Exchange, if a premium or discount in relation to futures prices is to be had) and when the process of fixing the price will begin and end.

The futures position on the Exchange which will be used to fix the prices of the physicals should correspond to the period of shipment. If this is not the case, the parties should agree on whether to adopt the previous or following position (usually the closer one). Depending on the situation of the market, the parties should also agree on premiums or discounts, taking into consideration the price difference between the futures position chosen and the month of shipment.

The advantage for the exporter is that he can fix the price of the physicals whenever he so desires, during the agreed-upon period. A disadvantage is that he has to pay a commission, which is not high in relation to the total value of the exports, and deposit margins if the open position shows a loss on paper, if he uses the services of a commission house.

2. Analysis of the futures market

There are two ways of looking at market analysis: the fundamental perspective, based on the theory that the price of a product represents the point of equilibrium between the demand and supply of a product, although it is known that the market price does not always reflect the conditions of supply and demand; and the technical perspective, based on the presupposition that the actual prices can be predicted from an analysis of the historical movement of prices and the present activity of the market.

a) Analysis of the fundamental factors

The buyer or seller who uses the basic analysis sees the actual price of coffee, sugar or cocoa as the result of an interaction of supply and potential demand. The trader of the fundamentals believes that knowing the behaviour of the factors of supply and demand will help predict how they might vary and how they will therefore influence the price of the product. These factors are incorporated into an economic model or group of mathematical formulas that explain how they interact to influence prices.

Market analysis based on fundamental factors can include the long, medium and short term. In the analysis, "long term" in the CSCE is 18 months, depending on the last futures position quoted on the Exchange. Any analysis for a period of three or five years would be useless since no action in the market could be taken through the Exchange. "Medium term" refers to a period of four to six months, and "short term" to the immediate situation which includes the next few weeks.

The fundamental factors can be divided into two groups: endogenous and exogenous. Endogenous refers to factors directly related to the supply and demand of coffee, sugar or cocoa, while the exogenous factors are those that affect these products indirectly.

Exogenous factors

The situation of the world economy in general, but particularly the situation of the main importers, is one of the exogenous factors that should be taken into account in a fundamental analysis, since it will have an important effect on sugar consumption and therefore, on the demand for sugar imports.

Another exogenous factor is the monetary situation of the main industrialized countries, particularly the United States, because it will affect not only domestic consumption, but also the prices quoted on the New York Exchange and other exchanges, since world prices of coffee, sugar and cocoa are based on U.S. dollars.

The situation of other raw materials can also indirectly affect the prices of coffee, sugar and cocoa. A sudden rise in these markets, for example, could originate a similar situation in another product market, which would otherwise not have had a reason to expect a rise of that nature. Frequently a sudden rise on the Chicago exchanges will cause the New York Exchange to rise. This can be attributed to, among other things, the fact that funds were transferred to other product exchanges.

If the prices on certain exchanges suddenly drop, even on the Stock Exchange, it can also be felt on other exchanges, since the speculators who are "long" on the exchanges that are in decline are obliged to operate with higher margins and that could lead them to liquidate positions they have in other markets to obtain cash to cover those margins.

Another exogenous factor is the political and military situation in the world or in some specific zone. In times of war or conflict, industrial consumers tend to store large stocks of merchandise, and this pressure to buy can cause a sudden rise in the prices for basic products. In the same way, the measures taken by governments, prohibiting the entrance of certain products, can also cause readjustments in the situation of supply and demand, and motivate sudden price changes.

Endogenous factors

These factors should be analyzed from the viewpoint of long-, medium- and short-term perspectives. These perspectives can frequently differ substantially. Prices can rise over the long term and decline in the medium and short term.

In long-term analysis, the most important factors are those that affect production and consumption. Production should be analyzed on the basis of: projections of areas sown; new production centres; limits on the quotas included in the Agreement, which can lead to a reduction in the future production of the member exporter countries (in the case of coffee);

government measures in the main exporter and importer countries. In general, any factor that could directly or indirectly influence the production of coffee, sugar or cocoa. A similar analysis can be done country by country, or on a global basis.

For consumption or demand, factors should be analyzed such as the pattern or scheme of consumption, both direct and indirect, eating habits, population growth, price and income elasticities, substitutes, government measures, etc.

Data on production and consumption and the ending inventories from the previous campaign will give an idea of the situation of supply and demand. After the surplus or deficit has been determined, the situation can be compared to previous years to see if the year under study is a normal year or not. If supply is analyzed on a country by country basis, the limits of export quotas which can be imposed on exporting countries who are members of the Agreement (for coffee) will have to be taken into account. As in the preceding case, the price level will influence the level of quotas, and the solution will be to work with two alternative hypotheses regarding quotas.

Another element that should be studied is the trend of the historical price and the prices prevailing at the moment of the analysis, both in real and actual or nominal terms.

The result of the analysis of the so-called fundamental factors will give us a hypothetical situation of supply and demand; but it will never say what price level corresponds to the mentioned situation of supply and demand. The analysis will indicate if prices are susceptible to rise or fall, but never by how much.

Once the long-term analysis is completed, the medium-term analysis will call for a study of the specific situation of the main markets, whence a need for information about them. It will be a question of calculating the needs for the next three or four months, taking into consideration various factors like the possible effects of seasonal consumption, weather conditions in the main producing countries which might be harvesting at that time, any news of disease in the coffee, cane or cocoa of those countries, inventory levels in the main importing countries, and the potential supply from exporting countries. In general, in medium-term analysis, the most important factors are

those related to the time of year being analyzed, and the influence of the long-term situation previously studied.

In short-term analysis, the most important question to be analyzed is that of the pressures of demand and the conditions of supply in the market, both in general and for specific countries. An attempt should be made to foresee possible actions by buyers and sellers in the market, on the basis of information about their prior behaviour. It must be remembered that the price movements in one or a few days are basically determined by the kind of news the market receives, and therefore, it is recommended that an attempt be made to predict market news day-by-day. In long-term analysis, events from one day to the next have little value, since in one way or another they will all be included in both parts of the production-consumption equation. However, in short-term analysis, daily events should be followed and carefully analyzed from the moment they happen, particularly in the case of news that can affect in one way or another the economy of the product being analyzed.

Tables III.4 to III.6 give the world balances of coffee, sugar and cocoa, which are some of the instruments used in fundamental analysis.

b) Technical analysis

Technical analysis refers to the study of the historical behaviour of the market through the use of figures, in order to predict future price trends.

It is based on three basic premises:

- the action of the market discounts everything;
- prices follow trends, and;
- history always repeats itself.

The main information needed for a technical analysis are: prices, volume and open positions. Technical analysts do not deny that the fundamental factors determine future prices, but they doubt the possibility of foreseeing price movements. They argue that the curves of the historical prices have incorporated not only the fundamental factors that make up those prices, but also the human and subjective reaction to those factors.

We should emphasize that the fact that many people follow the analysis of the figures when they operate on the Exchange can give rise to a situation in which what the figure indicates becomes reality.

Table III.4

WORLD BALANCE OF COFFEE
1979/80 - 1988/89
(1 000 60-Kg sacks)

HARVEST YEAR	INITIAL STOCKS	PRODUCTION	IMPORTS	TOTAL SUPPLY	CONSUMPTION	EXPORTS	FINAL STOCKS
1979/80	25.059	81.703	653	107.415	19.948	61.950	25.517
1980/81	25.517	86.143	675	112.335	20.468	59.854	32.013
1981/82	32.013	98.203	755	130.971	21.063	65.390	44.518
1982/83	44.518	81.926	733	127.177	20.647	65.118	41.412
1983/84	41.412	88.603	606	130.621	21.089	68.157	41.375
1984/85	41.375	90.266	456	132.097	23.015	72.000	37.082
1985/86	37.082	95.232	387	132.701	21.349	69.568	41.784
1986/87	41.784	79.337	265	121.386	22.219	66.300	32.867
1987/88	32.867	103.527	346	136.740	23.756	67.231	45.753
1988/89	45.753	93.160	315	139.228	24.799	68.105	46.324

SOURCE: Unites States, Department of Agriculture, World Coffee Situation, Foreign Agricultural Service (FAS), June, 1988.

Table III.5

WORLD BALANCE OF SUGAR
1979/80 - 1988/89
(1 000 metric tons)

HARVEST YEAR	INITIAL STOCKS	PRODUCTION	IMPORTS	TOTAL SUPPLY	CONSUMPTION	EXPORTS	FINAL STOCKS
1979/80	31.651	85.101	28.565	145.317	90.124	29.295	25.898
1980/81	25.898	88.726	28.980	143.604	89.805	28.216	25.583
1981/82	25.583	100.917	31.124	157.624	92.254	32.115	33.255
1982/83	33.255	100.593	29.165	163.013	94.394	29.894	38.725
1983/84	38.725	97.996	29.135	165.856	96.292	30.046	39.518
1984/85	39.518	100.428	28.381	168.327	98.853	29.970	39.504
1985/86	39.504	98.711	28.442	166.657	100.505	29.285	36.867
1986/87	36.867	104.556	27.851	169.274	105.128	29.058	35.088
1987/88	35.088	104.841	27.773	167.702	106.626	28.331	32.745
1988/89	32.745	108.511	27.697	168.953	108.313	28.012	32.628

SOURCE: F.O. Licht, International Sugar Report, August 1988.

Table III.6

WORLD BALANCE OF COCOA
1979/80 - 1988/89
(1 000 metric tons)

HARVEST YEAR	INITIAL STOCKS	PRODUC TION	TOTAL SUPPLY	CONSUMP TION	FINAL STOCKS
1978/79	238	1.453	1.987	1.123	123
1979/80	272	1.651	1.923	1.488	435
1980/81	435	1.677	2.112	1.592	520
1981/82	520	1.720	2.240	1.600	640
1982/83	640	1.530	2.170	1.620	550
1983/84	550	1.530	2.080	1.720	360
1984/85	360	1.974	2.307	1.799	508
1985/86	508	1.953	2.461	1.835	626
1986/87	626	1.945	2.571	1.884	687
1987/88	687	2.040	2.727	1.925	802

SOURCE: Unites States, Department of Agriculture, World Cocoa Situation, Foreign Agricultural Service (FAS), March 1988.

That is why those who decide their action in the market on the basis of the analysis of the basic factors study the figures when they analyze the market. A widespread practice is to determine the market trend by analyzing the basic factors, and once that trend has been determined, to choose the opportune moment to enter the market with the help of an analysis of the figure. Thus both forms of analysis are complementary and not mutually exclusive.

Figures III.1 to III.3 give some of the graphs used in technical analysis.

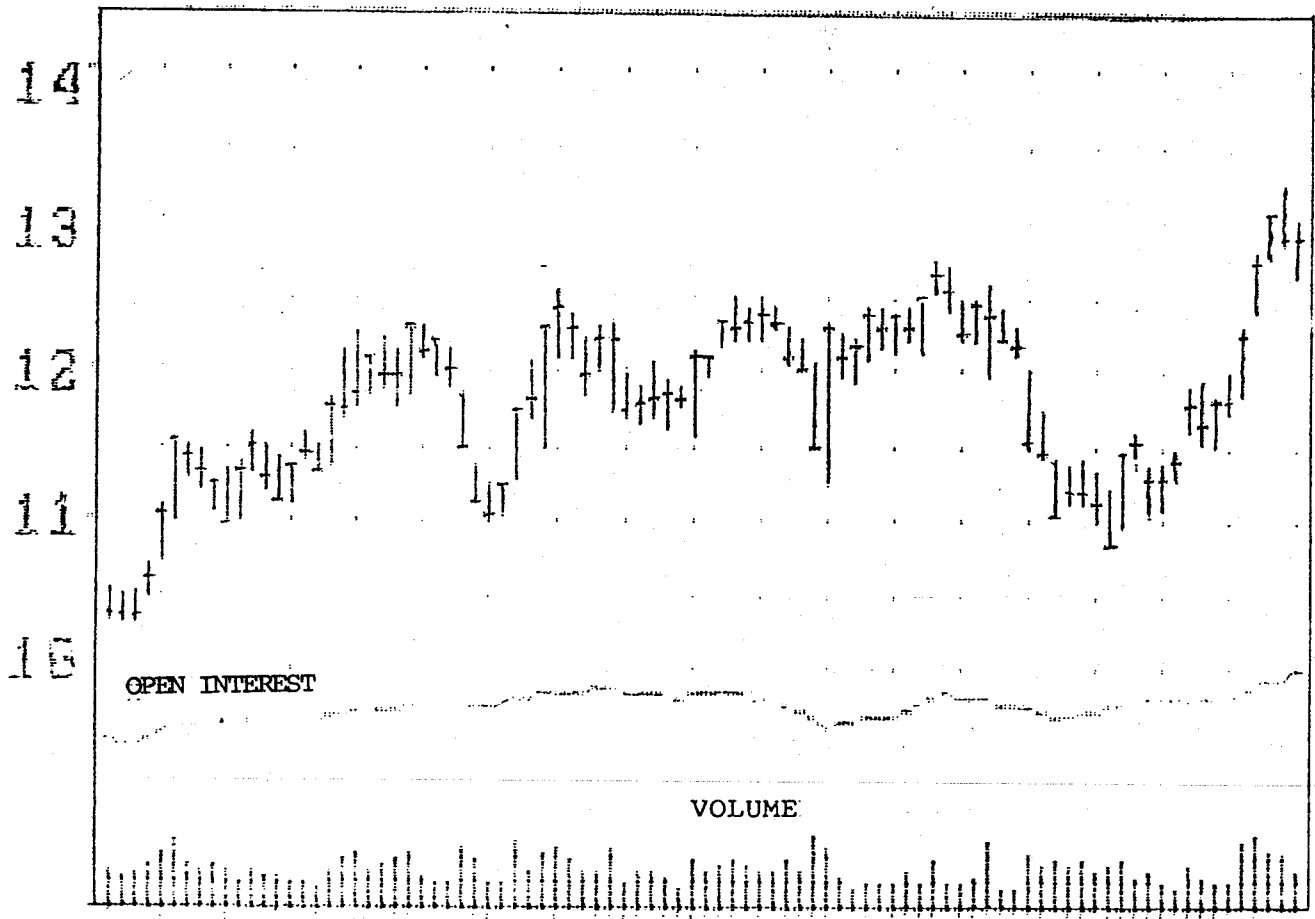
3. Use of the services of commission houses and traders

As mentioned above, the commission houses are members of the CSCE and operate for third parties on it without taking their own positions. They buy and sell coffee, sugar and cocoa for their clients. Other members of the Exchange, on the contrary, such as traders and floor speculators operate both for their clients and on their own account.

Figure III.1
HIGH, LOW AND CLOSING PRICE, OPEN INTEREST AND VOLUME
OCTOBER N° 11 CONTRACT, NEW YORK
(U.S. cents per pound)

10/02/89

20/06/89



Note: The upper part of this figure shows daily sugar prices; each vertical line indicates the highest and lowest price of the day, and the cross the closing price.

The following line shows the open positions.

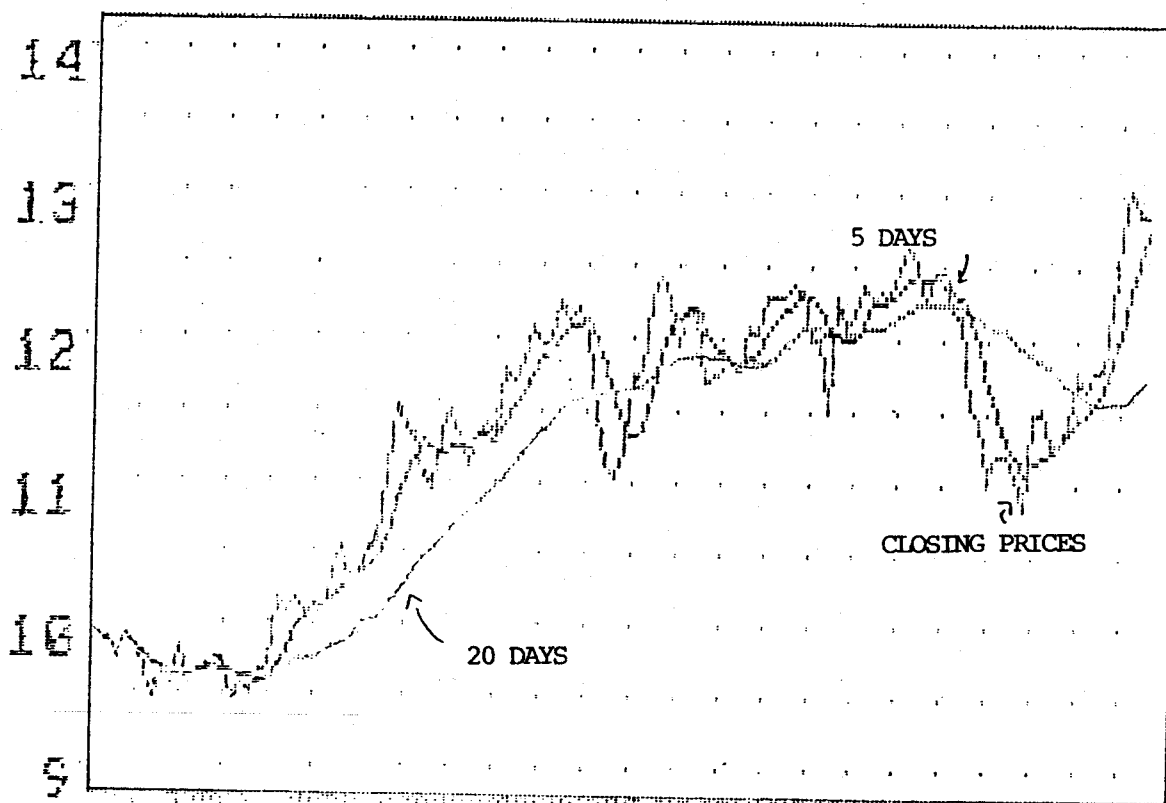
The lower part, in bars, shows the volume traded.

Figure III.2

MOBILE AVERAGES
OCTOBER N° 11 CONTRACT, NEW YORK
(U.S. cents per pound)

03/01/89

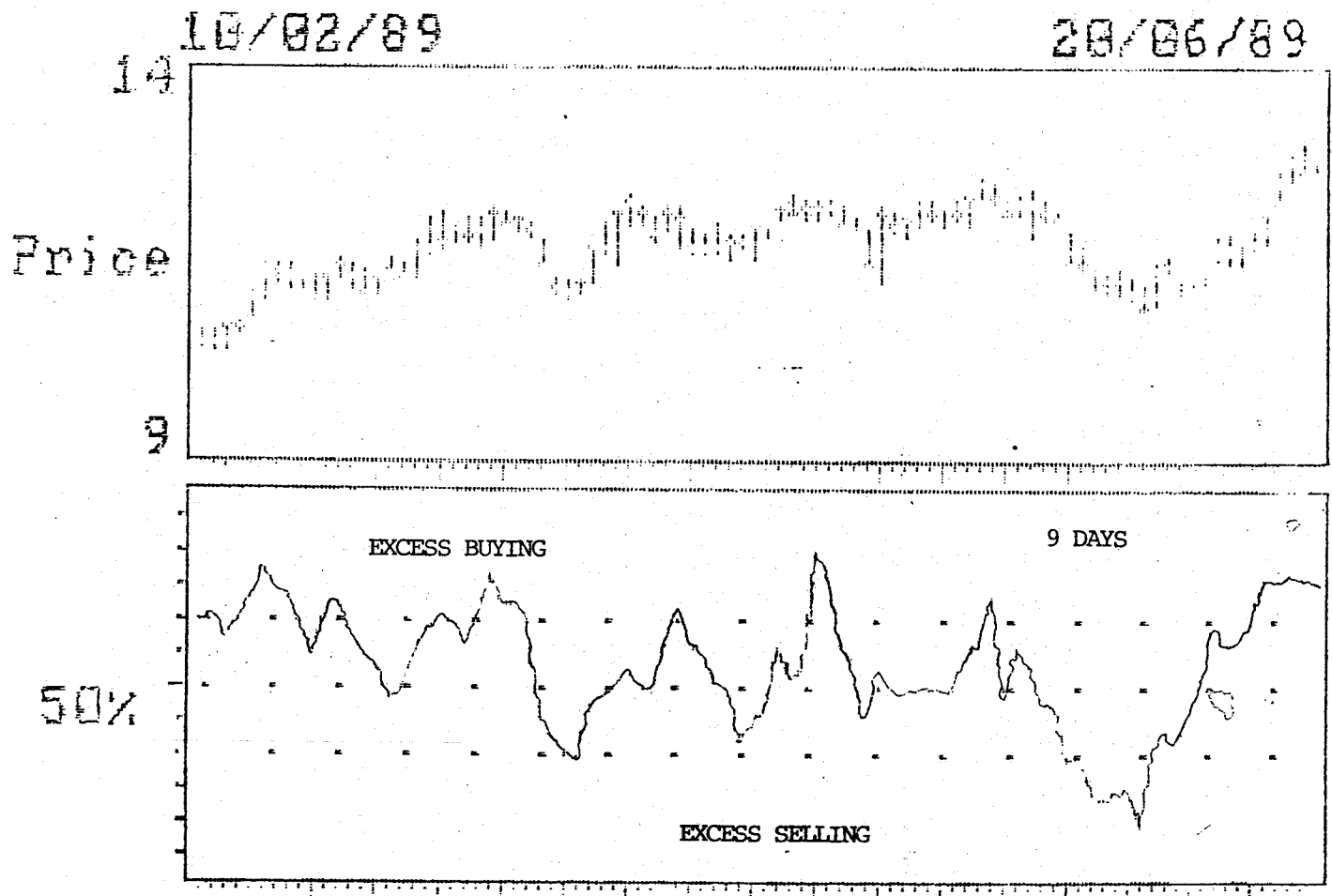
20/06/89



Note: This figure has three lines: the first shows the closing prices on the CSCE; the second a five-day mobile average closing price; and the third a 20-day mobile average. When the five-day line crosses the 20-day line and cuts through the closing line from above or below, that gives technical analysts indications for entering the Exchange to buy or sell.

Figure III.3

RELATIVE STRENGTH INDEX (R.S.I.)
OCTOBER N° 11 CONTRACT NEW YORK
(U.S. cents per pound)



Note: The upper part of this figure shows daily prices, highs, lows and closing.

The lower part shows the relative strength index, calculated by the relative differences between gains and losses within a determinate period, 9 days in this example, showing situations of excess buying above 70% and excess selling below 30%

Usually the clients of a commission house are speculators who have no access to the Exchange except through a member, and since the speculative element in any exchange is what gives fluidity to the operations of producers, exporters and industrialists, the commission houses provide this part by their intermediation.

The commission houses are specialists in trying to achieve the best possible execution of a purchase/sell transaction on the floor of the exchange, either to fix prices or cover themselves, which can be to the advantage of exporters.

Likewise, those houses protect the anonymity of their clients in the CSCE, which allows exporters who do not want it to be known that they are operating on the Exchange to sell easily without other competing countries and traders becoming aware of the fact. That is why traders also use commission houses.

They provide consulting services and information about the coffee, sugar and cocoa markets to their clients. They give their opinion about the present and future trends of coffee, sugar and cocoa prices on the basis of their analyses and studies of the fundamental and technical market factors. Their technical studies, based on figures and computerized statistical analyses, make it possible to determine at certain times market prices. They daily publish opinions about the market, which they send to their clients, be they exporters, buyers, speculators, et al., by telex, fax or telephone.

The commission houses can also assist the exporter in obtaining financing for his operation on the Exchange. The larger houses are capable of providing the necessary credit themselves.

The commission house is indifferent to the prices on the market since they do not have their own positions. They are mainly interested in giving the best service possible to their clients to help them carry out their operations in the best possible way to fulfill their objectives of speculation or hedging. The commission house's economic interest lies in having their clients satisfied with their service so they continue to use the agency in the future.

These houses charge a commission for their services, negotiable according to the client and/or agency, for each contract they buy or sell. The

commission, which does not depend on the price levels of the coffee, sugar and cocoa, represents less than 3%, in the worst of cases, of the value of the export.

On the other hand, traders are members of the CSCE, like commission houses. Theoretically they offer the same services on the Exchange, with the advantage of not charging commissions or demanding deposits of margins when they fix prices for executable orders for coffee, sugar or cocoa that the exporter sold to them. It should be remembered that they do take their own positions in the Exchange. Therefore, if the exporting country does not want its entry into the CSCE or the volume it is protecting to be known, then it should use the services of the commission house.

4. Alternatives and prerequisites for participating in the Exchange

The countries of Latin America and the Caribbean can participate in the Exchange in two ways:

- a) through a commission house or trader perhaps the more simple one, and:
- b) directly.

We have already commented on the first alternative. The only decision here is the choice between a commission house or trader. Either can be used indiscriminately for hedging, because the countries will have to pay a commission for the services of these houses as well as the deposits and margins they will have to cover in the CSCE. If the countries are going to sell coffee, sugar or cocoa through executable orders, a trader would be more useful, since no commission would have to be paid, unless the operation was to be kept a secret, in which case a commission house would be used. Only a very important producing country of a given product should operate in secret, for example, Brazil or Colombia for coffee and Cuba for sugar, and only at certain times.

Alternative b) would imply that the government or an association of producers of one of the countries of Latin America and the Caribbean become a member of the CSCE. They could do so directly or create a commercial enterprise to do so.

A membership in the CSCE costs around US\$ 60 000 and, as we said in Chapter I, in order to be accepted, one has to show proven assets of US\$ 25 000 and, more importantly, be recommended by two present members. That means that the agency or government that wants to be a member of the CSCE must have the confidence of the trade community (in coffee, sugar or cocoa) of New York. Added costs are those of maintaining an office in New York, which could be very small, and communications costs.

Some of the advantages and requirements for the different alternatives:

	USE SERVICES OF		BE A MEMBER
	Commission House	Trader House	of the CSCE
Office installation and maintenance	NO	NO	YES
Communications costs Commissions:	NO	NO	YES
Hedges	YES	YES	NO
Executable orders	YES	NO	NO
Margins deposits initial and additional:			
Hedges	YES	YES	YES
Executable orders	NO	NO	NO
Anonymity	YES	NO	YES
Good execution of orders on the Exchange	YES	YES	YES
Participation in decision making in the CSCE	NO	NO	YES

We recommend using the services of a trader for executable orders, a commission house for hedging, and membership only for a country that exports substantial quantities of coffee, sugar or cocoa, because of the cost implied in opening an office in New York, and the need to have personnel with very specialized knowledge of the Exchange for a good execution of sell orders.

5. Barriers to participating in the exchanges

We already mentioned in Chapter II the degree of participation in the CSCE of the countries of Latin America and the Caribbean and the reasons why it is so small. In this section we will analyze the barriers to that participation within the workings of the CSCE.

In reality, the New York Coffee, Sugar and Cocoa Exchange places no barriers to the participation of the countries of Latin America and the Caribbean.

The rules of the CSCE open the possibility that the countries of the region participate as members, like the companies that trade and use coffee, sugar and cocoa. Nevertheless, as we commented in Chapter I of this study, the participation of our countries is practically non-existent.

Such participation would be important since it implies taking part in decision-making within the CSCE. It would be particularly important to be able to have influence regarding the quality of the product, since, as we have already said, a good part of our exports receive discounted prices because they do not meet the quality demanded by the rules of the CSCE. Influence could also be had on other conditions advantageous for exporters such as shipments, sampling methods, and contracts for some by-products, among others points.

The barriers to participation by the countries of the region in the CSCE come from the characteristics of those countries. First, financial aspects, since buying and maintaining a membership demands a good deal of money. The price of a complete membership in mid-1988 was around US\$ 60 000, which is not high in relation to revenues from coffee, sugar and cocoa exports. An added cost would be an office in New York, which would also serve for following prices on the Exchange minute-by-minute, or for frequent visits to that city.

Other obstacles are the following.

a) Little or no knowledge of futures markets. To solve this, seminars could be held in the countries, organized by ECIAC together with certain agencies of each country, both producer and exporter associations and State enterprises. The participants of these seminars should be executives and public officials directly related with the export of coffee, sugar and cocoa.

International seminars on this theme could also be considered, at ECLAC headquarters or in one of the countries of Latin America and the Caribbean, inviting people from the whole area.

b) The physical distance of some of the countries of Latin America and the Caribbean. This refers to the distance between most of the countries of the area, especially in South America, and New York, which makes it impossible to frequently visit that city in order to be in the Exchange and see traders and commission houses. Travel costs are not high in comparison with the benefits of visiting the Exchange. Therefore we recommend that the countries of Latin America and the Caribbean send people to New York to familiarize themselves with its functioning and thus increase their participation.

c) A lack of communications infrastructure. We might think that in these times this would no longer be an obstacle to participating in the Exchange. However, in many of our countries communications are not efficient enough to continuously and expeditiously communicate with New York, to transmit sell or buy orders to a commission house or trader in a matter of minutes or seconds. The delay in establishing communications between New York and some countries at certain times prevents some of our countries from participating in the New York Exchange.

d) Strong links with habitual buyers. Some of the area's exporters have sold their coffee, sugar or cocoa to the same buyers for years, making it difficult for them to want to change and sell their products on the New York Exchange. In that case, the above-mentioned seminars would help exporters come to know the different sales options involved in using the Exchange or not.

e) Dependence on traditional sales systems. This point is close to the one above, for if a sales system has been used for many years, the people or enterprises who use it do not want to change it for other systems that are unknown to them. Once again, the seminars could be a means for changing to new sales systems which would allow them to obtain better prices for their coffee, sugar and cocoa.

6. Possible use of the Exchange in the trade strategies of the industries of Latin America and the Caribbean

The countries of Latin America and the Caribbean that export coffee, sugar and cocoa should directly or indirectly use the quotations of the New York Coffee, Sugar and Cocoa Exchange.

If they want to sell their product at a fixed price, either because they think the international price will drop, or because the domestic laws of some countries demand that a price be declared before a product can physically leave the country and they cannot directly use the Exchange, they will have to use the quotations on the CSCE to settle a price with the buyer (the prices, moreover, from which the trader will use the Exchange to protect himself).

If the exporter does not find a buyer who wishes to pay a fixed price, then he will have to recur to the Exchange to hedge; that is, use the Exchange directly.

We already examined the advantages of doing this, but it is worthwhile emphasizing that by having the production/export protected on the Exchange, that is, having a sure price fixed, the coffee, sugar or cocoa grower can easily find financing at better terms for his harvest or inventories. Also, the producer can better plan his productive and sales activities if he knows what his revenues will be.

If the exporter wants to fix the price of his production/export in the future, either because he thinks the price might rise or because he does not want to run the risk of taking a wrong decision at this time, then he can use a formula based on prices from a determinate period, for example, the 15/30-day average of the month prior to shipment, indirectly using the CSCE, since the average will have to be taken from the closing price of a determinate position (related to the shipment month) or be calculated on the spot price in the case of sugar.^{12/}

Or he can use the Exchange to fix the price for his export by using executable orders, and by following the evolution of the market, obtain better prices for his export.

Our producers should use the New York Coffee, Sugar and Cocoa Exchange constantly and directly, since by so doing they can obtain the best prices for

their products. They should not continue with the traditional sales methods which do not use the Exchange directly, since those methods completely depend on the development of world prices. It should also be remembered that if a country exports coffee, sugar or cocoa at good prices, that fact in itself has a positive influence on the market and benefits the rest of the exporting countries.

We present two examples of direct use of the New York Exchange, the first a hedging operation and the second an operation of executable orders:

EXAMPLE OF COVERAGE THROUGH FUTURES

Objective: Fix a high price for a projected sale of physicals (coffee, sugar or cocoa) through selling futures.

Presupposition: That the price of the physicals will drop. If that happens, more income will be obtained.

CONSEQUENCES

a) The market rose, contrary to expectations.

Result: There was a loss with futures.

There was a gain with physicals.

Since there was coverage, the net price of the purchase that had been fixed as the objective was achieved.

(In U.S. cents per pound)

Date	+	Physicals	+	Futures	+	
	+		+	(Oct. '89)	+	
April 7	+	11.93	+	12.18	+	Futures sold
	+		+		+	
Oct. 1	+	15.00	+	15.00	+	Futures bought/ physicals sold
Sale price of physicals:						15.00
Sale price of futures:				12.18		
Purchase price of futures:				15.00		
Cost of futures operation (commissions):				0.15		
Balance on the futures operation:				<u>-2.67</u>		<u>-2.67</u>

Net sale price:12.33

b) The market dropped, as expected.

Result: There was a loss with the physicals.
 There was a gain with futures.

The objective fixing the price was achieved.

(In U.S. cents per pound)

Date	+	Physicals	+	Futures	+	
	+		+	(Oct. '89)	+	
April 7	+	11.39	+	12.18	+	Futures sold
	+		+		+	
Oct. 1	+	9.00	+	9.00	+	Futures bought/ Physicals sold

Sale price of physicals: 9.00

Sale price of futures:	12.18	
Purchase price of futures:	9.00	
Cost of futures operation (commissions):	0.15	
Balance on the futures operation:	<u>+3.33</u>	<u>+3.33</u>

Net sale price:12.33

EXAMPLE OF FIXING PRICES THROUGH EXECUTABLE ORDERS

Objective: Establish, at the moment of selling the physical coffee, sugar or cocoa, partial or total executions of the physical sale and the date of shipment, to take advantage of price rises.

Presupposition: That the price of the physicals will rise, and therefore the futures price will also. If that happens, a better sale will be achieved.

CONSEQUENCES

a) The market rose, as expected.

Result: The futures price was fixed through executable orders. There was a gain with physicals as a result of this operation.

(In U.S. cents per pound)

Date	+	Physicals	+	Futures	+	
	+		+	(Oct. '89)	+	
April 7	+	11.93	+	12.18	+	Physicals sold/ price not fixed
	+		+		+	
	+		+		+	
From	+		+		+	
Apr. 7 to	+		+		+	
Oct. 1	+		+	14.00	+	Futures sold/ price fixed
	+		+		+	
Oct. 1	+	15.00	+	15.00	+	Physicals price shipment date
	+		+		+	

Sale price of physicals: 12.18

Average sale price of futures: +14.00
 Cost of operation with executable orders
 (If a commission house is used): - 0.0005
 Result of fixing futures prices: + 1.8195

Net sale price: 13.9995

b) The market dropped, contrary to expectations.

Result: The futures price was fixed.

There was a loss with the physicals as a result of this operation.

The price fixed was lower than the market price the day the physicals were sold.

(In U.S. cents per pound)

Date	+	Physicals	+	Futures	+	
	+		+	(Oct. '89)	+	
April 7	+	11.93	+	12.18	+	Futures sold/ price not fixed
	+		+		+	
	+		+		+	
From	+		+		+	
Apr. 7 to	+		+		+	
Oct. 1	+		+	11.00	+	Futures sold/ price fixed
	+		+		+	
Oct. 1	+	9.00	+	9.00	+	Physicals price shipment date
	+		+		+	

Sale price of physicals:	12.18
Average sale price of futures:	+11.00
Cost of operation with executable orders (If a commission house is used):	- 0.0005
Result of fixing futures prices:	<u>- 1.1805</u>
<u>Net sale price:</u>	<u>10.9995</u>

IV. QUESTIONS RAISED BY THE LATIN AMERICAN AND CARIBBEAN COUNTRIES ABOUT THE APPROPRIATE USE OF THE EXCHANGE

1. Representativeness of prices

Prices for the basic products traded on the Exchange depend on the expectations about the future course of events that affect supply and demand of the product being traded, coffee, sugar and cocoa in this case.

Buyers and sellers base their expectations on market news, which in a broad and very organized market like the CSCE, tends to be exact, timely and appropriate. The market discounts all available information and tries to foresee the future course of events offered by the world market for coffee, sugar or cocoa, in order to establish the equilibrium point of the futures market.

For example, a firm or agency might emit an estimate of world production for the coming year of an excess of 500 000 metric tons of cocoa over consumption. The prices of the Cocoa Contract on the CSCE might not move at all, because that factor had already been discounted owing to information known from the main producing and consuming countries, so that when the figure of the estimate finally came out it produced no surprise in the Exchange since it had already been taken into account. It is even possible that a high production figure make prices rise, if an even higher figure had been considered and discounted.

We analyze here whether or not the prices on the CSCE are representative of the conditions of supply and demand of coffee, sugar and cocoa. The analysis considers the period between 1969/1970 and 1987/1988.

In the case of cocoa, prices evolved very much in relation to the behaviour of supply and demand.

The decline in prices over the last four years was due to increased production. The 1987/1988 harvest was the largest in history. The high prices of 1983 and 1984 provided incentives for this increase in production.

The International Cocoa Agreement, which took effect in January 1987, was unable to influence prices because of the abundant supply and the non-participation of the main consumer country, the United States.

By observing changes in world inventories in relation to prices on the CSCE, we see that when inventories diminish prices rise and vice-versa, when inventories increase they drive prices down. (See Table IV.1).

The rise in prices over the last three years is due to the strong increase in consumption, a lower increase of production and the consequent decline in ending inventories.

The percentage of ending inventories over consumption is an index that has a direct effect on sugar prices. For example, in 1984/1985 the price was 4.19 cents (the second lowest average in nominal terms in the period under study), and ending inventories represented 40% of that year's consumption, one of the highest indexes of the period. The highest prices, 29.60 cents, correspond to the period of the lowest inventories, 21% in 1973/1974. (See Table IV.2).

Coffee prices, unlike cocoa and sugar, do not seem to reflect the fundamental factors in certain years, because supply was artificially kept down by the action of the International Agreement. This is observable especially in the last three years. In 1985/1986, inventories increased and prices rose at the same time; in 1986/1987, inventories were reduced by almost 9 million sacks and the price dropped instead of rising; and in 1987/1988, inventories increased by nearly 13 million sacks and the price rises (till July 1988).

It should be mentioned that the world coffee market is very much influenced by the International Agreement, which has a mechanism of import quotas adjusted quarterly, trying to keep prices in the US\$ 1.20 to US\$ 1.40 per pound range. When prices fall below this band, export quotas are reduced, and when they rise above it, the quotas might be suspended, leaving exports free. The effectiveness of the Agreement can be seen in the figures for this last year when the highest production in history was recorded and prices rose. Likewise, Brazil's importance in the world coffee market should be highlighted, since it normally produces a third of the total world production. For this reason, any event that affects its harvest, mainly weather conditions, has a strong repercussion on world prices. (See Table IV.3).

Table IV.1

COCOA: SUPPLY, DEMAND, CHANGE IN INVENTORIES AND PRICES
1969/1970 - 1987/1988
(Thousands of metric tons)

YEARS 1/	NET PRODUCTION 2/	MILLING	CHANGE IN INVENTORIES	PRICES CSCE 3/ (US\$ per M.T.)
1969/70	1.409	1.354	55	655
1970/71	1.478	1.399	79	524
1971/72	1.556	1.536	20	633
1972/73	1.392	1.583	-191	1.111
1973/74	1.443	1.512	-69	1.637
1974/75	1.527	1.452	75	1.239
1975/76	1.496	1.523	-27	2.078
1976/77	1.333	1.438	-105	3.792
1977/78	1.497	1.394	103	3.362
1978/79	1.491	1.457	34	3.181
1979/80	1.651	1.489	162	2.502
1980/81	1.677	1.598	79	1.979
1981/82	1.720	1.593	127	1.640
1982/83	1.530	1.627	-97	2.030
1983/84	1.530	1.735	-205	2.342
1984/85	1.947	1.829	118	2.172
1985/86	1.928	1.841	87	1.967
1986/87	1.973	1.889	84	1.917
1987/88	2.122	1.971	151	1.571 4/

SOURCE: Elaborated from figures from the United States Department of Agriculture and Gill & Duffus.

1/ Harvest October-September.

2/ Includes a 1% deduction for weight loss.

3/ Average closing price for the first three positions from 1970 to 1988.

4/ Average for January/September 1988.

Table IV.2

SUGAR: SUPPLY, DEMAND, CHANGE IN INVENTORIES AND PRICES
1969/1970 - 1987/1988
(Thousands of metric tons corrected volume)

YEARS 1/	PRODUCTION	CONSUMPTION	CHANGE IN INVENTORIES	ENDING INVEN.	PRICES CSCE 2/
1969/70	72.981	70.590	1.967	29.92	3.75
1970/71	71.030	72.760	-2.373	25.77	4.52
1971/72	72.176	74.333	-1.861	22.72	7.41
1972/73	75.688	75.863	-839	21.48	9.59
1973/74	78.922	78.859	-245	20.73	29.60
1974/75	78.268	76.375	1.347	23.38	20.49
1975/76	81.578	78.797	2.984	26.30	11.60
1976/77	86.714	81.338	4.394	30.88	8.11
1977/78	91.246	85.127	5.549	35.83	7.81
1978/79	91.010	89.334	1.051	35.43	9.87
1979/80	85.101	90.124	-5.753	28.74	29.01
1980/81	88.726	89.805	-315	28.49	16.93
1981/82	100.917	92.254	7.672	36.05	8.55
1982/83	100.593	94.394	5.470	41.02	8.50
1983/84	97.996	96.292	793	41.04	5.18
1984/85	100.248	98.853	-14	39.96	4.19
1985/86	98.711	100.505	-2.637	36.68	6.07
1986/87	104.556	105.128	-1.779	33.38	6.71
1987/88	104.841	106.626	-2.343	30.71	10.06 3/

SOURCE: Elaborated from figures from F.O. Licht and the Group of Latin American and the Caribbean Sugar Exporting Countries (GEPLACSA).

1/ Harvest September-August.

2/ Average spot price from 1970 to 1988.

3/ Average from January-November 1988.

Table IV.3

COFFEE: SUPPLY, DEMAND, CHANGE IN INVENTORIES AND PRICES
 1969/1970 - 1987/1988
 (Thousands of 60 kgs sacks)

YEARS 1/	PRODUCT.	DOMESTIC CONSUMP.	TOTAL EXPORTS	CHANGE IN INVENT.	ENDING INVENT. % CONSUMP.	PRICES CSCE 2/ (cents p.lb)
1969/70	69.603	18.932	55.276	-4.218	88.32	52.01
1970/71	59.390	19.410	51.880	-11.414	75.92	44.99
1971/72	73.292	19.096	58.388	-3.714	65.06	50.33
1972/73	77.249	17.484	61.428	-1.221	62.34	62.30
1973/74	65.729	19.047	60.619	-13.369	44.97	65.84
1974/75	82.731	19.203	55.468	8.528	59.39	65.41
1975/76	73.131	19.219	59.707	-5.366	49.39	142.75
1976/77	61.106	18.452	56.505	-13.317	34.24	234.67
1977/78	70.677	18.828	48.737	3.739	43.52	162.81
1978/79	79.025	19.462	64.588	-4.347	29.81	173.53
1979/80	81.703	19.948	61.950	458	31.16	154.19
1980/81	86.143	20.468	59.854	6.496	39.86	128.09
1981/82	98.203	21.063	65.390	12.505	51.49	139.87
1982/83	81.926	20.647	65.118	-3.106	48.29	131.63
1983/84	88.603	21.089	68.157	-37	46.46	144.24
1984/85	90.266	23.015	72.000	-4.293	39.03	148.71
1985/86	95.232	21.349	69.568	4.702	45.96	199.58
1986/87	79.337	22.219	66.300	-8.917	37.13	116.37
1987/88	103.527	23.756	67.231	12.886	50.29	137.73 3/

SOURCE: Elaborated from figures from the United States Department of Agriculture.

1/ Harvest September/August.

2/ Average closing price of the first position from 1970 to 1988.

3/ Average from January/July 1988.

2. Degree of speculation in the CSCE

In order to try to measure the degree of speculation in the CSCE we used the statistics published by the Commodity Futures Trading Commission (CFTC) of the United States.^{13/} Operations on the Exchange are divided into reportable and non-reportable. Reportable operations in coffee and cocoa are those for 25 contracts or more, and in sugar for 200 contracts or more. All the details of these operations (whether they are speculative or commercial, prices, delivery dates, etc.) have to be given to the Futures Commission. Non-reportable operations are those for lower quantities and the details are not given to the Commission. They may include both speculative and commercial operations, but this is not reported in the statistics published. However, as can be seen below, the percentage of non-reportable operations is minimum for coffee and cocoa, and somewhat considerable for sugar. For the analysis we took the period from 31 December 1987 to 28 April 1989, leaving out October 1988 because we could not acquire the statistics for that month; in other words, a period of 16 months.

The Cocoa Contract is the one with the least speculation on the CSCE.^{14/} In the period between 31 December 1987 and 28 April 1989, according to the Futures Commission, for reportable commercial positions, which include hedging and price fixing, the longs, i.e. purchases, averaged 76.47%, and the shorts, i.e. sales, 85%; speculative positions averaged, therefore, 23.53% and 15.00% of longs and shorts respectively. (See Table IV.4).

In the 16 months analyzed, speculators registered their highest share in longs on 31 May, with 43.68% and their lowest on 31 December 1987, with 3.78%, which concurs with the attitude of the speculator to close his positions before the end of the year. The month with the most speculation for shorts was April 1989, with 25.69% of the total reportable positions, and the lowest was May, with 6.66%. (See Table IV.4).

Longs represented 96.22% of commercial positions on 31 December 1987 and 53.32% on 28 February 1989, and the shorts (exporters and producers of cocoa) 93.34% in May and 74.31% in April of 1989.

Table IV.4

COCOA: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
 31 December 1987 - 28 April 1989
 (Number of contracts of 10 M.T. each)

Dates	Reportable Positions						Non-reportable positions	
	Commercial		Speculation		Total		Long	Short
	Long	Short	Long	Short	Long	Short		
31 Dec. '87	23.688	20.467	931	3.528	24.619	23.995	2.359	2.983
29 Jan. '88	20.471	23.528	3.587	1.902	24.058	25.430	4.545	3.173
29 Feb.	21.039	20.494	3.435	5.159	24.474	25.653	4.614	3.435
31 Mar.	23.598	25.551	4.285	5.036	27.883	30.587	5.923	3.219
29 Apr.	22.053	27.313	5.255	3.562	27.308	30.875	6.491	2.924
31 May	19.987	28.319	7.186	2.019	27.173	30.338	7.854	4.689
30 Jun.	21.642	27.453	7.590	6.596	29.232	34.049	9.232	4.415
29 Jul.	22.624	29.249	8.025	6.421	30.649	35.670	7.944	2.923
31 Aug.	23.722	26.945	6.523	8.092	30.245	35.037	8.038	3.246
30 Sep.	22.432	27.930	7.455	6.873	29.887	34.803	8.200	3.284
30 Nov.	19.498	28.655	11.646	3.094	31.144	31.749	5.895	5.290
30 Dec.	18.692	29.873	12.786	2.534	31.478	32.407	5.284	4.355
31 Jan. '89	21.713	24.642	7.780	4.331	29.493	28.973	6.410	6.930
28 Feb.	15.537	26.512	12.049	2.188	27.586	28.700	7.652	6.538
31 Mar.	20.134	21.655	5.434	4.451	25.568	26.106	8.320	7.782
28 Apr.	26.333	24.316	4.556	8.408	30.889	32.724	8.561	6.726
Average	21.448	25.806	6.783	4.637	28.230	30.444	6.708	4.495

COCOA: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
31 December 1987 - 28 April 1989
(Share of total reportables)

Dates	Reportable Positions						Non-reportable positions % of total positions	
	Commercial		Speculation		Total		Long	Short
	Long	Short	Long	Short	Long	Short		
31 Dec. '87	96.22	85.30	3.78	14.70	100.00	100.00	8.74	11.06
29 Jan. '88	85.09	92.52	14.91	7.48	100.00	100.00	15.89	11.09
29 Feb.	85.96	79.89	14.04	20.11	100.00	100.00	15.86	11.81
31 Mar.	84.63	83.54	15.37	16.46	100.00	100.00	17.52	9.52
29 Apr.	80.76	88.46	19.24	11.54	100.00	100.00	19.20	8.65
31 May	73.55	93.34	26.45	6.66	100.00	100.00	22.42	13.39
30 Jun.	74.04	80.63	25.96	19.37	100.00	100.00	24.00	11.48
29 Jul.	73.82	82.00	26.18	18.00	100.00	100.00	20.58	7.57
31 Aug.	78.43	76.90	21.57	23.10	100.00	100.00	21.00	8.48
30 Sep.	75.06	80.25	24.94	19.75	100.00	100.00	21.53	8.62
30 Nov.	62.61	90.25	37.39	9.75	100.00	100.00	15.92	14.28
30 Dec.	59.38	92.18	40.62	7.82	100.00	100.00	14.37	11.85
31 Jan. '89	73.62	85.05	26.38	14.95	100.00	100.00	17.85	19.30
28 Feb.	56.32	92.38	43.68	7.62	100.00	100.00	21.72	18.55
31 Mar.	78.75	82.95	21.25	17.05	100.00	100.00	24.55	22.96
28 Apr.	85.25	74.31	14.75	25.69	100.00	100.00	21.70	17.05
Average	85.25	74.31	14.75	25.69	100.00	100.00	21.70	17.05

SOURCE: Elaborated from data from CFTC, Commitments of Traders in Commodity Futures, Washington. D.C.

Non-reportable positions, less than 25 contracts per operation, were 18.93% of the longs and 12.85% of the shorts. These positions show both commercial and speculative positions, but the statistics are not broken down into these categories. They include small commercial users and small speculators (individuals, executives, et al.).

After cocoa, the Coffee "C" Contract draws the most speculation. Reportable long commercial positions averaged 73.71% of the total during the period analyzed, and speculative positions averaged 26.29%.

The commercial share of shorts is higher, with 87.86% of the positions, leaving only 12.14% to speculation. (See Table IV.5).

For the coffee contract, the same as for cocoa and sugar, speculators have a marked preference for entering the CSCE to buy rather than sell. The speculator is an optimist by nature, leading him to believe that prices will rise and not fall. Another influence on the speculator is the fact that he does not possess the physical product, since unconsciously he rejects selling something which he does not have. These considerations also include the large speculative funds; even though they use computers to enter and exit from the Exchange, people finally take the decision.

The month with the most speculation on longs was February 1988 with 39.22% of the total positions; the month with the least was August with 16.66%.

Non-reportable positions, less than 25 contracts like the Cocoa Contract, represented an average of 25.44% of the longs and 15.48% of the shorts. (See Table IV.5).

The Sugar N° 11 Contract (world market) is the most speculative on the CSCE. During the period under analysis, these averaged 40.02% of the total long reportable positions. That means that most of the speculators bought sugar. There was little speculation with shorts, 3.06% on the average.

Speculation in the month of June was 54.42% of the total positions, that is, commercial operations registered in the N° 11 Contract were less than half of the total. The least speculation was registered in February 1988 with 16.80%. (See Table IV.6).

Table IV.5

COFFEE "C" CONTRACT: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
 31 December 1987 - 28 April 1989
 (Number of contracts of 37 000 pounds each)

Dates	Reportable Positions						Non-reportable positions	
	Commercial Long	Short	Speculation Long	Short	Total Long	Short	Long	Short
31 Dec.'87	11.431	16.019	4.670	2.138	16.101	18.157	5.820	3.764
29 Jan.'88	9.766	16.936	4.994	1.415	14.760	18.351	7.964	4.373
29 Feb.	12.107	20.161	7.814	2.340	19.921	22.501	6.431	3.851
31 Mar.	13.269	17.948	3.849	1.964	17.118	19.912	5.899	3.105
29 Apr.	13.010	13.833	3.030	3.777	16.040	17.610	4.790	3.220
31 May	13.958	18.090	4.769	3.517	18.727	21.607	5.174	2.294
30 Jun.	10.198	15.761	4.956	1.693	15.154	17.454	5.501	3.201
29 Jul.	13.764	17.240	3.905	2.092	17.669	19.332	4.967	3.304
31 Aug.	15.997	18.209	3.199	2.443	19.196	20.652	3.884	2.428
30 Sep.	12.908	18.682	5.102	1.539	18.010	20.221	4.998	2.787
30 Nov.	11.047	10.839	2.491	3.282	13.538	14.121	4.749	4.166
30 Dec.	9.538	17.440	6.141	1.546	15.679	18.986	7.477	4.170
31 Jan.'89	14.808	18.468	3.475	2.333	18.283	20.801	6.696	4.178
28 Feb.	13.260	15.820	3.049	3.053	16.309	18.873	6.225	3.661
31 Mar.	13.647	17.694	3.645	2.333	17.292	20.027	6.599	3.864
28 Apr.	12.667	20.270	6.978	1.380	19.645	21.650	5.957	3.952
Average	12.586	17.088	4.504	2.303	17.090	19.391	5.821	3.520

COFFEE "C" CONTRACT: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
 31 December 1987 - 28 April 1989
 (Share of total reportables)

Dates	Reportable Positions						Non-reportable positions % of total positions	
	Commercial		Speculation		Total		Long	Short
	Long	Short	Long	Short	Long	Short		
31 Dec. '87	71.00	88.22	29.00	11.78	100.00	100.00	26.55	17.17
29 Jan. '88	66.17	92.29	33.83	7.71	100.00	100.00	35.05	19.24
29 Feb.	60.78	89.60	39.22	10.40	100.00	100.00	24.40	14.61
31 Mar.	77.51	90.14	22.49	9.86	100.00	100.00	25.63	13.49
29 Apr.	81.11	78.55	18.89	21.45	100.00	100.00	23.00	15.46
31 May	74.53	83.72	25.47	16.28	100.00	100.00	21.65	9.60
30 Jun.	67.30	90.30	32.70	9.70	100.00	100.00	26.63	15.50
29 Jul.	77.90	89.18	22.10	10.82	100.00	100.00	21.94	14.60
31 Aug.	83.34	88.17	16.66	11.83	100.00	100.00	16.83	10.52
30 Sep.	71.67	92.39	28.33	7.61	100.00	100.00	21.72	12.11
30 Nov.	81.60	76.76	18.40	23.24	100.00	100.00	25.97	22.78
30 Dec.	60.83	91.86	39.17	8.14	100.00	100.00	32.29	18.01
31 Jan. '89	80.99	88.78	19.01	11.22	100.00	100.00	26.81	16.73
28 Feb.	81.30	83.82	18.70	16.18	100.00	100.00	27.62	16.25
31 Mar.	78.92	88.35	21.08	11.65	100.00	100.00	27.62	16.17
28 Apr.	64.48	93.63	35.52	6.37	100.00	100.00	23.27	15.44
Average	73.71	87.86	26.29	12.14	100.00	100.00	25.44	15.48

SOURCE: Elaborated from data from CFTC, Commitments of Traders in Commodity Futures, Washington. D.C.

There are more non-reportables positions for sugar than for coffee and cocoa, since the number of contracts that need to be reported is 200 or more. Thus medium-sized commercial users and speculators operate in non-reportables, since 200 contracts equals 10 000 long tons of sugar, which is the usual size of a shipment for export. Long positions represented an average of 40.02% and the shorts 15.70%. (See Table IV.6).

To summarize, we can state that in the period from 31 December 1987 to 28 April 1989, within the CSCE:

a) speculative operations preferred longs; that is normal in rising markets, as coffee and sugar were during this period;

b) the Sugar N° 11 Contract was the instrument most used for speculation; this can be explained by the fact that this contract covers the largest volume of operations on the CSCE, which gives the speculator more opportunities to enter and exit from the Exchange whenever he wishes.

We should add that in mid-1988 speculation rose sharply on the commodity exchanges in the United States, due to the severe drought that affected the grain harvests. For this reason, we feel that the period we chose to analyze the degree of speculation in the CSCE is representative.

3. Volatility of prices

To analyze the volatility of the prices for coffee, sugar and cocoa we took the monthly averages of the period from 1970 to 1988.

The behaviour of coffee, sugar and cocoa prices, as is well known, follows a cyclical trend: several years of low prices and a short period of high prices. This has produced a good deal of instability in the income of countries of Latin America and the Caribbean that produce and export coffee, sugar and cocoa, over and above what is called the deterioration of the terms of trade with the highly developed countries. The evolution of the prices for the products under analysis can be seen in the annexed figures.

The Sugar N° 11 Contract has shown the most volatility over the last 19 years. The highest average price observed in the period was 57.17 cents per pound and the lowest only 2.74 cents. The high was 1986% larger than the low. The standard deviation for the period analyzed is 8.59 cents and the average

Table IV.6

SUGAR N° 11 CONTRACT: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
 31 December 1987 - 28 April 1989
 (Number of contracts of 50 long tons each)

Dates	Reportable Positions				Non-reportable positions			
	Commercial		Speculation		Total			
	Long	Short	Long	Short	Long	Short	Long	Short
31 Dec. '87	41.594	109.048	31.291	3.993	72.885	113.041	62.869	22.713
29 Jan. '88	56.304	124.100	27.987	6.102	84.291	130.202	71.532	25.621
29 Feb.	65.702	99.324	13.270	4.894	78.972	104.218	53.710	28.464
31 Mar.	49.469	105.876	23.125	1.334	72.594	107.210	64/646	30.030
29 Apr.	44.275	95.565	20.594	1.957	64.869	97.522	58.624	25.971
31 May	41.275	116.806	40.531	5.289	81.806	122.095	69.066	28.777
30 Jun.	40.114	138.543	47.894	2.681	88.008	141.224	74.046	20.830
29 Jul.	52.125	117.930	30.307	2.780	82.432	120.710	58.424	20.146
31 Aug.	51.231	107.088	27.039	5.373	78.270	112.461	58.500	24.309
30 Sep.	48.607	93.965	32.382	4.612	80.989	98.577	40.323	22.735
30 Nov.	45.110	124.897	44.970	2.094	90.080	126.991	46.999	10.088
30 Dec.	53.391	128.730	40.729	1.715	94.120	130.445	49.121	12.796
31 Jan. '89	54.621	90.341	21.739	8.451	76.360	98.792	43.969	21.537
28 Feb.	49.381	117.370	34.109	926	83.490	118.296	52.148	17.342
31 Mar.	65.229	140.177	43.900	992	109.129	141.169	49.763	17.723
28 Apr.	60.160	120.600	39.135	2.255	99.745	122.855	41.200	18.090
Average	51.190	114.398	32.438	3.466	83.628	117.863	55.934	21.698

SUGAR N° 11 CONTRACT: COMMERCIAL AND SPECULATIVE POSITIONS ON THE CSCE
 31 December 1987 - 28 April 1989
 (Share of total reportables)

Dates	Reportable Positions						Non-reportable positions % of total positions	
	Commercial		Speculation		Total		Long	Short
	Long	Short	Long	Short	Long	Short		
31 Dec. '87	57.07	96.47	42.93	3.53	100.00	100.00	46.31	16.73
29 Jan. '88	66.80	95.31	33.20	4.69	100.00	100.00	45.91	16.44
29 Feb.	83.20	95.30	16.80	4.70	100.00	100.00	40.48	21.45
31 Mar.	68.14	98.76	31.86	1.24	100.00	100.00	47.10	21.88
29 Apr.	68.25	97.99	31.75	2.01	100.00	100.00	47.47	21.03
31 May	50.45	95.67	49.55	4.33	100.00	100.00	45.78	19.07
30 Jun.	45.58	98.10	54.42	1.90	100.00	100.00	45.69	12.85
29 Jul.	63.23	97.70	36.77	2.30	100.00	100.00	41.48	14.30
31 Aug.	65.45	95.22	34.55	4.78	100.00	100.00	42.77	17.77
30 Sep.	60.02	95.32	39.98	4.68	100.00	100.00	33.24	18.74
30 Nov.	50.08	98.35	49.92	1.65	100.00	100.00	34.29	7.36
30 Dec.	56.73	98.69	43.27	1.31	100.00	100.00	34.29	8.93
31 Jan. '89	71.53	91.45	28.47	8.55	100.00	100.00	36.54	17.90
28 Feb.	59.15	99.22	40.85	.78	100.00	100.00	38.45	12.79
31 Mar.	59.77	99.30	40.23	.70	100.00	100.00	31.32	11.15
28 Apr.	60.76	98.16	39.24	1.84	100.00	100.00	29.23	12.83
Average	60.76	98.16	39.24	1.84	100.00	100.00	29.23	12.83

SOURCE: Elaborated from data from CFTC, Commitments of Traders in Commodity Futures, Washington. D.C.

price 10.95 cents. The coefficient of variation, obtained by dividing the deviation by the average, is 78.4%.

Cocoa is the next most volatile, after sugar. Over the last 19 years, the highest price was US\$ 4 429 per metric ton and the lowest US\$ 472. The high was 838% more than the low. The standard deviation is US\$ 908 and the average for the period is US\$ 1 917 per metric ton; the coefficient of variation is 47.4%.

Coffee registered less fluctuations than sugar or cocoa. The highest average was 314.96 cents per pound, and the lowest was 42.24 cents; the former is 646% larger than the latter. The standard deviation is 55.97 cents and the average price for the period analyzed is 119.32 cents; the coefficient of variation is 46.9%.

The following points should be highlighted:

a) coffee behaved in a relatively stable fashion over the last nine years, since it fluctuated in a price range between 100 and 150 cents per pound, except for the high prices of 1986;

b) cocoa shows a falling trend from 1984 onward, that is, five years of continuing declines;

c) sugar records the lowest prices, most of the time below production costs of even the most efficient producers.

4. Volatility of prices against the degree of speculation

Taking the period from 31 December 1987 to 28 February 1989, we see that the Sugar N° 11 Contract registers the highest price volatility with respect to the degree of speculation.

During the month with the most speculation, June, prices rose by 18.87%, increasing by 33.17% the following month, under the impetus of the rises in the month of June, even though speculation declined somewhat. A speculation of 42.93% in December 1987 produced a price rise of 13.64%. On the other hand, with the lowest speculation, 16.8% in February 1988, prices fell by 12.86%. (See Table IV.7).

Table IV.7

SUGAR N° 11 CONTRACT: DEGREE OF SPECULATION AND PRICES
31 December 1987 - 28 February 1989

DATES	DEGREE OF SPECULATION (Long positions)	PRICES (US\$/M.T.)	% CHANGE IN PRICES
31 Dec. '87	42.93	8.25	13.64
29 Jan. '88	33.20	9.64	16.85
29 Feb.	16.80	8.40	-12.86
31 Mar.	31.86	8.52	1.43
29 Apr.	31.75	8.49	-.35
31 May	49.55	8.85	4.24
30 Jun.	54.42	10.52	18.87
29 Jul.	36.77	14.01	33.17
31 Aug.	34.55	11.10	-20.77
30 Sep.	39.98	10.19	-8.20
30 Nov.	49.92	10.87	6.67
30 Dec.	43.27	11.28	3.77
31 Jan. '89	28.47	9.68	-14.18
28 Feb.	40.85	10.49	8.37

SOURCE: Elaborated from data from CFTC, Commitments of Traders in
Commodity Futures, Washington. D.C.

For cocoa, we analyze the degree of speculation for the short positions and not the long as in the case of sugar and coffee, since speculators prefer to enter a falling market as sellers. The two largest drops in prices, 14.45% and 11.4%, came when speculation was high, 19.75% and 23.10% respectively, and the largest rise in prices, 25% in November, when speculation was low, 9.75%. (See Table IV.8).

Coffee recorded the least price fluctuation in the period analyzed, but the largest fluctuations, 9.04% and 8.22%, were observed in December 1988 and February 1988, when speculation was highest, 39.17% and 39.22% respectively. When speculation declined --it reached its lowest level in August-- prices fell by 6.62%. (See IV.9).

We can draw the conclusion that the participation of speculators does indeed influence the prices on the CSCE. However, we have seen that the fundamental factors, supply and demand, are what determines the price levels for coffee, sugar and cocoa. Therefore, we can say that speculation intensifies the movements of prices; in other words, when prices rise, speculation makes them rise more than they would have without it. In the same way, it lengthens periods of decline. For this reason, we share the opinion of some analysts of primary products that speculation distorts the price levels that would exist if they were only influenced by supply and demand. This is what has happened for coffee, sugar and cocoa over the last 19 years.

Table IV.8

COCOA CONTRACT: DEGREE OF SPECULATION AND PRICES
31 December 1987 - 28 February 1989

DATES	DEGREE OF SPECULATION (Short positions)	PRICES (US\$/M.T.)	% CHANGE IN PRICES
31 Dec.'87	14.70	1.810.00	-2.48
29 Jan.'88	7.48	1.903.00	5.14
29 Feb.	20.11	1.717.00	-9.77
31 Mar.	16.46	1.601.00	-6.76
29 Apr.	11.54	1.570.00	-1.94
31 May	6.66	1.638.00	4.33
30 Jun.	19.37	1.563.00	-4.58
29 Jul.	18.00	1.570.00	.45
31 Aug.	23.10	1.391.00	-11.40
30 Sep.	19.75	1.190.00	-14.45
30 Nov.	9.75	1.488.36	25.07
30 Dec.	7.82	1.449.21	-2.63
31 Jan.'89	14.95	1.386.45	-4.33
28 Feb.	7.62	1.430.27	3.16

SOURCE: Elaborated from data from CFTC, Commitments of Traders in
Commodity Futures, Washington. D.C.

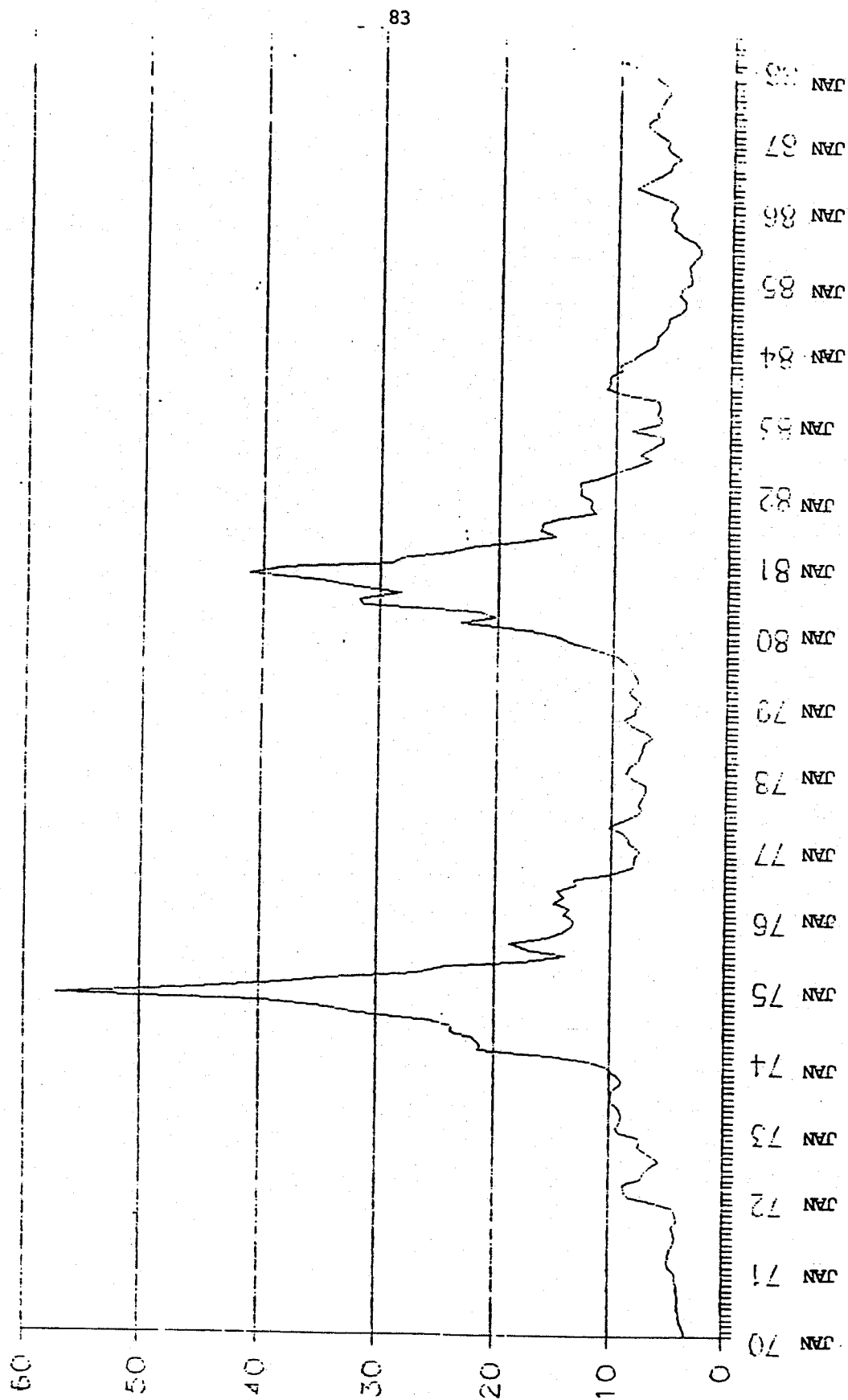
Table IV.9

THE COFFEE "C" CONTRACT: DEGREE OF SPECULATION AND PRICES
31 December 1987 - 28 February 1989

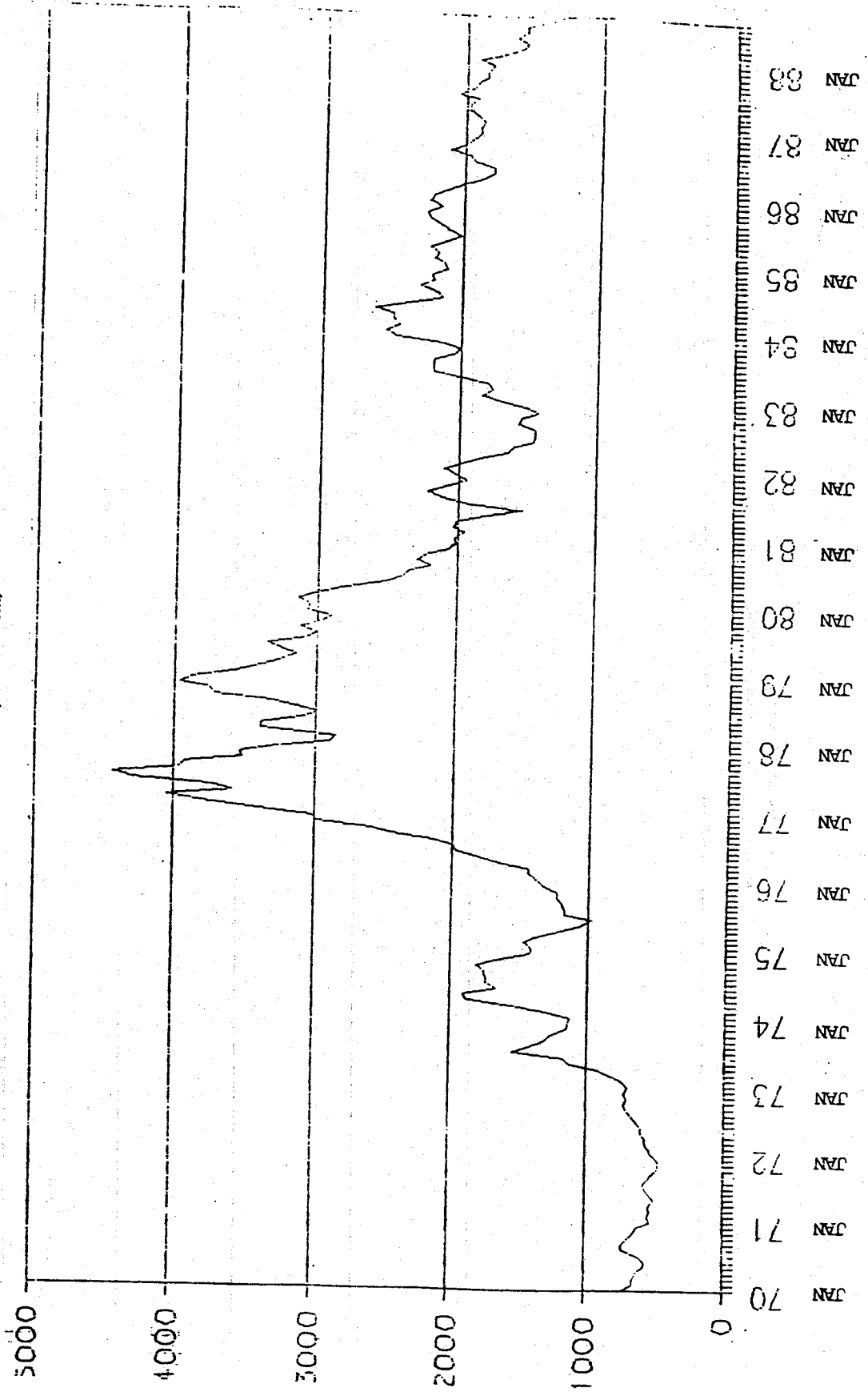
DATES	DEGREE OF SPECULATION (Long positions)	PRICES (cents per lb.)	% CHANGE IN PRICES
31 Dec. '87	29.00	126.88	.43
29 Jan. '88	33.83	128.02	.90
29 Feb.	39.22	138.54	8.22
31 Mar.	22.49	136.55	-1.44
29 Apr.	18.89	136.42	-.10
31 May	25.47	138.65	1.63
30 Jun.	32.70	143.93	3.81
29 Jul.	22.10	141.97	-1.36
31 Aug.	16.66	132.57	-6.62
30 Sep.	28.33	137.85	3.98
30 Nov.	18.40	135.39	-1.78
30 Dec.	39.17	147.63	9.04
31 Jan. '89	19.01	152.13	3.05
28 Feb.	18.70	139.95	-8.01

SOURCE: Elaborated from data from CFTC, Commitments of Traders in
Commodity Futures, Washington. D.C.

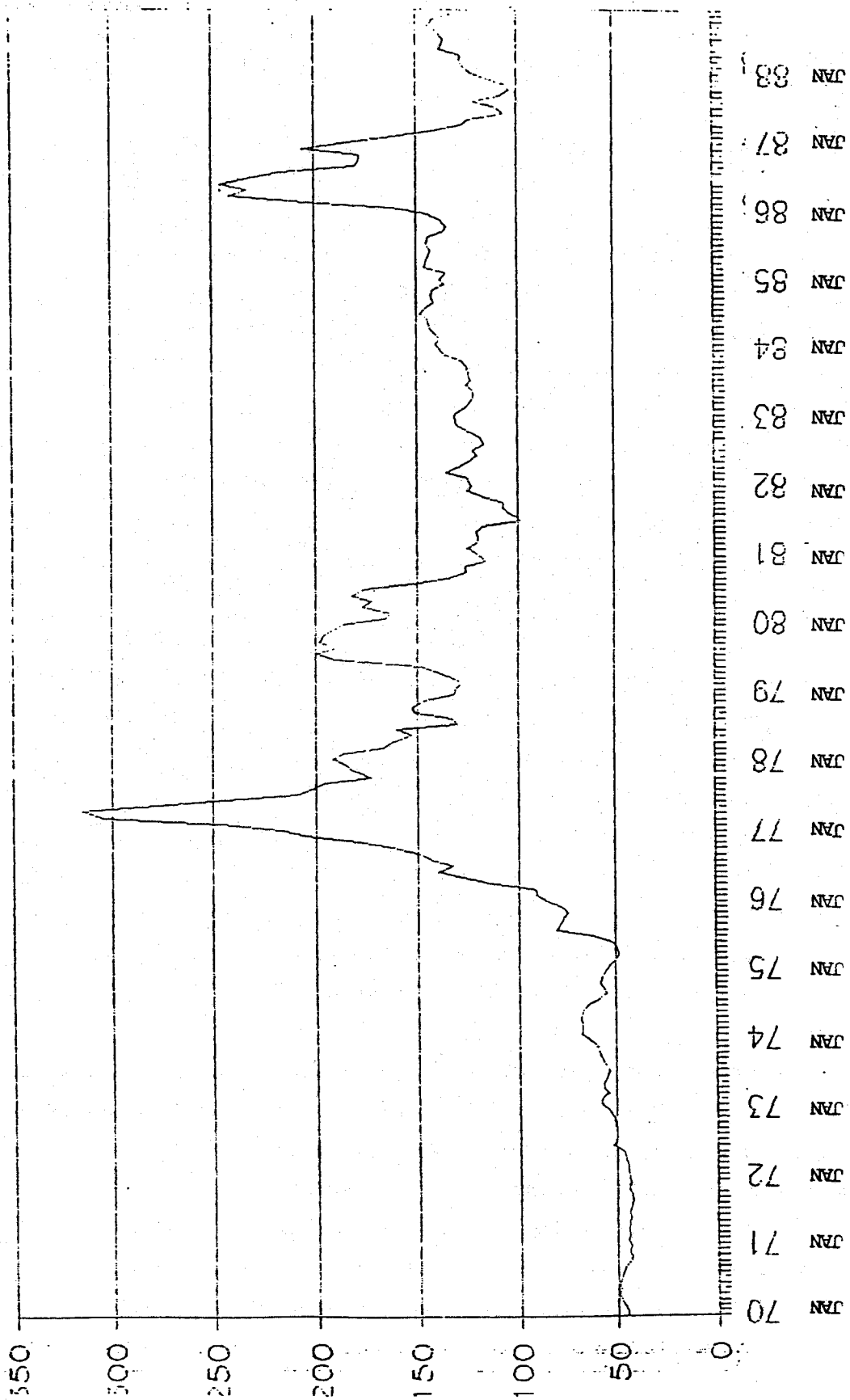
MONTHLY SUGAR PRICES
 № 11 Contract (U.S. cents per pound)



ANNEX IV-2

MONTHLY COCOA PRICES
Cocoa Contract (US\$ per metric ton)

MONTHLY COFFEE PRICES
"C" Contract (U.S. cents per pound)



V. EVALUATION OF THE EXCHANGE'S IMPACT ON THE COFFEE, SUGAR AND COCOA INDUSTRIES IN LATIN AMERICA AND THE CARIBBEAN

1. The Importance of Latin America and the Caribbean's coffee, sugar and cocoa production

The United States Department of Agriculture estimates the world production of coffee for the 1988/1989 harvest to be 93.2 million 60-kg. sacks, in comparison with 103.6 million the previous year and 79.3 million in 1986/1987. The main producers in the world, in order of importance, are: Brazil, Colombia, Indonesia, Mexico and the Ivory Coast. (See Table V.1).

The coffee production of Latin America and the Caribbean totaled 59.0 million 60-kg. sacks in 1988/1989, as opposed to 71.8 million the year before and an average of 58.2 million between 1979/1980 and 1983/1984. The annual rate of growth during that period was only 0.20%, compared with a growth rate of world production of 0.93%.

Sharp changes in production --a drop of almost 20% in the last year-- are due to variations in Brazil's production, the largest in the world.

The region's production represented 63.38% of the world production in 1988/1989, as opposed to 69.33% the previous year. Latin America and the Caribbean is by far the main coffee producing region in the world.

The most important producing countries are: Brazil with 25.0 million sacks in 1988/1989, Colombia with 12.5, Mexico with 5.1, Guatemala with 2.6, Costa Rica with 2.6, Ecuador with 1.7 and Honduras with 1.6.

Other producing zones in the world are Africa, with 23.16% of the total in 1988/1989, and Asia with 12.10%. Both regions produce mostly robusta coffee.

World sugar production in 1988/1989 was 106.7 million metric tons, against 104.3 million in 1987/1988 and 103.5 million in 1986/1987. The main sugar producers in the world are: the European Economic Community, India, the Soviet Union, Cuba and Brazil. (See Table V.2).

The region produced 28.4 million metric tons corrected volume of sugar in 1988/1989, compared with 27.7 million the year before and 26.8 million in 1980/1981. The growth rate during that period was 0.73% a year, against 2.43%

Table V.1

COFFEE: PRODUCTION IN LATIN AMERICA AND THE CARIBBEAN
 1979/1980-1983/1984 - 1988/1989
 (Thousands of 60-kg. sacks)

COUNTRY	79/80-83/84	1984/85	1985/86	1986/87	1987/88	1988/89	Annual rate of change %
Bolivia	143	140	150	125	150	150	.69
Brazil	24850	27000	33000	13900	38000	25000	.09
Colombia	13371	11000	12000	11000	13300	12500	-.96
Costa Rica	1963	2516	1514	2460	2450	2550	3.81
Cuba	357	400	375	375	350	400	1.64
Dominican Rep.	956	909	710	855	900	900	-.86
Ecuador	1620	1500	1966	2268	1560	1660	.35
El Salvador	2870	2680	2300	2275	2200	2100	-4.36
Guatemala	2574	2703	2650	2843	2650	2600	.14
Guyana	22	15	12	7	11	12	-8.29
Haiti	586	596	505	475	540	550	-.90
Honduras	1282	1400	1062	1530	1450	1550	2.75
Jamaica	26	25	27	28	41	45	8.15
Mexico	4084	4250	4826	5297	4650	5100	3.22
Nicaragua	974	800	580	725	650	700	-4.61
Panama	131	237	207	195	220	220	7.69
Paraguay	188	240	270	330	300	325	8.13
Peru	1181	1150	1250	1200	1020	1300	1.38
Trinidad and Tobago	36	30	35	25	25	30	-2.57
Venezuela	1013	1213	960	1169	1300	1350	4.19
TOTAL	58227	58800	64399	47082	71772	59042	.20
WORLD	87337	90266	95232	79337	103527	93160	.93
LATIN AMERICA/WORLD %	66.67	65.62	67.62	59.34	69.33	63.38	

SOURCE: Elaborated by the consultant with data from the United States Department of Agriculture.

Table V.2

SUGAR: PRODUCTION IN LATIN AMERICA AND THE CARIBBEAN
1980-1981 - 1988/1989
(Thousands of metric tons corrected volume)

COUNTRY	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/1989	Annual rate of change %
Argentina	1716	1623	1623	1618	1545	1174	1121	1063	1139	-4.99
Barbados	97	88	86	98	101	113	77	81	72	-3.66
Belize	104	113	121	108	109	99	88	87	93	-1.39
Bolivia	262	260	228	197	198	182	190	174	163	-5.76
Brazil	8521	8423	9312	9576	9332	8274	8649	8458	8600	.12
Chile	267	137	231	360	351	482	437	445	471	7.35
Colombia	1212	1318	1340	1177	1367	1272	1294	1364	1419	1.99
Costa Rica	200	195	213	255	232	220	229	219	224	1.43
Cuba	7542	8279	7174	8331	8101	7347	7219	7548	8200	1.05
Dominican Rep.	1046	1217	1160	1200	1040	804	856	754	750	-4.07
Ecuador	368	322	254	220	329	281	287	341	335	-1.17
El Salvador	180	185	248	259	283	287	262	200	189	.61
Guatemala	444	643	549	528	601	624	651	679	705	5.95
Guyana	320	305	265	257	258	261	234	178	180	-6.94
Haiti	52	66	55	43	57	32	30	32	45	-1.79
Honduras	189	218	214	226	235	224	200	173	197	.52
Jamaica	206	202	200	190	209	199	191	224	203	-.18
Mexico	2586	2870	3108	3297	3489	4031	3986	3822	3650	4.40
Nicaragua	202	237	276	249	248	262	198	225	205	.18
Panama	186	239	206	177	160	139	123	107	110	-6.35
Paraguay	89	77	81	95	84	78	83	95	105	2.09
Peru	492	640	455	620	757	611	608	592	580	2.08
Trinidad and Tobago	93	79	79	65	83	92	85	91	103	1.28
Uruguay	80	94	107	85	77	93	101	93	69	-1.83
Venezuela	293	368	386	372	504	577	584	583	562	8.48
Others	40	42	34	38	34	34	32	25	28	-4.36
TOTAL	26787	28240	28005	29641	29784	27792	27815	27653	28397	.73
WORLD	88014	100694	101660	96373	101297	99418	103547	104332	106665	2.43
LATIN AMERICA/WORLD %	30.43	28.05	27.55	30.76	29.40	27.95	26.86	26.50	26.62	

SOURCE: Elaborated by the consultant with data from F.O. Licht, International Sugar Report, Retzeburg, Federal Republic of Germany, 23 May 1989.

for world production. Because of that difference in growth, the share of Latin America and the Caribbean in the world total decreased from 30.43% in 1980/1981 to 26.62% in 1988/1989.

The most important producing countries in the region are: Brazil with a production of 8.6 million metric tons corrected volume, Cuba with 8.2 million, Mexico with 3.7 million, Colombia with 1.4 million, Argentina with 1.3 million and the Dominican Republic with 0.8 million.

Unlike coffee, where Latin America and the Caribbean is far and away the main producing zone in the world, the region competes for first place in sugar production with Europe, which produced 29.57% of the total in 1988/1989. Asia is another important sugar producing zone, with 26.53% of the world total. Africa and Oceania also produce a significant quantity of sugar, 7.66% and 4.31% respectively.

The estimated world production of cocoa in 1988/1989 is 2 292 000 metric tons, in comparison with 2 143 000 in 1987/1988 and 1 993 000 in 1986/1987. The main producers in the world are: the Ivory Coast, Brazil, Malaysia, Ghana and Nigeria. (See Table V.3).

The cocoa production of Latin America and the Caribbean totaled 682 100 metric tons in 1988/1989, against 670 000 metric tons in 1987/1988 and 556 400 metric tons in 1982/1983. The annual growth rate for that period was 3.45%, compared with 6.79% annual growth of world production. As in the case of sugar, the share of cocoa in the world total dropped from 36.00% in 1982/1983 to 29.77% in 1988/1989.

Brazil is also the region's main producer for cocoa, with a total in 1988/1989 of 400 000 metric tons, followed by Ecuador with 80 000 metric tons, Colombia with 55 000 metric tons, the Dominican Republic and Mexico with 50 000 metric tons each, and Venezuela with 15 500 metric tons.

Africa is the most important cocoa producing zone in the world, representing 54.97% of the total in 1988/1989. Asia's production was 13.50% and Oceania's 1.73%.

Table V.3

COCOA: PRODUCTION IN LATIN AMERICA AND THE CARIBBEAN
1982-1983 - 1988/1989
(Thousands of metric tons)

COUNTRY	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Annual rate of change %
Bolivia	2.5	2.5	2.5	2.5	2.5	2.5	2.5	.00
Brazil	339.0	309.0	415.0	380.0	365.0	400.0	400.0	2.80
Colombia	39.8	40.5	42.0	45.6	52.0	53.8	55.0	5.54
Costa Rica	2.1	3.0	4.0	3.8	3.9	4.0	4.0	11.34
Cuba	2.0	2.5	3.0	2.0	2.1	2.1	2.1	.82
Dominican Rep.	43.3	42.0	39.2	39.0	45.2	49.0	50.0	2.43
Ecuador	55.0	55.0	128.0	112.0	77.0	71.0	80.0	6.44
Guatemala	1.5	2.0	1.9	2.0	2.0	2.0	2.0	4.91
Haiti	4.0	3.0	3.8	3.0	3.0	3.0	3.0	-4.68
Honduras	.5	1.0	1.5	1.9	2.0	2.0	2.0	25.99
Jamaica	2.8	2.8	2.6	2.4	2.6	2.5	1.5	-9.88
Mexico	33.7	35.1	42.1	39.2	37.9	49.5	50.0	6.80
Nicaragua	.2	.2	.2	.2	.2	.2	.2	.00
Panama	.8	.5	.5	.5	.5	.5	.5	-7.53
Peru	10.0	8.0	10.0	10.0	10.0	10.0	10.0	.00
Trinidad and Tobago	1.8	1.6	1.4	1.3	1.6	1.5	1.5	-2.99
Venezuela	14.8	12.2	10.5	11.2	13.9	14.1	15.5	.77
Others	2.6	2.3	2.5	2.0	2.3	2.3	2.3	-2.02
TOTAL	556.4	523.2	710.7	658.6	623.7	670.0	682.1	3.45
WORLD	1545.4	1545.4	1967.3	1947.3	1993.0	2143.2	2291.5	6.79
LATIN AMERICA/WORLD %	36.00	33.85	36.13	33.82	31.29	31.26	29.77	

SOURCE: Elaborated by the consultant with data from the United States Department of Agriculture.

2. Coffee, sugar and cocoa exports from Latin America and the Caribbean

Before analyzing the region's coffee, sugar and cocoa exports, it is important to point out that the part of the production of these products that is traded internationally differs considerably from one to another. For coffee and cocoa, international trade represents more than 70% of total production, while for sugar it is less than 30%, with a tendency to decline even further.

This is another of the reasons why sugar shows a greater variability in prices; when it registers an increase or reduction of little import in relation to total production, this greatly affects the part that goes to international trade, with the consequent effect on prices.

The exportable production of coffee --production less consumption-- of Latin America and the Caribbean totaled in 1988/1989 40.8 million 60-kg. sacks, compared with 54.2 million the previous year and an average of 43.3 million from 1979/1980 to 1983/1984. The growth rate over the last 10 years was -1.0% a year, compared with 0.4% for world exportable production. However, if we do not consider the last year, the growth rate up to 1987/1988 is 3.8% a year for the region and 3.0% for the world total.

Actual exports, according to the International Coffee Organization, reached 48.9 million 60-kg. sacks in 1986/1987, as opposed to 41.7 million in 1985/1986 and 39.3 million in 1981/1982. The annual growth rate during this period was 4.5%, compared with 2.6% of total exports from the member countries of the International Coffee Agreement.

We should clarify that because of the restrictions on exports by the International Agreement, the annual exportable production does not coincide with actual exports, even though over the medium term both tend to be the same. (See Tables V.4 and V.5).

Colombia, the region's second largest producer and exporter, maintains an exportable production with few changes, registering a 1.7% annual decline up till 1988/1989 and practically without change up to 1987/1988.

Mexico, the third largest exporter, increased its exportable production by 4.9% a year; Guatemala by only 0.4%, Costa Rica by 4.9%, Honduras by 3.4%,

Table V.4

COFFEE: EXPORTABLE PRODUCTION IN LATIN AMERICA AND THE CARIBBEAN ^{1/}
 1979/1980-1983/1984 - 1988/1989
 (Thousands of 60-kg. sacks)

COUNTRY	79/80-83/84	1984/85	1985/86	1986/87	1987/88	1988/89	Annual rate of change %
Bolivia	108	103	112	84	113	107	-15
Brazil	16650	16500	24000	4900	27500	14000	-2.85
Colombia	11543	9135	10130	9000	11280	10400	-1.72
Costa Rica	1739	2281	1276	2225	2215	2310	4.85
Cuba	7	100	100	180	136	150	66.66
Dominican Rep.	662	604	415	555	590	582	-2.12
Ecuador	1391	1240	1695	1986	1278	1375	-.19
El Salvador	2670	2480	2120	2095	2020	1920	-5.35
Guatemala	2248	2373	2350	2543	2350	2300	.38
Guyana	3	0	0	0	0	0	-100.00
Haiti	355	343	275	235	300	310	-2.23
Honduras	1154	1240	922	1390	1310	1410	3.40
Jamaica	14	13	15	15	27	30	13.54
Mexico	2594	2635	2625	4797	3070	3450	4.87
Nicaragua	882	705	505	640	570	620	-5.71
Panama	64	167	134	122	145	144	14.47
Paraguay	166	217	245	308	275	299	10.30
Peru	934	940	1050	1010	820	1100	2.76
Trinidad and Tobago	18	9	13	3	3	8	-2.12
Venezuela	70	173	142	227	230	240	22.80
TOTAL	43272	41258	48124	31315	54232	40755	-.99
WORLD	66956	67449	73426	57520	80009	68597	.40
LATIN AMERICA/WORLD %	64.63	61.17	65.54	54.44	67.78	59.41	

SOURCE: Elaborated by the consultant with data from the United States Department of Agriculture.

^{1/} Calculated by subtracting domestic consumption from production.

Table V.5

COFFEE: EXPORTS FROM LATIN AMERICA AND THE CARIBBEAN
1981/1982 - 1986/1987
(Thousands of 60-kg. sacks)

COUNTRY	1981/82	1982/83	1983/84	1984/1985	1985/1986	1986/1987	Annual rate of change %
Bolivia	116	120	110	103	102	64	-11.21
Brazil	16801	17452	20103	18339	12851	18117	1.52
Colombia	8984	9174	9969	9642	11514	12041	6.03
Costa Rica	1556	1735	1782	2089	1486	2479	9.76
Cuba	223	263	178	200	179	237	1.23
Dominican Rep.	634	489	533	544	471	612	-7.70
Ecuador	1367	1569	1398	1474	2039	1786	5.49
El Salvador	2165	2706	2908	2461	2655	2520	3.08
Guatemala	2469	2003	1976	3119	2301	2714	1.91
Haiti	350	410	397	313	280	216	-9.20
Honduras	911	1240	1046	1284	1481	1399	8.96
Jamaica	19	21	23	14	16	13	-7.31
Mexico	1846	3110	2897	2983	3694	3836	15.75
Nicaragua	815	1136	847	659	611	648	-4.48
Panama	71	76	80	99	128	97	6.44
Paraguay	186	228	160	200	258	506	22.16
Peru	750	864	989	931	1275	1399	13.28
Trinidad and Tobago	37	22	4	16	20	18	-13.42
Venezuela	18	22	97	108	386	191	60.38
TOTAL	39318	42640	45497	44578	41747	48893	4.46
TOTAL C.I.C.	63534	65731	70018	68944	68873	72186	2.59
LATIN AMERICA/C.I.C. %	61.88	64.87	64.98	64.66	60.61	67.73	

SOURCE: Elaborated by the consultant with data from the International Coffee Organization.

Note: Only includes members of the International Coffee Agreement.

and Peru by 2.8%. On the other hand, El Salvador has 5.4% less exportable product, Ecuador 0.2% and the Dominican Republic 2.1%.

Latin America and the Caribbean exported 255 000 metric tons of cocoa beans in 1987, compared with 231 000 metric tons the year before and 211 000 metric tons in 1978. The rate of growth during that period was 2.13% a year, a rate lower than the one registered for world exports, which was 3.9%. (See Table V.6).

The region's share in total world exports declined from 19.65% in 1978 to 16.79% in 1987, as a consequence of the different growth rates.

Brazil is the region's main exporter with 143 000 metric tons in 1987 and a growth rate from 1978 to 1987 of 0.8% a year. Ecuador, the second exporter, recorded 44 000 metric tons in 1987 and an annual growth rate of 11.7%. The Dominican Republic exported 39 000 metric tons, with an annual rate of growth of 3.9%. Colombia, an important exporter since 1984, exported 9 000 metric tons in 1987, an increase of almost 100% in relation to 1984.

However, it is important to mention that eight countries of the region decreased their cocoa bean exports during the period under consideration. These are: Costa Rica, -19.8%; Guatemala, -11.7%; Haiti, -3.5%; Mexico, -8.5%; Panama, -33.2%; Peru, -100%; Trinidad and Tobago, -8.3%, and Venezuela, 1.3%.

Sugar exports from Latin America and the Caribbean reached 11.4 million metric tons corrected volume in 1987, in comparison with 11.8 million the previous year and 12.6 million in 1978. Unlike coffee and cocoa, sugar exports diminished between 1978 and 1987, by 1.1% a year, compared with a growth in world exports of 1.4% annually. (See Table V.7).

The region's share of exports declined from 50.16% in 1978 to 40.11% in 1987.

Almost all the Latin American countries recorded declines in their exports, except for Brazil, +2.6% annual increase; Guatemala, +7.7%; Haiti, +3.8%; Honduras, +5.4%; Mexico, +24.1%, and Uruguay, +1.5%.

The largest sugar exporter in the world is Cuba, with 6.5 million metric tons in 1987. Brazil is the second largest exporter in the region, with 2.4 million, followed by the Dominican Republic with 587 000 metric tons, Mexico with 518 000 metric tons and Guatemala with 299 000 metric tons.

Table V.6

COCOA: EXPORTS FROM LATIN AMERICA AND THE CARIBBEAN
1978 - 1987
(Thousands of metric tons)

COUNTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	Annual rate of change %
Belize	4	0	0	4	18	47	50	64	85	70	37.44
Brazil	134000	156932	125246	143462	152773	152773	107289	172321	135150	143482	.76
Colombia	0	0	0	0	30	20	4640	2941	1701	8962	--
Costa Rica	5826	4235	2165	2019	2022	736	640	1450	1238	800	-19.80
Dominican Rep.	27638	25605	23418	27491	38782	34199	32280	31359	35867	38914	3.87
Ecuador	16247	15006	13697	27156	42458	5555	46910	68899	38285	43961	11.69
Guatemala	3068	1674	2000	366	65	1400	1200	2179	1422	1000	-11.71
Haiti	2901	2836	2600	2600	1514	3917	2404	481	1044	2100	-3.53
Honduras	374	414	200	550	941	982	900	3800	2700	3400	27.79
Jamaica	1243	1353	1300	1564	1260	1964	1910	1886	2196	1852	4.53
Mexico	3692	2069	1494	17	3044	11532	3597	1588	1700	1660	-8.50
Nicaragua	127	32	52	0	0	0	0	173	250	250	7.82
Panama	1025	1273	837	48	849	75	75	393	270	27	-33.24
Peru	2279	1469	1500	664	460	704	460	30	0	0	-100.00
Trinidad and Tobago	3228	2672	2149	3010	2435	1699	1500	1312	1304	1478	-8.31
Venezuela	6500	7040	7762	7893	7242	8634	5892	5919	5466	5759	-1.34
Others	2961	2580	2303	2781	2128	2587	2416	1606	2010	1405	-7.95
TOTAL	211113	225190	185320	201409	246710	226824	212163	296401	230688	255120	2.13
WORLD	1074474	918130	1036062	1249195	1251181	1169047	1285412	1392508	1502185	1519677	3.93
LATIN AMERICA/WORLD %	19.65	24.53	17.89	16.12	19.72	19.40	16.51	21.29	15.36	16.79	

SOURCE: Elaborated by the consultant with data from the Food and Agricultural Organization of the United Nations (FAO), FAO Trade Yearbook, Rome, 1980, 1982, 1984 and 1987.

Table V.7

SUGAR: EXPORTS FROM LATIN AMERICA AND THE CARIBBEAN
1978 - 1987

(Thousands of metric tons corrected volume)

COUNTRY	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	Annual rate of change %
Argentina	367	351	484	709	338	739	529	157	109	91	-14.35
Barbados	89	101	122	64	89	73	86	78	88	76	-1.74
Belize	117	97	103	95	104	116	102	96	105	84	-3.61
Bolivia	78	127	107	20	43	48	20	17	7	8	-22.36
Brazil	1925	1942	2662	2670	2788	2801	3040	2609	2554	2424	2.59
Chile	31	0	38	12	0	0	0	0	0	0	-100.00
Colombia	132	278	280	177	293	303	183	294	212	96	-3.48
Costa Rica	87	73	82	57	59	58	84	3	66	85	-.26
Cuba	7231	7269	6191	7071	7734	6792	7017	7209	6703	6482	-1.21
Dominican Rep.	937	1035	793	864	850	956	885	722	481	587	-5.06
Ecuador	40	69	72	53	0	0	10	25	18	10	-14.28
El Salvador	133	164	35	49	56	93	78	115	104	40	-12.50
Guatemala	153	195	210	228	218	404	304	287	373	299	7.73
Guyana	295	280	263	282	265	227	215	230	219	195	-4.50
Haiti	5	10	9	0	6	14	16	0	0	7	3.81
Honduras	23	54	81	76	96	106	89	87	95	37	5.42
Jamaica	203	194	135	125	141	157	160	155	146	136	-4.35
Mexico	74	27	0	0	17	15	0	66	219	518	24.14
Nicaragua	104	111	69	89	97	112	106	55	72	51	-7.61
Panama	126	152	145	111	112	137	82	77	68	11	-23.73
Paraguay	0	0	4	0	3	15	0	0	11	0	--
Peru	274	186	54	0	69	91	115	91	55	27	-22.70
Trinidad and Tobago	103	94	64	67	50	63	47	62	60	55	-6.73
Uruguay	7	0	0	0	15	7	4	8	8	8	1.49
Others	42	39	33	35	37	26	28	25	24	23	-6.47
TOTAL	12576	12848	12036	12854	13465	13361	13203	12464	11797	11350	-1.13
WORLD	25072	25985	26832	29142	30427	28981	28497	27750	27200	28295	1.35
LATIN AMERICA/WORLD %	50.16	49.44	44.86	44.11	44.25	46.10	46.33	44.92	43.37	40.11	

SOURCE: Elaborated by the consultant with data from F.O. Licht, International Sugar Report, Retzeburg, Federal Republic of Germany, 23 May 1989.

3. Importance of coffee, sugar and cocoa exports for Latin America and the Caribbean

Coffee is the most important of the three primary products we are examining, from the viewpoint of exports from the countries of Latin America and the Caribbean. Moreover, after petroleum, coffee is the region's most important export product.

Export earnings from coffee in 1987 represented 6.6% of the total exports of Latin America and the Caribbean, estimated at slightly more than US\$ 91 billion. In the period from 1982 to 1986, its average share was 6.7%, as opposed to 8.5% in the period between 1972 and 1976. (See Table V.8).

A country-by-country analysis shows that coffee is significant in 16 countries of the region, with Brazil and Colombia being the most important because of the quantities they export. But from the viewpoint of importance within total exports, Guatemala is first, since coffee represents 60% of its export earnings in 1987, followed by Colombia and El Salvador with 39.8%, Haiti with 26.4%, and with a bit less than a fifth of their exports, Costa Rica, Honduras and Nicaragua. Coffee does not have the relative importance for Brazil and Colombia as it does for other countries in Latin America and the Caribbean, since their total exports reach very high figures (above US\$ 20 billion). Nevertheless, they are important in absolute terms, without taking into account their great importance within some areas of those countries.

Sugar comes slightly behind coffee for export revenues. From 1972 to 1976, sugar earned more than coffee.^{15/} In 1987 it represented 5.9% of the region's revenues, compared with 6.2% in the period from 1982 to 1986 and 11.7% from 1972 to 1976. (See Table V.8 and Annex V.1).

We should point out that although sugar prices have been very low over the last seven years, all the countries of the region enjoy preferential prices,^{16/} at least for part of their exports, owing to agreements they have with several countries. Almost all of the countries of Latin America and the Caribbean have an export quota to supply sugar to the United States, for which they are paid prices higher than those on the world market. However, the quantity of sugar they export is considerably less than their exports before

Table V.8

COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN:
PROPORTION OF INCOME FROM COFFEE, SUGAR AND COCOA EXPORTS
IN TOTAL EXPORTS
1872 -1976, 1982-1986 and 1987
(Percentages)

COUNTRY	COFFEE			SUGAR			COCOA		
	1972-76	1982-86	1987	1972-76	1982-86	1987	1972-76	1982-86	1987
Argentina	-	-	-	3.5	1.1	1.1	-	-	.1
Barbados	-	-	-	32.9	10.0	18.4	-	-	-
Belize	-	-	-	46.8	33.0	33.0	.2	.2	.2
Bolivia	1.4	1.4	1.4	6.0	1.0	1.0	-	-	-
Brazil	16.6	9.3	6.4	10.3	2.1	.7	3.5	2.5	2.0
Colombia	49.4	52.8	39.8	3.8	1.4	.7	-	-	.1
Costa Rica	25.5	27.5	19.3	6.1	1.5	1.2	.2	-	-
Chile	-	-	-	2.5	-	-	-	-	-
Cuba	.5	.5	.5	81.0	75.1	75.1	-	-	-
Dominican Rep.	7.3	12.1	12.1	47.2	29.3	17.3	5.6	7.7	8.8
Ecuador	10.5	7.8	12.3	-	-	-	-	-	-
El Salvador	41.9	59.1	39.8	8.2	4.0	3.8	-	-	-
Guatemala	29.8	39.4	60.0	10.1	5.6	6.2	.1	.6	.4
Guyana	-	-	-	36.1	32.7	23.8	-	-	-
Haiti	32.1	27.9	26.4	5.0	2.0	2.0	-	-	1.2
Honduras	18.5	25.5	19.8	1.0	2.8	1.4	.2	.3	.3
Jamaica	1.3	1.3	1.3	12.5	7.9	7.2	.9	.9	.9
Mexico	7.7	2.6	3.2	4.4	-	.5	-	-	-
Nicaragua	15.9	26.7	17.4	7.1	4.7	2.7	-	-	-
Panama	11.7	8.8	5.1	10.7	9.9	1.6	1.6	1.6	1.6
Paraguay	-	-	-	.7	.7	.7	-	-	-
Peru	4.7	4.7	4.7	11.2	.6	.9	-	-	-
Trinidad and Tobago	-	-	-	3.5	1.1	1.1	-	-	.1
Uruguay	-	-	-	-	.3	.3	-	-	-
Venezuela	-	-	-	-	-	-	.1	.1	.1
TOTAL	8.5	6.7	6.6	11.7	6.2	5.9	1.0	.8	.8

SOURCE: Inter-American Development Bank (IDB), Economic and Social Progress in Latin America. 1988 Report, Washington, D.C., 1988; Food and Agricultural Organization of the United Nations (FAO), FAO Trade Yearbook, Rome, 1971 through 1987; International Organization for Standardization (ISO), ISO Yearbook, Geneva, various issues; United Nations Conference on Trade and Development (UNCTAD), UNCTAD Commodity Yearbook, New York, 1971 through 1986, and estimations of the consultant.

the quotas were inaugurated in 1982. The English-speaking countries of the Caribbean have an export quota with the European Economic Community, inherited from the agreement of the United Kingdom with its ex-colonies. Finally, Cuba has a preferential agreement with the Soviet Union, which buys Cuban sugar at prices much higher than the market price.

It is important to note that all the countries of Latin America and the Caribbean produce sugar, unlike coffee and cocoa, which cannot be produced in all countries due to weather conditions, but it is usually used to cover domestic demand and is not exported. Countries like Venezuela and Ecuador have an adequate sugar industry, especially Venezuela, but their whole production goes to the domestic market. Even so, they do not completely cover domestic demand and have to import a certain quantity of sugar.

The most important country both for its sugar exports as well as for the weight of its total exports is Cuba, with 75% in 1987. Following Cuba, for their relative figures are Belize with 33%; Guyana, 23.8%; Barbados, 18.4%; and the Dominican Republic, 17.3%. For Brazil, second largest exporter in the region, sugar exports represented only 0.7% of its total revenues in 1987.

Cocoa comes in third place for our three products as a generator of foreign exchange for the countries of the region. In 1987, it represented 0.8% of total exports, the same as during the period from 1982 to 1986 and compared with 1.0% in the period from 1972 to 1976. These figures are for exports of cocoa beans, that is, they do not take into account income from exports of cocoa paste, cocoa powder and chocolates. If these are taken into account, its importance would increase considerably. (See Table V.8).

For example, countries like Mexico, which exported in 1987 around US\$ 4 million in cocoa beans, also exported US\$ 23 million worth of cocoa paste to the United States alone; Colombia, with less than US\$ 10 million of exports in cocoa beans, exported to the United States alone US\$ 11 million of cocoa paste; Peru exported cocoa beans, but its exports of paste and powder to the United States, one of the countries it exported to, totaled more than US\$ 7 million.

The most important cocoa exporting countries in the region are Brazil, Ecuador and the Dominican Republic, in that order for absolute figures. By percentage of their total exports, the Dominican Republic would be first with

8.8%, followed by Ecuador with 4.3% and Brazil with 2.0%. Cocoa is significant for 14 countries in Latin America and the Caribbean.

Taking coffee, sugar and cocoa together, they are clearly important as generators of revenues for the countries of Latin America and the Caribbean. In 1987, they represented 13.3% of total exports, against an average of 13.7% from 1982 to 1986 and 21.1% from 1972 to 1976. In other words, only three primary products have come to represent a fifth part of the region's total exports.

4. Representativeness of the Coffee, Sugar and Cocoa Exchange and the degree of speculation

In Chapter IV, we analyzed the representativeness of the prices on the CSCE in relation to the basic factors of supply and demand, as well as the degree of speculation and its influence on the volatility of prices. Here we draw some conclusions.

a) Cocoa and sugar prices over the last 19 years have shown a direct relation between the evolution of prices and the situation of supply and demand.

b) Coffee does not seem to reflect the fundamental factors in some years, owing to the influence of the International Agreement, which keeps supply artificially low.

c) Cocoa and coffee register less speculation. Cocoa had an average speculation of 23.5% of reported operations over the last 16 months, and coffee 26.3%.

d) Sugar is the most speculative contract on the New York Coffee, Sugar and Cocoa Exchange, with 38.4% of reported operations.

e) With respect to price volatility, sugar is the most volatile, with a coefficient of variation, standard deviation/average, over the last 19 years of 78.4%, compared with 47.4% for cocoa and 46.9% for coffee.

f) Coffee prices have had a relatively stable behaviour over the last nine years, fluctuating between 100 and 150 cents a pound, except for the high prices of 1986.

g) Sugar recorded the lowest prices, running most of the time below the production costs of even the most efficient producers.

h) The participation of speculators influences the prices on the CSCE. Nevertheless, supply and demand determine the price levels for coffee, sugar and cocoa. Therefore we can state that speculation intensifies price movements.

ANNEX V.1
COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN EARNINGS FROM TOTAL EXPORTS AND FROM SUGAR
1971 - 1986
(US\$ millions)

COUNTRY	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
ARGENTINA																
Total exports	1,740	1,941	3,266	3,931	2,961	2,916	5,652	6,400	7,813	8,020	9,143	7,626	7,835	8,107	8,396	6,852
Sugar exports	14.5	24.0	91.4	296.8	113.4	80.1	161.0	56.0	65.3	311.0	282.7	74.9	178.8	101.9	27.7	24.8
Sugar/total exports	.83	1.24	2.80	7.55	3.83	2.05	2.85	.88	.84	3.88	3.09	.72	2.28	1.26	.33	.36
BARBADOS																
Total exports	40	45	53	85	107	86	95	130	151	226	194	257	289	272	215	275
Sugar exports	12.9	14.1	16.5	25.4	47.1	24.4	25.2	23.4	29.4	52.1	25.6	30.8	19.2	28.5	25.0	26.1
Sugar/total exports	32.25	31.33	31.13	29.88	44.02	28.37	26.53	18.00	19.47	23.05	13.20	11.98	6.64	10.48	11.63	9.49
BELIZE																
Total exports	19	25	32	45	67	42	54	67	96	111	119	94	78	94	90	91
Sugar exports	7.5	10.6	12.8	23.6	42.1	15.3	21.6	29.8	31.5	47.7	37.6	33.3	35.5	32.5	22.9	22.0
Sugar/total exports	39.47	42.40	40.00	52.44	62.84	36.43	40.00	44.48	32.81	422.97	31.60	35.43	45.51	34.57	25.44	24.18
BOLIVIA																
Total exports	222	202	261	300	445	566	634	635	857	1,037	984	899	818	773	673	540
Sugar exports	.9	12.2	12.1	20.9	23.6	39.7	23.2	14.2	29.6	47.6	5.7	8.9	12.4	12.9	1.8	3.2
Sugar/total exports	.41	6.04	4.67	6.97	5.30	7.01	3.66	2.24	3.45	4.59	.58	.99	1.52	1.67	.27	.59
BRAZIL																
Total exports	2,904	3,990	6,198	7,951	8,670	10,128	12,054	12,294	15,244	20,132	23,680	20,213	21,899	27,005	25,639	22,394
Sugar exports	153.0	403.5	558.7	1321.9	1099.8	306.6	462.7	350.1	363.8	1288.3	1062.2	580.3	526.9	586.8	368.0	367.9
Sugar/total exports	5.27	10.11	9.01	16.63	12.69	3.03	3.84	2.85	2.39	6.40	4.49	2.87	2.41	2.17	1.44	1.64
COLOMBIA																
Total exports	689	863	1,177	1,417	1,465	1,745	2,443	3,003	3,300	3,945	2,956	3,095	3,081	3,483	3,552	5,102
Sugar exports	16.4	29.2	30.2	72.2	95.1	24.1	2.2	19.5	42.8	164.7	77.0	54.8	69.0	37.3	38.1	49.3
Sugar/total exports	2.38	3.38	2.57	5.10	6.49	1.38	.09	.65	1.30	4.17	2.60	1.77	2.24	1.07	1.07	.97
COSTA RICA																
Total exports	225	279	345	440	493	593	828	865	934	1,002	1,008	871	866	978	989	1,026
Sugar exports	12.9	13.1	21.5	24.4	48.2	24.7	15.6	15.7	17.5	40.7	42.0	16.6	16.9	20.4	5.1	13.1
Sugar/total exports	5.73	4.70	6.23	5.55	9.78	4.17	1.88	1.82	1.87	4.06	4.17	1.91	1.95	2.09	.52	1.28
CUBA																
Total exports	890	838	1,410	2,660	3,684	3,571	3,545	4,487	4,825	5,577	5,406	5,920	6,418	6,197	6,492	6,298
Sugar exports	659.0	594.0	1038.7	2261.5	3280.2	3077.6	2928.7	3854.7	4087.0	4581.4	4159.0	4507.2	4873.5	4718.8	4734.2	4681.0
Sugar/total exports	74.04	70.88	73.67	85.02	89.04	86.18	82.61	85.91	84.70	82.15	76.93	76.14	75.93	76.15	72.92	74.33

COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN EARNINGS FROM TOTAL EXPORTS AND FROM SUGAR

(Continuation)

1971 - 1986

(US\$ millions)

COUNTRY	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
DOMINICAN REP.																
Total exports	241	348	442	637	894	716	781	676	869	962	1,188	768	785	868	750	718
Sugar exports	132.0	160.0	186.6	323.4	560.6	247.1	218.5	171.5	190.6	286.9	516.7	261.5	262.5	287.0	181.2	155.2
Sugar/total exports	54.77	45.98	42.22	50.77	62.71	34.51	27.98	25.37	21.93	29.82	43.49	34.05	33.44	33.06	24.16	21.62
ECUADOR																
Total exports	222	326	487	962	897	1,258	1,436	1,557	2,0767	2,481	2,542	2,341	2,203	2,581	2,780	2,171
Sugar exports	13.2	13.2	12.5	21.7	23.6	11.7	10.9	5.5	8.8	36.7	13.9	-	-	15.4	7.0	6.7
Sugar/total exports	5.95	4.05	2.57	2.26	2.63	.93	.76	.35	.43	1.48	.55	.00	.00	.60	.25	.31
EL SALVADOR																
Total exports	243	302	358	462	513	721	973	801	1,131	1,074	797	699	735	607	679	720
Sugar exports	9.4	18.0	17.8	39.6	82.1	40.5	26.4	18.9	26.8	13.4	14.8	15.9	40.1	25.8	28.0	26.5
Sugar/total exports	3.87	5.96	4.97	8.57	16.00	5.62	2.71	2.36	2.37	1.25	1.86	2.27	5.46	4.25	4.12	3.68
GUATEMALA																
Total exports	290	338	445	582	641	760	1,160	1,092	1,241	1,520	1,226	1,120	1,159	1,122	1,066	624
Sugar exports	10.4	16.1	21.9	49.6	115.6	106.7	84.9	45.8	52.4	75.9	84.2	23.9	91.1	61.1	43.8	51.7
Sugar/total exports	3.59	4.76	4.92	8.52	18.03	14.04	7.32	4.19	4.22	4.99	6.87	2.13	7.86	5.45	4.11	8.29
GUAYANA																
Total exports	170	143	150	300	365	279	260	294	300	389	346	241	189	210	207	218
Sugar exports	46.1	49.5	36.1	127.9	177.4	85.1	73.4	91.9	88.8	122.1	109.5	88.9	65.2	72.7	57.3	65.0
Sugar/total exports	27.12	34.62	24.07	42.63	48.60	30.50	28.23	31.26	29.60	31.39	31.65	36.89	34.50	34.62	27.68	29.82
HONDURAS																
Total exports	189	204	258	286	375	392	519	613	734	829	728	668	670	746	780	800
Sugar exports	1.6	2.0	.1	4.5	6.9	2.2	3.7	5.5	13.3	28.0	49.9	24.5	27.8	25.7	21.5	30.4
Sugar/total exports	.85	.98	.04	1.57	1.84	.56	.71	.90	1.81	3.38	6.85	3.67	4.15	3.45	2.76	3.80
JAMAICA																
Total exports	339	378	392	718	759	633	768	794	818	963	974	767	732	747	564	596
Sugar exports	37.4	42.5	39.2	81.9	153.7	61.4	74.8	67.3	56.8	54.7	46.4	49.0	54.3	62.4	49.2	50.0
Sugar/total exports	11.03	11.24	10.00	11.41	20.25	9.70	9.74	8.48	6.94	5.68	4.76	6.39	7.42	8.35	8.72	8.39
MEXICO																
Total exports	1,366	1,845	2,070	2,850	2,992	3,361	4,286	5,899	8,818	15,301	20,041	20,929	21,012	23,602	21,822	15,698
Sugar exports	90.7	102.1	114.7	192.0	117.6	.4	-	-	23.6	-	-	6.1	6.8	-	9.9	29.8
Sugar/total exports	6.64	5.53	5.54	6.74	3.93	.01	.00	.00	.27	.00	.00	.03	.03	.00	.05	.19

COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN EARNINGS FROM TOTAL EXPORTS AND FROM SUGAR
1971 - 1986
(US\$ millions)

(Conclusion)

COUNTRY	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
NICARAGUA																
Total exports	187	249	278	381	375	542	637	646	567	450	500	406	429	385	300	280
Sugar exports	11.6	15.2	13.5	12.3	42.6	54.0	28.0	19.6	19.6	20.5	48.7	28.4	31.6	20.3	6.4	4.2
Sugar/total exports	6.20	6.10	4.86	3.23	11.36	9.96	4.40	3.03	3.46	4.56	9.74	7.00	7.37	5.27	2.13	1.50
PANAMA																
Total exports	115	121	133	211	280	238	271	247	295	353	319	309	304	256	306	327
Sugar exports	6.6	6.1	8.8	27.5	49.4	26.3	21.9	20.0	26.1	65.8	52.6	23.7	41.3	33.3	27.3	20.1
Sugar/total exports	5.74	5.04	6.62	13.03	17.64	11.05	8.08	8.10	8.85	18.64	16.49	7.67	13.59	13.01	8.92	6.15
PERU																
Total exports	893	944	1,050	1,521	1,291	1,360	1,726	1,941	3,676	3,916	3,249	3,227	3,027	3,131	2,705	2,467
Sugar exports	69.7	77.1	86.6	153.7	295.5	92.0	83.0	43.6	61.0	13.4	-	16.9	3.1	18.3	24.8	23.0
Sugar/total exports	7.81	8.17	8.25	10.11	22.89	6.76	4.81	2.25	1.66	.34	.00	.52	.10	.58	.92	.93
TRINIDAD AND TOBAGO																
Total exports	519	558	694	2,038	1,754	2,189	2,180	2,043	2,610	4,085	3,764	3,072	2,347	2,173	2,164	1,378
Sugar exports	22.3	29.7	22.5	52.1	77.0	48.0	34.8	22.4	35.2	28.0	27.1	21.8	25.2	25.3	21.0	21.0
Sugar/total exports	4.30	5.32	3.24	2.56	4.39	2.19	1.60	1.10	1.35	.69	.72	.71	1.07	1.16	.97	1.52
TOTAL																
Total exports	11,503	13,939	19,499	27,777	29,028	33,096	40,302	44,484	56,346	72,373	79,164	73,522	74,876	83,337	80,169	68,575
Sugar exports	1328.1	1632.2	2342.3	5132.9	6451.5	4367.8	4300.5	4875.4	5269.9	7278.9	6655.6	5847.4	6381.2	6186.4	5700.2	5671.0
Sugar/total exports	11.55	11.71	12.01	18.48	22.23	13.20	10.67	10.96	9.35	10.06	8.41	7.95	8.52	7.42	7.11	8.27

SOURCE: Food and Agricultural Organization of the United Nations (FAO), FAO Trade Yearbook, Rome, 1971 through 1987; International Organization for Standardization (ISO), ISO Yearbook, Geneva, various issues; United Nations Conference on Trade and Development (UNCTAD), UNCTAD Commodity Yearbook, New York, 1971 through 1986.

VI. RECOMMENDATIONS AND POLICY ALTERNATIVES

1. Use the CSCE more

The countries of Latin America and the Caribbean that export coffee, sugar and cocoa should use the New York Coffee, Sugar and Cocoa Exchange constantly and directly; in that way they can obtain better prices for their products. They should not continue to use traditional sales methods which only indirectly use the Exchange, since that way of selling depends completely on the evolution of world prices.

Coffee, sugar and cocoa are clearly important generators of revenues for the countries of the region. For that reason, the governments and the private sector of the countries of Latin America and the Caribbean should try to obtain better prices for these products. To do so, they should use the instruments we have already commented on in detail, such as hedging if prices are expected to decline, and price fixing through executable orders if they might possibly rise.

The cost of using the Exchange is small in relation to the amount of exports. For a hedging operation, an initial deposit of approximately 10% of the value of the transaction has to be made, plus some additional deposits if the price moves against the position taken, that is, if prices rise instead of fall, in the case of an exporter. The money deposited is not lost. It is only temporally in the hands of the Exchange and will be returned to the exporter once the operation that he initially made is paid for, plus or minus the profit or loss he may have had, which will be offset when the physical product is sold.

In the case of an operation of executable orders, the deposits will be equal to those of a hedging operation if the services of a commission house are used, but they will not be necessary if the operation on the Exchange is made through a trader to whom the physical coffee, sugar or cocoa was sold.

Many of the countries of the region control currency exchanges. Because of this, it is difficult in some cases to convince the government of the need to take foreign exchange out of the country to deposit in the Exchange, since authorization to use foreign exchange is usually given to import products or

to pay for services. Frequently a government agency that exports has more difficulty is getting approval to use foreign exchange than the private sector, owing to the scarcity of foreign currency in the country and the desire to use it in the best way possible.

The governments of the region should change their attitude and allow foreign exchange to be taken out to be used in the Exchange, since this will eventually provide more income for the country.

It should not be forgotten that the fact that a country obtains better prices for its coffee, sugar or cocoa has a positive effect on the market, often raising prices if they are low or keeping them firm. That is why it is important that all the countries of Latin America and the Caribbean use the Exchange for their exports, since by doing so they will obtain higher prices.

With regards using commission houses or traders for operations on the Exchange, we already suggested in Chapter III that the former should be used for hedging and the latter for executable orders, and that a commission house should be used for executable orders only in order to keep the operation anonymous (which should be done only by a large exporter and in given moments).

2. Become members of the CSCE

Besides the above alternative, serious consideration should be given to becoming members of the CSCE. The New York Coffee, Sugar and Cocoa Exchange places no obstacles to membership for the countries of Latin America and the Caribbean.

The cost of a membership is not high, around US\$ 60 000, in comparison with income from coffee, sugar and cocoa exports. The Exchange's other requirements, commented on above, are not difficult to meet. Obtaining a membership is feasible.

Countries that are small exporters could create an association or a commercial enterprise to obtain the membership.

In considering the costs of membership, the expenses involved in having an office in New York City would have to be taken in account. It could be a small office. An alternative, less recommendable, is to make frequent trips to

that city. We reiterate that these expenditures are minimum in comparison with export income.

The benefits of membership are great. It would avoid having to pay commissions to operate on the Exchange —although deposits would still have to be made— and the main benefit is being able to participate in the decision making in the Exchange about the minimum quality of coffee, sugar and cocoa —at this time the countries of the region have their prices discounted because the required quality is very high— the terms of contracts, delivery periods of the product, ways of sampling quality, etc., which frequently go against exporters in favour of importers.

The obstacles to membership in the Exchange come from internal conditions in the countries of the region themselves for obtaining financing, either domestically or externally, and in obtaining authorization to take foreign exchange out of the country. We mentioned other obstacles in Chapter III, such as little or no knowledge of the Exchange, deficient infrastructure for communications, strong links with steady customers, attachment to traditional sales systems, among others.

3. Examine the possibility of establishing coffee, sugar and/or cocoa exchanges in countries of the region

A successful futures exchange needs to have the support of the different sectors involved in the production, marketing and consumption of coffee, sugar or cocoa. This support would give this market a sufficient daily volume of futures trading so that the price would represent the real price of the product at any given moment.

The sectors mentioned in the more important producing and exporting countries in Latin America and the Caribbean of coffee, sugar and cocoa should be polled to see if they are interested. Speculators should also be consulted, since, as we mentioned beforehand, speculation is important for the fluidity of futures markets.

The largest producers should be consulted to see if they are interested in creating a futures exchange for coffee, sugar and cocoa in some country of the region: for coffee, Brazil, Colombia, Mexico and the Central American

countries; for sugar, Cuba, Brazil, Colombia, Mexico and Guatemala; for cocoa, the Dominican Republic, Brazil and Ecuador.

International traders and industrial consumers in the main consumer areas, should also be consulted, especially the United States, since that country is the main consumer of coffee, sugar and cocoa from Latin America and the Caribbean.

In order to find out what interest speculators might have in such a project, meetings could be held with business associations in the countries of our region, where the functioning, characteristics and objectives of the exchange to be established would be explained.

Another important point to consider in establishing a futures exchange is that it should be in a place with good efficient communications by telephone, telex and fax, since the success of a futures market will depend on the participation of many enterprises outside that country.

A futures exchange needs a corporation to guarantee all contracts (a clearing house, see Chapter I, section 7). If the new coffee, sugar and cocoa exchange were established in Argentina or Brazil, a new clearing house would not necessarily have to be created, since those already in existence in those countries —the grains market in Argentina and the basic products market in Brazil— might be interested in working with the new exchange. If other countries were chosen, then conversations would have to be held with the banking sector of the more viable countries.

Finally, a study would have to be made of the current laws in the more viable countries for the futures market to analyze which offer some specific advantages. The possibilities of promulgating degrees giving tax breaks or other advantages for creating a futures market would have to be looked at.

It is important to mention that the existence of a futures market is no guarantee of profitable prices for producers. When there is an oversupply of a product, a balanced situation between supply and demand would be a guarantee for the producers whose prices cover their costs and allow them to have a reasonable profit margin. As long as this is not the case, the objective of obtaining profitable prices by creating a futures market for coffee, sugar and cocoa is remote, not to say impossible.

It should also be kept in mind that the philosophy of a futures market rests on the free play of supply and demand, without major interference from government measures or controls. Most of the countries of the region have exchange controls, which might impede the free entrance and exit of capitals for investment in the exchange. This would affect its adequate functioning.

There are two futures exchanges actually functioning in Latin America: the grains exchange in Argentina and the Brazilian Futures Exchange, the Merchandise Exchange of Sao Paulo and the Mercantile and Futures Exchange in Brazil. The Argentinean exchange trades grains and apparently has not functioned successfully, mainly being used to cover the fluctuations of the Austral against the U.S. dollar and other currencies. The Brazilian exchanges have been partially successful, since they only function domestically and are also used to cover fluctuations of the Cruzado.

Establishing a futures exchange for coffee, sugar and cocoa in one of the countries of Latin America and the Caribbean would bring the following benefits:

- a) greater transparency in exchange operations;
- b) contract conditions, affecting the quality of the products as well as delivery periods, ports, etc., would be more suitable to the region's products than those actually offered by the New York Exchange;
- c) demand for banking and communications services would increase in the country where it would be established and possibly in some other countries of the region.

It is obviously highly recommendable that an in-depth study be made of the costs and benefits of establishing a futures exchange for coffee, sugar and cocoa in some country of the region, observing the feasibility of using some of the existent exchanges, broadening their radius of action to include products from all of Latin America and the Caribbean.

4. Train officials and technicians from the region

Directly using the futures exchange in New York implies that the countries of the region have officials and technicians widely trained in exchange activities.

Latin America and the Caribbean today lacks specialists in futures. This would be problematic in the beginning for a suitable participation in the CSCE.

Therefore we suggest setting up training courses, both national and international. The national courses would have a good number of participants within one country. Participants from all the countries of the region, one or two from each, would be invited to the international courses, to be held in a given country, which would provide a greater number of participants.

ECLAC or some international body, together with a national agency and/or the New York Exchange, could organize this kind of seminar or course, obtaining financing to be able to fund at least one participant from each country. These courses should be brief, no more than a week. The speakers invited should be specialists from the region, a specialist from the CSCE, and representatives from traders and commission houses, who would probably pay for their own expenses, owing to the publicity they would be giving to their firms.

The international seminars should include a short visit to New York City to see the CSCE in action and to speak with the specialists of the Exchange and traders and commission houses.

ECLAC should continue to develop the details of the seminars or courses.

Notes

1/ Only operations for options and the foreign currency index contract are allowed (the foreign currency index contract stopped operating in 1987).

2/ Guzmán, Santiago E.M., Cía. de Intercambio y Crédito, S.A., Guayaquil, Ecuador, and Hughes, James V., Lancom Limited, Bridgetown, Barbados.

3/ International traders of coffee, sugar and cocoa are called operators.

4/ There is also a contract for white sugar, but it is not transacted. World trade for this kind of sugar uses the London and Paris exchanges.

5/ Description: indicates the harvest, the selection method or a commercial classification.

Condition: If the seed has a good size and shape.

Grade: Percentage of defects.

Count: Number of seeds per kilogram.

6/ The commission houses and each broker must register with the National Futures Association, which is a self-regulating body approved by the Commission.

7/ W.D. Greenston, "The coffee cartel: manipulation in the public interest," The Journal of Futures, vol. 1, N° 1, 1981.

8/ Ibid.

9/ Arbitrage operations imply the simultaneous purchase of physical products in a market against the sale of physical products or futures in the same or another market in order to obtain profits from the difference in prices.

10/ The Commodity Futures Trading Commission registers the participation of foreign firms in the Exchange (reportable positions), but does not publish this information, considering it to be confidential.

11/ The participation of the countries of Latin America and the Caribbean in the CSCE in a nine-month period, from mid-1976 to early 1977, only averaged 1.9% of the reportable open positions (Source: Commodity Futures Trading Commission, M. Powers and P. Tosini: Commodity Futures Exchanges and the North South Dialogue). This participation was only significant for the Coffee Contract --16%, having reached 25% of the total in one of the months-- which could be explained by the activities of the Pancafé group, which was very active in the period mentioned trying to raise the prices for this product.

12/ The coffee, sugar and cocoa exporting countries of Latin America and the Caribbean generally use the CSCE, directly or indirectly, to fix the price of their product (except Brazil for coffee, since the kind it produces is traded on European exchanges). The exporting countries in other regions usually use the European exchanges.

13/ Commitments of Traders in Commodity Futures, CFTC, Washington, D.C., a monthly publication.

14/ The N° 14 sugar contract does not record speculative operations owing to the small volume traded. Therefore it was not taken into account in this analysis.

15/ Sugar reached its highest prices in history in 1974/1975.

16/ Except Chile, Nicaragua and Panama. These last two had their export quota to the United States taken away because of political reasons. Only exports are considered, and Chile is mentioned for having exported between 1978 and 1981.

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