

The Cocoa Industry Board: Implications for competition in the Jamaican cocoa industry

28 January, 2002

Executive summary

In promoting competition, the Fair Competition Act (FCA) prohibits agreements and practices that result in the restriction of competition in any defined market. Two broad categories of prohibited activities are (a) agreements that have, or are likely to have, the effect of substantially lessening competition in the market; and (b) abuse of dominance respectively.

Commodity boards in Jamaica, have the duty to promote the interests of the relevant industry with an emphasis on the welfare of the growers and farmers. In some cases, the boards were given the exclusive rights to certain markets and the powers to regulate the industry. Effectively, the boards tend to have a monopoly in their respective markets. It is this monopoly power, and the potential consequences that may lead to anti-competitive behaviour in the respective markets, that raise concerns from the perspective of the FCA.

The Cocoa Industry Board (henceforth, the “Board”) is set up by the Cocoa Industry Board (CIB) Act (1957) to regulate the cocoa industry.

The objectives of this analysis are twofold:

- To assess if the powers and activities of the Board, as set out in the CIB Act, are in any way anti-competitive under §17(1) and §20(1) of the FCA; and if so
- 1. To carry out an analysis in accordance with §17(4) and §20(2). These subsections in essence allow for the “authorization” of practices that may appear to be anti-competitive but that contribute to the improvement of production of distribution of goods and services and the promotion of technical or economic progress while allowing consumers a fair share of the resulting benefit. With an authorization, an agreement is not considered to be in contravention to the FCA.

With regard to the first objective, the analysis considers whether the powers and activities of the Board lead to a monopoly or dominance by the Board in any relevant market and, if so, whether there is any evidence of abuse of dominance.

The current activities of the Board are to purchase, process, market and sell cocoa beans. Seven directors comprise the Board. Four are elected directly by the Minister of Agriculture. Three others are elected by the Ministry upon recommendation by the Cocoa Federation, which represents the interests of the cocoa growers.

While there are many growers of cocoa beans in Jamaica (approximately 22,000 farmers), the Board is the sole buyer of wet cocoa beans, sole operator of fermentaries in Jamaica and the sole exporter of Jamaican cocoa. In the world market for cocoa, however, the Board is a very small player with no market power whatsoever: Jamaica supplies less than 1% of total world production of fine flavour cocoa.

The Board's monopoly in the purchasing, processing, grading/packaging and exporting of the Jamaican cocoa beans is not created by legislation. The CIB Act does not prohibit the private purchase of cocoa beans, private ownership and operation of the fermentaries and even direct export without going through the Board, as long as minimum standards set by the Board are adhered to.

Given the dominant position of the Board in these activities, the question then is, is there any evidence of abuse of dominance. Specifically, is there evidence of the Board abusing its dominant position by paying growers excessively low prices?

With regard to prices paid to growers, there is no evidence of abuse of dominance for the following reasons. First, prices paid to growers are determined by revenues less cost, where revenues are primarily determined by the export market in which the Board has no influence. Second, there is no evidence of excess profits, which would be the expected result of excessively low input prices. On the contrary, for several years, the Board has made losses. Finally, given the Board's obligations to protect the interests of the growers and the representation of growers by the Board's directors, it is highly unlikely that the Board would abuse its dominance in this manner.

Neither is there evidence of any other forms of abuse of dominance, such as the creation of barriers to entry for potential entrants to the market or the leveraging of dominance in one market to gain an advantage in another market. In sum, the staff of the FTC found that the current activities of the Cocoa Industry Board are not in contravention of the FCA.

1. Introduction

The objective of the FCA is to promote fair and healthy competition in the Jamaican economy. Competition lies at the heart of any successful market economy and is crucial to the protection of consumers' interests and the efficient allocation of resources. It is a process whereby firms constantly try to gain an advantage over their rivals and win more business by offering more attractive terms to customers or by developing better products or more effective ways of meeting their requirements. Competition has several dimensions of which price is only one, albeit in many markets the most important. By encouraging the development of new or improved products or processes, it leads to efficient and globally competitive industries. In the long run, this enhances economic growth and living standards in Jamaica as a whole.

In promoting competition, the FCA prohibits agreements and practices that are anti-competitive, i.e., that result in the restriction of competition in any defined market. Two broad categories of prohibited activities are:

- *Agreements that have, or are likely to have, the effect of substantially lessening competition in the market*—this includes resale price maintenance, market sharing and collusion, applying dissimilar conditions to equivalent transactions with other parties and thereby placing them at a competitive disadvantage and bundling¹;
- *Abuse of dominance*—abusive conduct generally falls into one of two categories. First, conduct that exploits customers or suppliers through, for example, excessively high prices or discriminatory prices or other terms and conditions. Second, conduct that is anti-competitive behaviour, sometimes called 'exclusionary behaviour' because it removes or limits competition among existing competitors, or because it prevents new undertakings from entering the market. This second class of behaviour includes predatory behaviour, unfair vertical restraints and the restriction of access to essential facilities. This applies to existing potential as well as existing competitors.

Commodity boards in Jamaica, such as the Cocoa Industry Board, are products of the 1940s and 1950s. The Cocoa Board, for example, was established in 1957 by the CIB Act and entrusted with the duty to promote the interests of the industry with an emphasis on the welfare of the growers and farmers. The emphasis was also on commodities that were exported. In order to ensure that the small growers and farmers did not get a raw deal in their export markets, commodity boards were set up to centralize exports so that better deals could be found by virtue of larger size. In some cases, the boards were given the exclusive rights to export in order to capture the benefits of this 'size effect'. In order to enforce these exclusive rights, a host of other measures, such as the exclusive rights to buy from growers and powers to regulate the industry were given to the boards. Effectively, the boards were generally given a monopoly in their respective markets. It is this monopoly power and the potential consequences that may lead to anti-competitive

¹ Bundling refers to making the conclusion of contracts subject to accepting of supplementary obligations that, by their nature or according to commercial usage, have no connection with the subject of such contracts.

behaviour in the respective markets and that raise concerns from the perspective of the FCA.

The current analysis is carried out in view of the potential conflicts between the FCA and the activities and practices of the Board, as laid out in the CIB Act. The procedure for the analysis is as follows:

- The fundamental question asked is, do the powers and the activities of the Board lead to anti-competitive behaviour that would be prohibited by the FCA? The main provisions of the FCA that are applied in this analysis are §17 and §20. (See Appendix A for details of §17 and §20.)
- If the powers and activities of the Board are found to be anti-competitive, in relation to §17(1) – 17(3) and §20(1) of the FCA, an analysis will be carried out in accordance with §17(4) and 20(2) which in essence allow for the “authorization” of practices that may appear to be anti-competitive but that contribute to the improvement of production or distribution of goods and services and the promotion of technical or economic progress while allowing consumers a fair share of the resulting benefit. With an authorization, an agreement is not considered to be in contravention to the FCA.
- If, however, the analysis suggests that there are no benefits to the consumer from the anti-competitive practice, then the practice would be in contravention of the FCA. In this case, a recommendation would be made to either bring a halt to, or change, the practice in question and amend the corresponding legislation.

The remainder of this paper is organized as follows: Section 2 outlines the application of the FCA to the Board. Section 3 lays out the supply chain in the cocoa industry and identifies the areas in which the Board participates. In section 4, the powers and activities of the Board pertaining to the regulation of the cocoa industry as proscribed by the CIB Act are described. Section 5 reviews the market structure and production of the Jamaican cocoa industry while section 6 analyses the price-setting behaviour of the Board. In section 7, relevant provisions of the CIB Act are discussed in relation to the FCA. The focus is on identifying provisions of the CIB Act that may contravene the FCA. Section 8 concludes. Appendix A details §17 and §20 of the FCA. Appendices B and C respectively provide an overview of the world cocoa market and a profit analysis of the Cocoa Industry Board.

In this analysis, the information on the Cocoa Industry Board and the Jamaican cocoa industry is drawn primarily from a meeting that was held between the staff of the Fair Trading Commission (FTC) and the Board and the annual reports of the Board.² Other sources of information are referenced where applicable.

² The meeting took place between 2.15 – 4.30pm on the 1 October, 2001 at the offices of the Cocoa Industry Board at Marcus Garvey Drive, Kingston. Attending were Ms. Evona Channer, Dr. Swee Chua and Mr. David Miller of the Fair Trading Commission (FTC) and Mr. Naburn Nelson of the Cocoa Industry Board.

2. Elements of the FCA that are relevant to the powers and activities of the Cocoa Industry Board

Of the agreements and practices that are prohibited by the FCA, those that are most pertinent to commodity boards are the creation of exclusive rights to markets and abuse of dominance. Each is discussed below.

2.1 Exclusivity

Commodity boards are often endowed with monopoly rights to either buy or sell in certain markets. In some cases, no other entity, private or public, is allowed to participate in the market. This would effectively create a monopoly and eliminate competition, which goes against the spirit of free and competitive markets on which the FCA is based. The creation of such dominance could then facilitate certain practices that are considered as abuse of dominance.

2.1 Abuse of dominance

A wide range of practices could be considered as abuse of dominance and therefore prohibited under the FCA. Some that may be of relevance to commodity boards include the following:

- *Unfair pricing*—The commodity boards are also able to set prices at which they would purchase or sell the commodities that pass through their ‘hands’. The ability of the boards to set prices is in itself not anti-competitive.³ The anti-competitive effects may arise if the boards, by virtue of their dominance, are able to set prices that are excessively high (for commodities that they sell) or excessively low (for commodities that they buy). In other words, the dominance of the board allows it to set unfair (monopoly or monopsony) prices.

In most cases, however, the commodity boards are not profit-motivated organizations. They are often created to protect the interest of growers/farmers from whom the board obtains the commodities and on whose behalf the board operates. If there is more than one level in the supply chain in which the board operates, it is normally the interests of farmers and growers that override the interests of other segments of the industry.⁴

³ Price-setting is sometimes confused with price-fixing, a practice which is prohibited under the FCA. Price fixing refers to competitors colluding to set an agreed price or a dominant undertaking imposing constraints on the prices set by *other* undertakings, normally re-sellers. Independent non-collusive price-setting, however, does not fall into this category of prohibited practices.

⁴ This is not surprising, given that these commodity boards come under the jurisdiction of the Ministry of Agriculture. This feature is also reflected in the composition of the board of directors whereby there is a stipulated minimum representation from the growers.

- *Discrimination*—another anti-competitive practice would be the unequal treatment of the board’s buyers or sellers on grounds that are not based on economic reasons. In this regard, governance issues, i.e., the interests represented on the board, are important. Board directors with other related interests could lead to discriminatory treatment.
- *Influence in related markets*—if the board is participating in more than one market, it may be able to use its dominance in one market to influence its position in another market. If, for example, a board has exclusive rights to purchase the commodity and it also participates in manufacturing products using that commodity, along with other private players, it may be able to offer its own manufacturing business better terms than those offered to its competitors. In other words, there could be implicit discrimination or even predation.
- *Unequal access to funding*—The boards’ access to funding could also tip the scale. As government entities, the boards tend to require government approval for loans that they obtain. However, they may also obtain government-backing (guarantees) for their borrowing, which would allow them to borrow on better terms and conditions than their private competitors, if any, would be able to obtain. If there are no private competitors, such conditions could be a deterrent to entry, even if permitted.

The above are some possible anti-competitive outcomes that could arise out of the commodity boards. The following analysis therefore looks at the factors that would shed light on whether the powers and practices of the Board, as explicitly laid out in the CIB Act, or implicitly derived through the legislated powers and/or market conditions, are anti-competitive and therefore prohibited under the FCA. This requires studying the powers and activities of the Board, the relevant markets in which the Board participates, price-setting behaviour of the Board and the potential incentives for discriminatory behaviour, which would include the business interests of the board of directors.

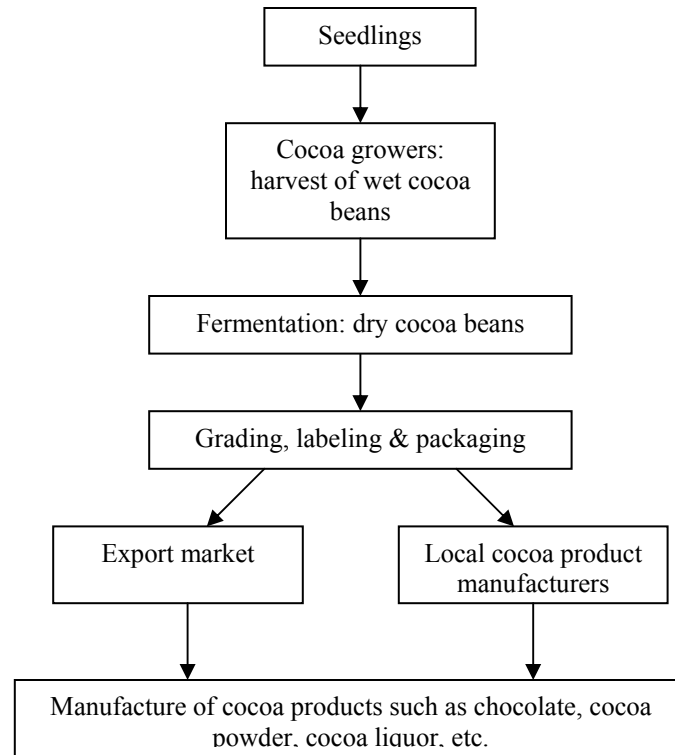
3. Supply chain of cocoa industry

Cocoa is a perennial tree crop of the humid tropics grown frequently under forest shade. A cocoa field has an economic life of some 25-30 years. The fruits (pods) take about 5 months from flowering/fruit-set to ripeness. They are then harvested and the pods are broken up. The pod husk is discarded in most instances, and the wet cocoa beans are fermented, then dried. The dried cocoa bean is used to make cocoa butter, which is used in the manufacture of chocolate, as well as in cosmetics. It is used to make cocoa powder, which can be used in the production of foodstuff, such as chocolate flavoured drinks, ice cream or mousse. It is also used for cocoa liquor, which is also used in the production of chocolate. On a much smaller scale, the husk of the cocoa pods and the pulp is used for the production of potash, animal feed, soft drinks, alcohol, jam and marmalade.

The Jamaican cocoa industry consists of cocoa growers, the Board and manufacturers of cocoa products. The Board is in effect a cocoa dealer itself. Pioneer, a chocolate manufacturer also acts as a dealer in that it buys in bulk from the Board and, in addition

to using it for its own production, sells to other manufacturers who require only small quantities of cocoa, for example, producers of Tia Maria. The supply chain in the Jamaican cocoa industry is shown in Figure 1.

Figure 1: Supply chain of cocoa industry in Jamaica



The following briefly describes the activities in the various steps of cocoa production in Jamaica:

- *Nursery*—the Board cultivates seedlings that are provided to growers at a subsidized cost. Currently, growers pay about J\$10 per seedling. For ‘serious’ farmers, the Board sometimes gives out the seedlings for free. Currently, a minimum of 4000 seedlings is produced every 3 months. Levels reflect that which is required to maintain cocoa acreage. Currently, the focus is on rehabilitation (e.g., pruning, fertilization, etc.) rather than replanting.
- *Cocoa growing*—Cocoa growing is spread throughout the island. About three years after planting, the cocoa plants start bearing beans. A cocoa tree lives for a very long time. These beans are harvested by farmers and brought to collection points established by the Board. At this stage, the beans are termed as wet beans.

- *Collection*—every fortnight, trucks from the Board go to designated collection points to collect the cocoa. The cocoa beans are brought to one of the (currently) three operating fermentaries for drying.
- *Fermentaries*—the beans are dried and polished at the fermentaries. The Board owns four fermentaries: in Richmond in St. Mary, Morgans Valley in Clarendon, Kingston and Haughton Court. These fermentaries are positioned around the island so that cocoa beans from any part of the island can be within ‘easy reach’ of a fermentary. Currently, only the former three are operating. Production was not sufficient to make operating the Haughton Court fermentary economical. Even the three that are operating are operating at about 50% capacity.

In the fermentary, a ‘slow cooking’ (drying) process takes place to bring out the flavours of the cocoa. Jamaica’s cocoa is one of the highest qualities in the world in terms of flavour. The beans are placed in boxes covered with plastic to trap the heat. The natural heating process (no additional heat is supplied) takes about 6 – 8 days, during which the beans are regularly turned to keep the process even. They are then ‘rested’ for some time, depending on the weather (½ day in the summer and up to 2 days during the wet season). The beans are then ‘polished’. Polishing is an incidental process that occurs as the beans rub against themselves in the drums/containers that turn.

- *Grading and packaging of dried cocoa beans*—The dried beans are then graded, packaged and sold, both in the local as well as export market.
- *Domestic cocoa products markets*—there is some manufacturing of cocoa products in Jamaica. Local cocoa as well as imported inputs are used. Locally made cocoa products are retailed alongside imported cocoa products.

4. Powers and activities of the Board

The Board was created by the CIB Act to regulate the Jamaican cocoa industry. It is set up as a body corporate with powers to acquire, hold and dispose of land and other properties. The following discusses the governance and duties of the Board, the powers of the Board and finally, the activities of the Board today.

4.1 Governance and duties

Normally, seven directors comprise the Board. Four are elected directly by the Minister of Agriculture. Three others are elected by the Ministry upon recommendation by the

Cocoa Federation. The Cocoa Federation, which is under the umbrella of the Jamaican Agricultural Society, represents the interests of the cocoa growers.⁵

The duties of the board, as set out in §5(1) of the CIB Act, are as follows:

- (a) to promote the interests and efficiency of the industry of the Island, to assist in its development and to promote the welfare of persons engaged in the industry;
- (b) to secure the most favorable arrangements for the purchase, handling, marketing, sale, importation and exportation of cocoa;
- (c) upon being required to do so by the Minister, to make recommendations to the Minister as to any matter directly or indirectly affecting, relating to, or connected with the cocoa industry, or persons engaged in that industry;
- (d) to perform such other duties in relation to or connected with the cocoa industry or persons engaged in that industry as the Minister may require to be performed by the Board.

4.2 Powers of the Board

§2 of the CIB Act gives the Board blanket powers to carry out any activity for the purposes of fulfilling its functions:

“subject to the provisions of this Act, the Board shall have power, for the purpose of discharging any of its functions under this Act, to do anything and to enter into any transaction which, in the opinion of the Board, is necessary to ensure the proper discharge of its functions”.

Further specific powers of the Board include the following:

- *Participate in any part of the supply chain of the cocoa industry (§4)*—this includes nurseries, the importation, cultivation and sales of cocoa seedlings, the operation of cocoa plantations, the processing of cocoa and the manufacture of cocoa products. Furthermore, the Board may also carry out R&D work in relation to the cocoa industry.
- *Carry out examinations on the quality of cocoa (§4(g))*—whereby the Board may appoint persons to carry out examinations of cocoa at any level of the production chain to check that the condition of the cocoa is fit for purchase, sale, exportation or distribution. If, in the opinion of the appointed person, the cocoa is not in a fit condition, then the cocoa shall be seized under his superintendence or by a constable.

⁵ Currently there are six directors: Mr. J.R. Suah (chairman), who is a research consultant who was in charge of the Hill Agricultural Rehabilitation Programme (HARP); N.C. Rhone, who is City of Kingston Credit Union manager; D. Archibald, who is an economic consultant with long experience in agriculture; L.J. Thomas, who is the chairman of the Cocoa Federation; G.A. Barnes; and Rev. I. Francis. The post of one director was vacant, at time of writing.

- *Determination of price offered to growers (§6)*—the Board may use funds at its disposal or from its reserves to pay growers for cocoa purchased by the Boards “such sums upon such conditions as the Board thinks fit”.
- *Purchase and export of cocoa (§6.1)*—No person shall purchase or export any cocoa except the Board, a cocoa dealer or a person engaged in the manufacture of cocoa products.
- *Regulate the industry*—including registration of all nurseries, cocoa growers, cocoa works and dealers (§8(b)), regulation of cocoa works that are operated by the Board (§8(f)); prescription of quality grades of cocoa to be exported (§8(k)); and regulating the delivery points of any cocoa being purchased by the Board.
- *The imposition of a cess (§9)*—with the approval of the Minister, on (a) the proceeds of sale by the Board of any cocoa supplied to the Board by a cocoa dealer or (b) in respect of any services rendered by the Board relating to the quality of cocoa exported from Jamaica.

Other provisions of the Act define the procedures, administrative and regulatory issues.

4.3 Activities of the Cocoa Industry Board

The current activities of the Cocoa Board are to purchase, process, market and sell cocoa beans. Specifically, the Board carries out the following activities:

- *Collection*—the Board runs collection points for wet cocoa. Collection is done fortnightly. Wet cocoa is brought to the fermentaries using vehicles owned by the Board;
- *Drying/fermenting*—the four existing (three operating) fermentaries are owned and operated by the Board.
- *Grading, packaging and labeling*—of all cocoa for sale. Both grading and packaging are done according to the standards set by the Cocoa Association of London;
- *Sale of dry cocoa beans*—both to the export and local markets.

While the Board currently has a monopoly in the processing, grading/packaging and exporting of the cocoa beans, this is not a statutory monopoly. In other words, private purchase of cocoa beans, private ownership and operation of the fermentaries and even direct export is possible without going through the Board, as long as they operate to the standards of the Board.⁶ This is because of the need to maintain the quality and brand of the Jamaican cocoa in the international market – the grading has to be reliable and correct.

⁶ In fact, Pioneer Ltd, a chocolate company in Jamaica, has considered the possibility of buying the Haughton Court fermentary from the Board. However, the plan did not come to fruition as it turned out to be more economical for Pioneer to buy the processed cocoa from the Board to process it themselves.

Almost all activities that the Board does are carried out in-house. Only one part could be said to be outsourced – marketing. The export of cocoa is done through marketing agents overseas who are paid a commission of 2% of gross sales. The use of marketing agents provides the following benefits:

- It reduces the cost of selling, for example, the need to provide warehousing facilities;
- It reduces the fluctuation in sales for the Board, as the agents tend to keep a stock of the commodity to smooth out fluctuations.

Other than marketing, nothing is out-sourced. Export prices are FOB; the buyer therefore pays for shipping and other transportation-related costs.

The Board does not use all the powers that the CIB Act provides. Table 1 below compares the powers of the Board, as proscribed under the CIB Act, and the actual current activities of the Board.

Table 1: Powers and activities of the Cocoa Industry Board

Powers	Activities
Participate in any part of the supply chain of the cocoa industry	3 The Board participates in supply of seedlings, collection of wet cocoa beans, fermenting, grading and packaging, and sales to export and local markets.
Examinations on the quality of cocoa	3 The Board examines the quality cocoa. ¹
Determination of price offered to growers	3 The Board determines the price paid to growers based on export prices.
Purchase and export of cocoa	3 The board purchases and exports cocoa.
Registration of all nurseries, cocoa growers, cocoa works and dealers	X No direct, fee-charging registration is carried out. ²
Regulation of any cocoa works that are operated by the Board	3 The Board regulates the cocoa works that it operates.
Prescription of quality grades of export cocoa	3 The Board prescribes the quality grades of export cocoa.
Regulating the delivery points	3 The Board regulates the collection points that it operates.
Impose a cess	X No cess is imposed.

¹ Examination is carried out in three stages. At the collection point, bad cocoa beans are rejected. At the fermentary, ungraded beans are sold in the local market. At the point of export, a representative from the Ministry of Agriculture checks the beans. Those that are rejected are sold locally.

² However, as the Board keeps a list of the cocoa growing bodies, such as the co-operatives, it is able to obtain, through them full lists of all cocoa growers, if it wishes to. In respect of cocoa works, the Jamaican cocoa industry is fairly small that one almost always knows the players in the industry.

5. Market structure and production of the Jamaican cocoa industry

5.1 Growing

In the last financial year, there were approximately 22,000 cocoa farmers in Jamaica. Many are small farmers – as long as a farmer brings in some quantity of cocoa (it could be as little 1/4th of a box), he would be classified as a cocoa farmer. Amongst the largest growers are Orange River Farm (80 acres) and Bachelor’s Farm with 530 acres of which 80 – 90 acres are devoted to cocoa. The Board itself produces a small quantity of wet cocoa beans from the farms that it still owns (others have been divested over the years). The Board’s growing activities, however, account for less than 10% of Jamaica’s wet cocoa bean production.⁷

In 1998/99, 102,162 boxes (2,550 tonnes) of wet cocoa beans were produced.⁸ This reflects a downward trend in cocoa harvests, which have been in decline over the last decade (see Table 2).

Table 2: Cocoa Industry Board’s purchases of wet cocoa (tonnes)

Crop Year	Wet cocoa purchases
1993/94	6169
1994/95	6186
1995/96	3458
1996/97	4071
1997/98	4064
1998/99	2550

The low cocoa harvests have been a constraint to greater production and sales. According to the Board, the following are some reasons for low cocoa production:

- *Poor road infrastructure*—some farms can be accessed only through dirt tracks that cannot be accessed by the Board’s pickup vehicles. The need to walk long distances to bring their harvest to the collection points, is a disincentive. In some cases where the Board finds it uneconomical to travel the distance to pick up a small quantity of beans, it pays for it anyway without picking it up (the availability of beans is verified by field officers who travel on scooters to these rural areas).
- *Age of farmers*—the average age of farmers is about 65 years. On the hillsides, the harvested beans from the higher lands often roll down. The farmer would have to go pick them up. Older farmers would therefore just restrict their harvest to the easily harvested areas.

⁷ Verbal information from the Board.

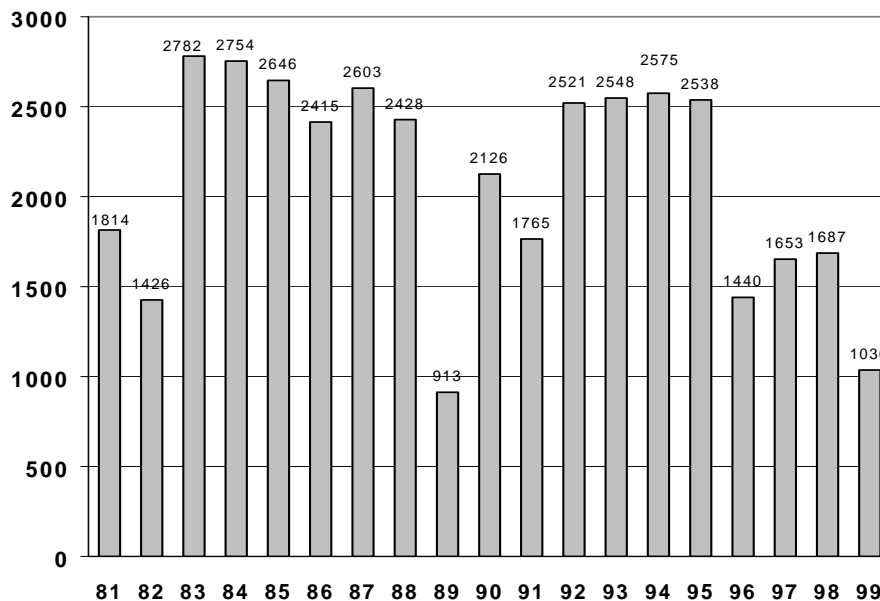
⁸ See the Annual Report Cocoa Industry Board 1998/99, p. 5.

- *Lack of investments*—the cooperatives do not invest the earnings back into the industry.
- *Lack of financial aid to farmers*—The Board’s ability to pass on further financial aid to farmers for improvement is limited. The Board has never given much hand-outs, except during the Hill Agricultural Rehabilitation Programme (HARP), when cocoa plants, technical support and fertilizer were provided to farmers.
- *The perceived low return from cocoa*—The farmers often say that the return on a box of cocoa (for example, \$370) is lower than for a box of coffee (e.g., J\$800). However, they overlook the fact that a box of cocoa is smaller than a box of coffee. A tonne of coffee, for example, fetches \$30,000 compared to \$36,000 for a tonne of cocoa. The Board is therefore trying to change the mentality towards one using ‘tonnes’ rather than boxes to allow for clear comparability.

5.2 Dry cocoa processing (fermenting)

The Board is currently the sole operator of fermentaries in Jamaica. There are four fermentaries but only three are in operation due to low production. The smallest fermentary (Haughton Court) was shut down when production fell below 50 tonnes per annum. 50 tonnes was the level at which production broke even (minimum level for feasible production).

Figure 2: Jamaica’s cocoa production (tonnes)⁹



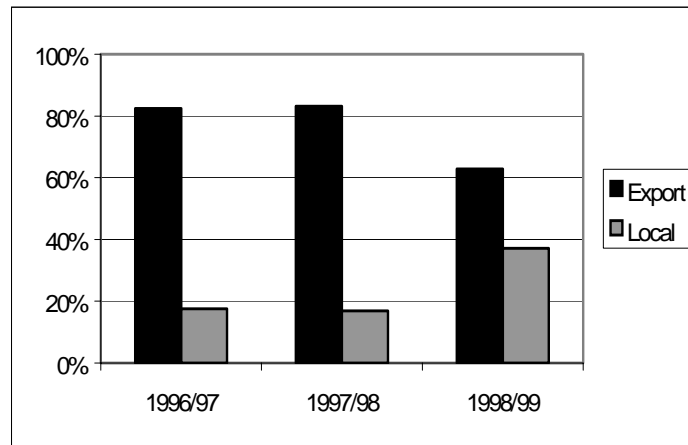
⁹ The years in the graph refer to financial years whereby the financial year 1981 refers to the period 1 October 1980 to 30 September 1981.

Over the last decade, cocoa production in Jamaica has been declining, as can be seen from Figure 2. Compared to its peak production level of 2782 tonnes in 1983, production in 1999 stood just over 1000 tonnes.

5.3 Sales

Total sales of cocoa beans in 1998/99 amounted to 984 tonnes, valued at J\$55.2 million. Of this, exports accounted for 63% of production (619 tonnes, J\$34.4 million) while local sales amounted to 37% (365 tonnes, J\$20.8 million), see Figure 3.

Figure 3: Exports and local sales of Jamaican cocoa (% tonnes)



Key export markets are Belgium, Holland, UK, Japan, France and USA (see appendix B for a review of the world cocoa market). Jamaica does not benefit from any preferential export agreements for cocoa (see Table 3).

There is only one domestic buyer of cocoa from the Board – Pioneer Chocolate Company (previously, Highgate Chocolate Company also purchased from the Board). There are other domestic users of cocoa (e.g., makers of Tia Maria). However, they tend to buy very small quantities and therefore purchase from Pioneer rather than directly from the Board. Other small manufacturers such as makers of chocolate tea buy directly from the farmers.

According to the Board, the main reason for declining sales is low cocoa harvests (see section 5.1 of this paper). There is capacity for additional production at the fermentaries, which are currently underutilized. There is also demand for more Jamaican cocoa. A Japanese buyer, for example, would be willing to buy 300 tonnes, if supply can be guaranteed, to make a 100% Jamaican brand chocolate bar. The production of this bar came to an end due to low supplies of Jamaican cocoa.¹⁰

¹⁰ This has now been replaced with a Caribbean bar, which allows a mix of various types of cocoa beans from the Caribbean.

Table 3: Jamaican cocoa exports¹

Destination	1996/97		1997/98		1998/99	
	Tonnes	JA\$'M	Tonnes	JA\$'M	Tonnes	JA\$'M
Export						
1 st Grade						
Belgium	590	32.0	860	55.7	325	18.6
Holland	150	7.2	150	7.7	50	3.2
Japan	262.5	15.3	150	7.0	100	5.4
France	147	9.4	197	13.0	122.0	6.6
U.S.A.	200	9.1	100	6		
Total 1 st grade	1,349.5	73.0	1,457	89.4	597	33.8
Export Crushed	--	--	12.5	0.2	22.0	0.6
Total Export	1,349.5	73.0	1,469.5	89.6	619	34.4
Local	287.6	14.8	297.6	18.7	365.0	20.8
TOTAL SALES	1,637.1	87.8	1,767.1	108.3	984.0	55.2

Source: Annual Report: Cocoa Industry Board 1998/99, p. 6.

6. Price setting by the Cocoa Industry Board

There are two categories of prices that are relevant to this analysis – prices at which cocoa is sold and prices that are paid to growers. This is because the Board currently is the dominant buyer of wet cocoa and the only producer and seller of dry cocoa in Jamaica. The objective is therefore to analyze if the prices at which cocoa is sold could be excessively high, and if the prices that growers are paid may be excessively low.

6.1 Selling prices

Selling prices to both export and local markets are almost identical. Prices are driven predominantly by the export market, where Jamaica is a very small producer in relation to other cocoa producing nations.

As further elaborated in Appendix B, there are two categories of cocoa in the export market “fine or flavour” (FF) cocoa, and “bulk” or “ordinary” cocoa. The former is of higher quality. The share of FF cocoa in the total world production currently stands at just under 5% of total world production or approximately 150,000 tonnes in 1999/2000. Using 1999 figures, Jamaica’s production of 984 tonnes amounts to less than 1% of the world production of FF cocoa.

The price of Jamaican cocoa is set with reference to the market price in the London-based cocoa exchange with a premium added for the quality (FF cocoa). Typically, this premium ranges between £120 – £400 per tonne. Current export prices for Jamaican

cocoa are approximately US\$1250 or £780 per tonne. Table 4 shows the prices of Jamaican cocoa in the local currency over the last decade.

Given the small share of Jamaican cocoa in the export market, therefore, Jamaica has no market power whatsoever and is a price-taker, i.e., it has no influence over the world price. Since the world market for cocoa is competitive, it is almost certain that the price at which Jamaica exports is also competitive and not excessively high. In other words, Jamaica does not have a dominant position in the world market and consequently would have no scope to act anti-competitively in any way in this market.

Table 4: Realized prices for Jamaican dry cocoa (per tonne)¹

Years	JA\$	US\$ ²
1993/94	39,819	--
1994/95	48,190	--
1995/96	50,045	1274 ³
1996/97	53,645	1527
1997/98	61,541	1706
1998/99	56,163	1501

Information from Table 2 of the Cocoa Industry Board's Annual Report 1999. ² The exchange rate was calculated as the average between selling and buying rates. The monthly exchange rates were obtained from the Bank of Jamaica; ³ The rate for 1995/96 was based on data from Jan – June 1996 only.

The Board's position differs slightly in the domestic market, where it is the sole seller of cocoa beans. No cocoa beans are imported although cocoa powder, which is used also as an input in the manufacture of cocoa products, is imported. Dominance of the Board in local sales of dry cocoa depends on the extent to which imported input substitutes for the manufacture of cocoa products (such as cocoa powder) exist and are used. If substitutes are used in large quantities in relation to dry cocoa supplied by the Board, then the Board may not be considered to be dominant in the market. However, to the extent that substitutes are not extensively used, then the Board may be dominant. If this were the case, then there may be scope for excessively high prices in the local market for cocoa.

As it turns out, however, local prices mirror export prices very closely. As established before, the Board has no market power in the export market and export prices are very likely to be competitive. In this case, local prices of cocoa would also be competitive. In short, even if the Board were dominant in the local market, prices are not excessive.

6.2 Prices paid to growers

The total payment to growers is based on revenues less cost. Growers are paid an advanced payment followed by a final payment once the cocoa is sold. The first payment is made each time the cocoa is collected (i.e., fortnightly). This payment is based on the

estimate of what the final export price may be. The board sets this price to be as high as possible, to encourage the farmers to reap. The second payment is based on actual deficit or surplus and acts as a bonus to farmers. It is due in September each year and paid out in December.¹¹

Both payments are recommended by the Board and approved by the Minister. Prices are generally set on an annual basis. Table 5 shows the payments to farmers from 1993 – 1999. Table 6 shows the percentage of total price realized by the Board that is paid out to farmers. As can be seen, the proportion of realized prices accruing to farmers has risen from approximately 41% in 1993/1994 to 56% in 1998/99.

Table 5: Prices paid to farmers (JA\$ per tonne)¹

Crop Year	Advanced Payment	Final Payment	Total Payment
1993/94	9,006	7,500	16,506
1994/95	10,006	11,000	21,006
1995/96 ²	13,506	11,000	24,506
1995/96 ³	15,006	11,000	26,006
1996/97	20,006	8,000	28,006
1997/98	27,006	4,500	31,506
1998/99	27,006	4,500	31,506

¹ Information from Table 3 of Cocoa Industry Board's Annual Report 1999; ² to April 1996; ³ from May 1996.

Table 6: Proportion of realized prices accruing to farmers

Crop Year	Total Payment ¹	Prices realized by Board ²	% of prices realized accruing to farmers
1993/94	16506	39,819	41%
1994/95	21,006	48,190	44%
1995/96 ³	24,506	50,045	49%
1995/96 ⁴	26,006	50,045	52%
1996/97	28,006	53,645	52%
1997/98	31,506	61,541	51%
1998/99	31,506	56,163	56%

¹ Information from Table 3 of Cocoa Industry Board's Annual Report 1999; ² Information from Table 3 of Cocoa Industry Board's Annual Report 1999; ³ to April 1996; ⁴ from May 1996.

¹¹The second payment is made just before Christmas. The Board has attempted to get rid of the second payment and make only one single payment to the growers. However, the growers have become used to the two-payment system and, even when a large first payment was made, demanded their usual second payment when regular payment time came. Hence, the board has chosen to stick to the two-tier payment system.

Given the Board's position as the dominant buyer of wet cocoa in Jamaica, the question then arises, does the Board abuse its dominant position and pay excessively low prices to the growers? In other words, are the prices paid to growers too low?

The analysis shows that the likely answer to this is in the negative, for the following two reasons:

1. The key objective of the Board is the promotion of the interests of the cocoa industry in general, and *particularly* those of the growers. This is reflected in the composition of the Board's directorship, of which three out of seven directors are elected by the Ministry upon recommendation by the Cocoa Federation, which represents the interests of the cocoa growers. It is therefore unlikely that the Board would be allowed to abuse any dominant position that it has vis-à-vis the cocoa growers and pay unfairly low prices.
2. Over the last decade, the Board has sometimes made losses. In 1999, for example, losses were to the order of J\$10.6 million (see Appendix C for a summary discussion on the profitability of the Board). One of the tests of abuse of dominance is the existence of excessive profits. Losses therefore are not consistent with either a dominant buyer or dominant seller that is abusing its dominance. Note that this does not mean that loss-making by the Board is a good thing. On the contrary, losses cannot be sustained in the long run and, short of a government bailout, this may mean the collapse of the entire industry.

In sum, the analysis suggests that, although the Board is a dominant buyer of wet cocoa, there is no evidence of any abuse of dominance by the Board with regard to prices paid to growers.

7. The Cocoa Industry Board and the Fair Competition Act

This section analyses in detail provisions of the CIB Act in relation to the FCA. Provisions that are not discussed may be assumed to be consistent with the FCA, i.e., not in contravention of the FCA.

Each of the provisions discussed are analyzed with regard to whether or not it has or is likely to have the effect of substantial lessening of competition in the market. If so, the assessment considers if the practice contributes to the improvement of production or distribution of goods or services, or the promotion of technical or economic progress (see §17(4) and §20(2) of the FCA). Note that provisions in the CIB Act that are not discussed in this analysis also fall within this category.

As discussed in section 2, whether or not a practice or provision is in contravention of the FCA depends primarily on two factors. First, it depends on whether the Board has exclusive rights and access to certain markets, both directly and indirectly, leading to a position of dominance in the relevant market. Following that, the second factor is whether or not the Board abuses the dominance. This can occur in several ways, some of which were outlined in section 2 of this paper.

7.1 Participation in any part of the supply chain of the cocoa industry (§5(4))

This provision in itself does not contravene the FCA. The ability/right to participate in any part of the industry is similar to the right of any private undertaking to enter in any particular markets. As long as this right to participate is not coupled with the right to exclude other players from the market, i.e., the CIB Act does not provide for the monopolization of any part of the industry, the FCA is not contravened.

As it turns out, the Board:

- Grows cocoa; however, there are many other growers (see section 5.1) and the Board's own supply of wet cocoa beans constitutes less than 10% of total supply in Jamaica;
- Ferments/dries cocoa beans;
- Grades, packages and labels the dried beans before exporting or selling to local cocoa products manufacturers.

In both fermenting/drying and grading/packaging, the Board is the monopolist in the market. However, this is not an outcome dictated by the CIB Act as private undertakings may, if they so wish, enter into any of these activities. This provision therefore does not does not exclude competition and is not anti-competitive, especially since there is no evidence of abuse of dominance (see following sections of this paper).

7.2 Examinations on the quality of cocoa (§5(4)(g))

Under this provision, the Board may appoint persons to carry out examinations of cocoa at any level of the production chain to ensure that the condition of the cocoa is fit for purchase, sale, exportation or distribution. If, in the opinion of the appointed person, the cocoa is not in a fit condition, then the cocoa shall be seized under his superintendence or by a constable.

This power per se does not contravene the provisions of the FCA. The question, however, is whether these powers could and would be mis-used to any anti-competitive ends. If, for example, there were other competing (privately-owned) fermentaries, the Board could *potentially* misuse these powers to examine and unfairly claim that the cocoa produced by its competitors is of unfit condition and destroy/confiscate it. This is currently not a problem as the Board is the sole player at almost all levels of the supply chain. It therefore has no incentives or scope to mis-use these powers in an anti-competitive way. In growing, where there are other growers besides the Board, the Board also faces few incentives to mis-use these powers. This is because the Board's share of the wet cocoa production is small. It needs the supply from other growers to keep its drying operations viable. Therefore, §5(4)(g) is not considered to be a contravention of the FCA.

7.3 Determination of price offered to growers (§5(6))

Under this provision, the Board may use funds at its disposal or from its reserves to pay growers for cocoa purchased by the Boards "such sums upon such conditions as the Board thinks fit". The ability of the Board to set prices at which it buys a good is, in

itself, not anti-competitive. It becomes problematic only from the perspective of the FCA if:

- the undertaking is dominant; and
- the undertaking abuses its dominant position by either charging excessive prices (in the case of a dominant, monopolist supplier) or offering unreasonably low prices (in the case of a dominant, monopsonist buyer).

Both these factors together could constitute an abuse of dominance under the FCA. Nonetheless, the ability to set prices per se is not prohibited under the FCA. Further, as discussed in section 6.1, evidence suggests that:

- the Board is not dominant in the export market for dry cocoa and is bound to competitive world prices;
- the Board is dominant in the local market for dry cocoa but does not charge excessive prices as domestic prices follow the competitively-set export prices;
- the Board is dominant in the local market for the purchase of wet cocoa from growers but does not bind the growers to excessively low prices, as the duty of the Board is to lean towards protecting the interests of the growers. Further, the losses made in some years, i.e., the lack of evidence of excessive profits, would suggest the absence of an abuse of dominance by the Board.

In sum, §5(6) is not in contravention of the FCA.

7.4 Restrictions on purchase and export of cocoa (§6 and §7)

Under §6(1) of the CIB Act, no person shall purchase or export any cocoa except the Board, a cocoa dealer or a person engaged in the manufacture of cocoa products. §6(2) states that persons contravening §6(1):

“shall be guilty of an offence against this Act and shall on summary conviction before a Resident Magistrate be liable for a first offence to a fine not exceeding ten thousand dollars and in default of payment to imprisonment with or without hard labour for a term not exceeding six months and for a second or subsequent offence to a fine not exceeding ten thousand dollars and in default of payment to imprisonment with or without hard labour for a term not exceeding twelve months or to both such fine and imprisonment”.

A similar penalty is imposed under §7 on any person who falsely holds himself out or represents himself as being a cocoa dealer or a person acting under the written instructions of the Board.

The key question from the perspective of the FCA is, do these regulations give rise to any exclusivity in the purchase and export of cocoa. In other words, are dominant/monopoly entities created and high barriers to entry erected?

§6(1) does not restrict the right to purchase or export cocoa solely to the Board. The categories of “cocoa dealers and any persons engaged in the manufacture of cocoa products” are sufficiently wide to allow any undertaking to purchase and export cocoa, if it is able and chooses to do so. Therefore, as the CIB Act does not allow for the Board to

regulate the entry conditions to cocoa dealership and the manufacture of cocoa products, this provision of the Act does not raise any competition concerns. In sum, §6 and §7 are not in contravention of the FCA.

7.5 Regulating the cocoa industry (§8)

There are various sub-provisions that pertain to the regulation of the cocoa industry. Some of the more relevant ones are discussed below:

- *Registration of nurseries, cocoa growers, cocoa works and cocoa dealers (§8(1)(b), (c), (n), (o) and (p))*—Under §8(1)(b), the Board may provide for the registration of all nurseries, all cocoa growers, all cocoa works and all cocoa dealers. While this raises the possibility of costly bureaucracy, it does not raise any competition concerns. In any case, the Board does not enforce this regulation and does not carry out any form of formal, fee-based registration.

§8(1)(c), §8(1)(n), §8(1)(o) and §8(1)(p) provide for keeping of the register pursuant to the registration of the above-mentioned persons, prescription of the records to be kept, returns to be made and information to be provided by registered persons.

- *Regulation of cocoa works operated by the Board (§8(1)(f))*—Under this provision, the Board may regulate any cocoa works that it operates. If the Board owns and operates cocoa works (such as the fermentaries), it is reasonable that the Board should be able to regulate these works. As this provision limits the Board’s powers to regulating *its own* works and not the works of other undertakings, if any, it does not raise any competition concerns.
- *Prescription of quality grades (§8(k))*—Jamaican cocoa is of premium or “fine flavour” quality (see appendix A). Grading and the quality assurance are important elements of the production and sales process. Unreliable quality standards would damage the reputation and brand of Jamaican cocoa and consequently affect its exports. This is therefore a key function of the Board. It is not an infringement of the FCA.
- *Regulating the delivery points (§8(m))*—Similar to the analysis of §8(f), it is reasonable for the Board to regulate the delivery points of any cocoa being purchased by the Board. Here, regulation is taken to mean the operation and maintenance of the delivery point. There are no competition concerns as long as the Board is not empowered to regulate another undertaking’s delivery points, if any.

7.6 Blanket powers for the Board (§5(2))

The Board is given blanket powers by the §5(2) of the CIB Act, which states that:

“subject to the provisions of this Act, the Board shall have power, for the purpose of discharging any of its functions under this Act, to do anything and to enter into any transaction which, in the opinion of the Board, is necessary to ensure the proper discharge of its functions”.

Given the broad scope of the powers endowed upon the Board under this provision, however, it would not be possible to foresee the exact regulations or practices that may be carried out by the Board if it chose to exercise these powers. Nonetheless, *currently*, the activities of the Board are not anti-competitive (see sections 7.1 – 7.5 of this paper).

8. Summary

The assessment indicates that the CIB Act and the current activities of the Board are not in contravention of the FCA. This is largely because the CIB Act does not contain any genuine exclusivity provisions that give monopoly power to the Board and the Board is subject to competitive pressures on the world market in which it is not dominant.

Finally, we turn to a broader question of the effectiveness of commodity boards, including but not limited to the Cocoa Industry Board, in promoting the efficiency of the industry concerned. This question arises based on the observation that industries that have been under the umbrage of a commodity board have, in general, shown rather weak results. Cocoa, for example, has seen declining production and financial losses in the last decade.

There are various possible explanations for this decline, including poor macroeconomic conditions and the lack of growth prospects for agricultural commodities in general, competitive pressures from other countries where the cost of production, including labour, is significantly lower. The latter, however, still begs the question, why?

While there is likely to be more than one valid explanation for the downward trend in these sectors, one possibility should not be discounted. The organization of the sectors around commodity boards that possess a high degree of market power and lack a clear profit-incentive is a strong correlating factor in each of these cases. The role and importance of profits in driving efficiencies and productivity-increasing innovations, both technical and managerial, should not be underestimated.

Further, the emphasis on the interests of the growers may, in the long run, not be in the interests of the industry as a whole. Maximizing the price paid to growers, for example, may lead to high production costs and the loss of competitiveness in the export markets. Further, the protection of small growers may limit the consolidation in growing and the increases in the scale of production (moving from small to large farms) that is required to stay competitive in agriculture. All these could lead to a shrinkage of the sector, which eventually is detrimental to the growers themselves. The viability of the boards' activities may finally require some form of government subsidies, directly or indirectly. The cost to taxpayers could be high.

It may be that the situation cannot be reversed without injecting a clear profit-incentive into the sector. In other words, consideration should be given to the liberalizing and privatizing of these sectors with a focus on the commodity boards. While not all of the functions of the boards should be subject to liberalization, many would be amenable to that change. If carried out in a timely and carefully structured manner, it would be possible to jump-start these declining sectors. In view of this, a thoughtful and thorough analysis of the following issues is recommended:

- the role, structure and impact of commodity boards;

- the advantages of increasing competition where possible; this may require some degree of privatization. If anything is privatized, it should be done carefully, with reference to the privatization experiences in other countries;

If the analysis indicates that liberalization would be beneficial, much can be learnt on the process of liberalization from the experiences in other countries. If carried out in a way that promotes competition, the benefits in terms of increased efficiency and earnings, both to the sectors and to Jamaica, could be substantial.

Appendix A: Sections 17 and 20 of the FCA

A.1 Section 17 of the FCA

17.— (1) This sections applies to agreements which contain provisions that have as their purpose the substantial lessening of competition, or have or are likely to have the effect of substantially lessening competition in a market.

(2) Without prejudice to the generality of subsection (1) agreements referred to in that subsection include agreements which contain provisions that—

- (a) directly or indirectly fix purchase or selling prices or any other trading conditions;
- (b) limit or control production, markets, technical development or investment;
- (c) share markets or sources of supply;
- (d) affect tenders to be submitted in response to a request for bids;
- (e) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (f) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts,

being provisions which have or are likely to have the effect referred to in subsection (1).

(3) Subject to subsection (4), no person shall give effect to any provision of an agreement which has the purpose or effect referred to in subsection (1); and no such provision is enforceable.”

(4) Subsection (3) does not apply to any agreement or category of agreements the entry into which has been authorized under Part V or which the Commission is satisfied—

(a) contributes to—

- (i) the improvement of production or distribution of goods and services; or
- (ii) the promotion of technical or economic progress,

while allowing consumers a fair share of the resulting benefit;

(b) imposes on the enterprises concerned only such restrictions as are indispensable to the attainment of the objectives mentioned on paragraph (a); or

(c) does not afford such enterprises the possibility of eliminating competition in respect of a substantial part of the goods or services concerned.”

A.2 Section 20 of the FCA

20— (1) An enterprise abuses a dominant provision if it impedes the maintenance or development or effective competition in a market and in particular but without prejudice to the generality of the foregoing, if it—

- (a) restricts the entry of any person into that or any other market;
- (b) prevents or deters any person from engaging in competitive conduct in that or any other market;
- (c) eliminates or removes any person from that or any other market;
- (d) directly or indirectly imposes unfair purchase or selling prices or other uncompetitive practices;
- (e) limits production of goods or services to the prejudice of consumers;
- (f) makes the conclusion of agreements subject to acceptance by other parties of supplementary obligations which by their nature, or according to commercial usage, have no connection with the subject of such agreements.

(2) An enterprise shall not be treated as abusing a dominant position—

- (a) if it is shown that—
 - (i) its behavior was exclusively directed to...promoting technical or economic progress; and
 - (ii) consumers were allowed a fair share of the resulting benefit ;
- (b) by reason only that the enterprise enforces or seeks to enforce any right under or existing by virtue of any copyright, patent, registered design or trade mark.

Appendix B: The world cocoa market

The world cocoa market is 'run' by the Cocoa Association of London (CAL), which acts like a stock exchange for cocoa. It regulates the world market by setting the rules and regulations for trading, for example, standards, packaging requirements (now the jute bags have to be treated with vegetable oil), sales agreements and the rights of each party.

There is also the International Cocoa Association, which is essentially a club of cocoa sellers. Their function is to follow through on the rules and regulations set by the CAL.

Most countries sell cocoa through some form of a commodity board. Mr. Nelson, of the Cocoa Industry Board, could not think of a country where there are private sellers selling directly to the buyer without going through a Board. Variations do exist, however. Trinidad, for example, has what is known as 'estate cocoa', i.e., cocoa from each estate is different. In contrast, in Jamaica, all dry cocoa is identical and sold under one brand, regardless of which grower it comes from. Nonetheless, even the estate cocoa in Trinidad is exported through the Trinidadian board.

B.1 World cocoa production

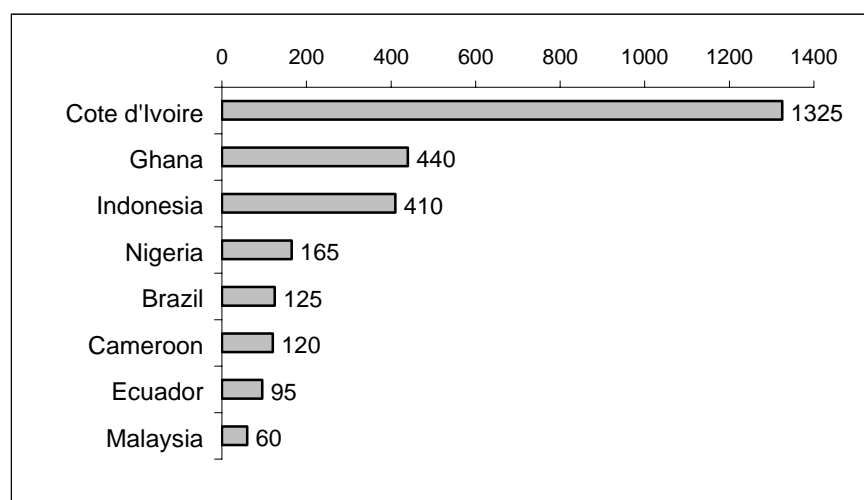
There are different qualities of cocoa in the world market, ranging from graded (premium) cocoa to bulk cocoa. Broadly speaking, there two categories of cocoa beans: "fine or flavour" (FF) cocoa, and "bulk" or "ordinary" cocoa. The share of FF cocoa in the total world production has fallen dramatically, from between 40% and 50% at the beginning of this century to just under 5% of total world production.

World production has generally risen over the past decade. Production in 1999/2000 stood at 3003.3 thousand tonnes. 5% of this would be FF cocoa, amounting to 150,000 tonnes.

The major producers of cocoa are, in order of the largest producers, Cote d'Ivoire, Ghana, Indonesia, Nigeria, Brazil, Cameroon, Ecuador, Malaysia, Papua New Guinea, Columbia, Mexico and the Dominican Republic. Combined, these countries produced an estimated 2889 thousand tonnes in 1999/2000, or 96% of total world production. Figure B1 shows the amount (in thousand tonnes) of cocoa produced by these countries.

Of these countries, Ecuador is the largest supplier of FF cocoa. It produces over half of the total world production of FF cocoa (approximately 60 to 70 thousand tonnes). In fact, The Latin American and Caribbean countries supply 80% of the world's FF coca, followed by Asia and Oceania (18%) and Africa (2%). Columbia, Indonesia, Venezuela and Papa New Guinea produce around 10 thousand tonnes each. Jamaica, Trinidad and Tobago, Costa Rico and Grenada are also important growers of FF cocoa in the Latin American and Caribbean region, each producing between 1 and 3 tonnes per annum.

Figure B1: Main world producers of cocoa



B.2 World cocoa consumption

The major processors of cocoa, based on 1997/1998 grinding levels, are shown in Table B1 below.

Table B1: Major world processors of cocoa

Country	Grinding levels of cocoa '000 metric tonnes
Netherlands	410
United States	410
Germany	250
Cote d'Ivoire	200
Brazil	180
United Kingdom	175
France	105

Europe and the United States are the major consumers of cocoa and cocoa by-products. The largest consuming market for FF cocoa is Western Europe (Belgium/Luxembourg, France, Germany, Italy, Switzerland and the United Kingdom). In other regions, the United States and Japan are also large consumers of this type of cocoa.

The demand for FF cocoa is directly related to the demand for premium quality chocolate from most major chocolate manufacturers, which require FF cocoa. The market for FF cocoa is generally regarded as a relatively small, highly specialized and separate market, with its own supply and demand characteristics, when compared to bulk cocoa. The

consumption of FF cocoa has declined over the recent decades, brought about by a general shift in consumer demand away from solid to filled products, containing other ingredients with stronger flavours, such as nuts, fruits and creams, which reduces the dependence on the aromatic flavour of FF cocoa. Another factor that may have reduced the demand for FF cocoa is that chocolate makers have taken advantage of advances in processing technology that enables them to extract the desired flavour characteristics from lower quality cocoa beans in manufacturing specialty products.

B.3 World cocoa prices

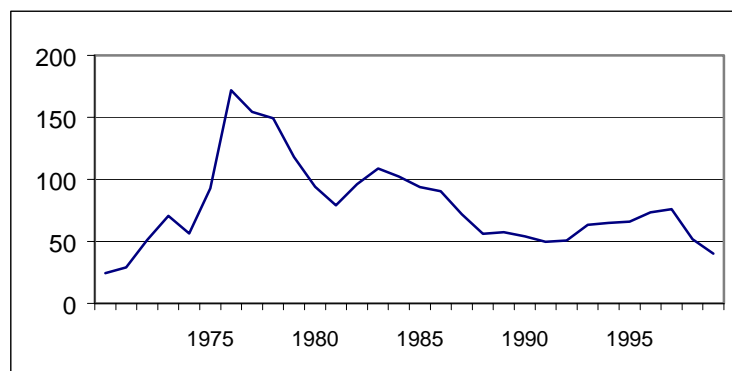
The cocoa trade consists of two markets, the actuals (or physical) and future (or terminal) markets. Contracts in the futures market are traded in tonnes. There are no specifications of the country of origin or of particular quality properties of the cocoa that would so be traded, therefore buyers receive the minimum quality necessary to pass the market's grading test. In physical market however, the buyer has more control over the specification of the material that he will receive, and consequently, the prices tend to be higher.

The difference in price compared to terminal market prices is, in the first instance, governed by the country of origin of the cocoa, since these tend to have different physical or chemical properties which determine premiums and discounts. Likewise, the price received for FF cocoa is determined by the supply-demand balance for that particular origin and type of cocoa, with quality and flavour requirements of the buyer being the primary consideration.

Also the prices in the London Cocoa Terminal Market is almost always higher than that of the New York Coffee, Sugar and Cocoa Exchange because the quality specifications for grading cocoa on the London market are more stringent than those of the New York terminal market are.

Figure B2 shows the average daily price between 1971 and 2000 of cocoa beans in US dollars. The daily prices are calculated using the average of the quotations of the nearest three active future trading months on the London Terminal and on the New York Terminal at the time of the London close.

Figure B2: Annual average prices of cocoa beans (US\$)



Appendix C: Profitability assessment of the Board

Table C1 shows the profit and losses made by the CIB between 1989/90 to 1998/99. Profits are calculated by taking the difference between the surplus at the beginning of each financial year and the surplus at the end of the financial year. As can be seen, the Board has made an average loss of approximately J\$2.8 million between 1989/90 – 1998/99.

Table C1: Profit and loss of the Cocoa Industry Board (1989/90 – 1998/99)¹

Year	Surplus/ (Deficit) at beginning of year	Surplus/(Deficit) at end of year	Profit/(Loss)
1989	(\$2,832,075.00)	\$482,728.00	\$3,314,803.00
1990	\$482,728.00	(\$3,668,742.00)	(\$4,151,470.00)
1991	(\$3,668,742.00)	(\$5,430,781.00)	(\$1,762,039.00)
1992	(\$5,430,781.00)	\$399,781.00	\$5,830,562.00
1993	\$399,781.00	(\$7,763,537.00)	(\$8,163,318.00)
1994	(\$7,763,537.00)	(\$3,243,745.00)	\$4,519,792.00
1995	\$22,447,564.00	\$37,088,421.00	\$14,640,857.00
1996	\$37,088,421.00	(\$8,813,690.00)	(\$45,902,111.00)
1997	(\$8,813,690.00)	(\$17,734,759.00)	(\$8,921,069.00)
1998	(\$17,734,759.00)	(\$5,702,859.00)	\$12,031,900.00
Average	--	--	(\$2,856,209.30)

Parentheses “()” indicate a negative value, i.e., deficits and losses.