

REPORT ON EXCHANGES
OF
FUTURES FOR PHYSICALS



DIVISION OF TRADING AND MARKETS

OCTOBER 1, 1987

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I. Introduction

A. Historical Background

Exchange of futures for physicals transactions ("EFPs") ^{1/} are an exception to the general prohibition contained in Section 4c(a) of the Commodity Exchange Act ("Act") against certain noncompetitive and prearranged transactions in commodity futures contracts. Even prior to passage of the Commodity Exchange Act in 1936, EFPs were provided for by exchange rules as an exception to the general requirement of pit execution also set forth in those rules. ^{2/} The volume of EFPs has increased significantly in recent years. The markets in which EFPs are transacted have expanded into precious metals, currencies, and financial instruments, and the structure and purpose of EFPs have become more varied. While EFPs in some markets are done by commercial firms to facilitate cash transactions, in other markets, most notably gold and foreign currencies, EFPs frequently are used to enter or exit the futures market after normal trading hours. Notably, the Act authorizes EFPs only to the extent that they are conducted in accordance with the rules of a contract market. The

^{1/} EFPs are variously referred to as "exchanges for physicals," "against actuals" ("AAs"), "versus cash," or "ex-pit trades," depending on the contract market on which they are executed. However, for consistency and convenience the transaction will be referred to as an EFP throughout this Report.

^{2/} G. Wright Hoffman, Hedging by Dealing in Grain Futures 55, note 2 (1925) [hereinafter Hedging].

exchanges' rules, however, generally provide little guidance and place few limits on the permissible scope of EFPs. For these reasons, the Division of Trading and Markets ("Division") undertook this study of EFP practices.

An EFP is a transaction in which one party buys the physical commodity and simultaneously sells (or gives up a long) futures contract while the other party sells the physical commodity and simultaneously buys (or receives a long) futures contract. The price of the exchanged futures position, the quantity of the futures and cash commodity to be exchanged, the price of the cash commodity, and other terms are privately negotiated by the parties rather than being competitively executed in the pit.

EFPs have been part of futures trading since before 1920. In a report on the grain trade issued in 1920, the Federal Trade Commission described EFPs as an exception to the Chicago Board of Trade's ("CBT") general rule requiring execution in the pit.^{3/} G. Wright Hoffman, in his book Hedging by Dealing in Grain Futures, describes an EFP, which he refers to as a "give-up," as a means by which grain exporters and importers avoid placing separate futures orders and effect an agreed-upon cash transaction.^{4/} In 1921, a representative of the New York Produce

^{3/} Report of the Federal Trade Commission on the Grain Trade, Vol. V, at 146-48 (1920) [hereinafter "FTC Report"].

^{4/} Hedging, at 53-57.

Exchange explained that exporters would receive foreign orders for grain not always available for the time of delivery requested, and, hence, it would be necessary for the exporter to cover the cash grain sale by a purchase of futures. In turn, the futures would be exchanged for the cash grain at or near the time of delivery. ^{5/}

EFPs traditionally served an important function for commercial market users by providing a means of pricing a cash transaction or of making or taking delivery on their futures commitments outside the normal exchange delivery system, allowing them to offset exchange positions through a privately negotiated transaction. Indeed, particularly in the grains, EFPs have long been an integral part of the hedging and pricing strategies employed by merchants and processors. The flexibility provided by EFPs can be particularly important to traders with unique or unanticipated needs regarding the underlying commodity. More recently, EFPs have been used by non-commercial traders in some markets, such as the precious metals, in transactions such as arbitrage, and in trading to enter or exit the futures market outside of regular trading hours. The structure of these EFPs also appears to vary from that of EFPs as historically constituted.

5/ Future Trading: Hearings Before the House Committee on Agriculture, 66th Cong., 3d Sess. 468 (1921) (statement of Mr. L.W. Forbell).

The Division, in its report on Volume Investors Corporation, for instance, noted that "EFPs have become an increasingly common vehicle for traders to cover market positions against overnight price changes and/or purchase or sell positions on foreign markets while domestic exchanges are closed." ^{6/} In Volume, the Division also expressed the opinion that the EFP "exemption was not designed to create an avenue for traders to use EFP transactions to accomplish what they could not otherwise legitimately do, that is, wash trades, accommodation trades, fictitious sales, or illegal off-exchange transactions." ^{7/}

The Division stated in Volume that it intended to conduct a study of EFP practices. Moreover, because of the increased volume and expansion of the scope of EFP practices, the Division

6/ Report of the Division of Trading and Markets: Volume Investors Corporation 59, note 54 (July 1985) [hereinafter Volume]. The Division also noted that EFPs played a significant role in Volume's business as a bullion merchant as well as an FCM.

7/ Id. In its study of the Silver Market of 1979/1980, Actions of the Chicago Board of Trade and the Commodity Exchange, Inc., the Division described several EFP transactions which played a key role in the developing silver market situation in 1979/1980. For instance, a number of EFPs transacted during that period took place between Hunt-related accounts and various silver traders, and some involved very large quantities of silver. Another series of EFP transactions resulted in the transfer of some of the Hunts' long silver contracts from the CBT to the Commodity Exchange, Inc. ("Comex") and the substantial liquidation of another trader's positions on both exchanges. The cash portion of each of these transactions was a single silver warehouse receipt which changed hands among the parties a number of times before ending up back with its original owner, the other trader.

believes it appropriate to examine those practices and their underlying reasons; the role of EFPs in the futures markets, and the legal and policy considerations applicable to EFP transactions.

B. Methodology

The Division began the present inquiry into EFP practices in the fall of 1985 with interviews of the staff at virtually all of the exchanges, ^{8/} an analysis of all exchange rules relating to EFPs, and review of memoranda and trade interviews that previously had been conducted by the Division of Economic Analysis. Based on this initial examination of EFPs in various markets and a statistical review (described below), the Division determined to focus on EFPs in the following sample markets: stock index futures (CBT, CME); interest rate futures (CBT, CME); currencies (CME); gold (Comex); grains (CBT); crude oil (NYMEX); sugar (CSC); and cocoa (CSC). ^{9/} The Division selected these

^{8/} The Division's regional office staffs conducted interviews of exchange staff at the CBT, Chicago Mercantile Exchange ("CME"), Coffee, Sugar & Cocoa Exchange, Inc. ("CSC"), Comex, Kansas City Board of Trade ("KCBT"), MidAmerica Commodity Exchange ("MidAm"), Minneapolis Grain Exchange ("MGE"), New York Cotton Exchange ("NYCE"), New York Futures Exchange ("NYFE"), and New York Mercantile Exchange ("NYMEX"). Thus, the Division met with staff at all exchanges except the Amex Commodities Corporation ("ACC"), Chicago Rice and Cotton Exchange ("CRCE"), Pacific Futures Exchange, and Philadelphia Board of Trade, Inc. ("PBT"). There were only 17 EFPs in CRCE's rough rice contract during 1986, and there were no EFPs at the ACC or PBT in 1986.

^{9/} The Division also attempted to gather information on EFPs in
(Footnote Continued)

markets in order to cover a broad range of EFP practices and a large percentage of current EFP activity. In November 1986, the Division interviewed staff at these five exchanges for a second time regarding EFP practices in their markets. ^{10/} In addition to exchange staff, the Division interviewed 35 firms, including futures commission merchants ("FCMs") and dealers in various cash commodities, and obtained written material regarding internal procedures and sample documents from several of those sources. These documents included cash-side confirmations, contracts, orders, telexes, purchase-and-sale statements, and forms required by one or more of the exchanges. These interviews provided the primary basis for the description of EFP practices and exchange rules and interpretations contained in this Report.

With the assistance of Economic Analysis, the Division compiled a computerized database of monthly EFPs, deliveries, and volume for each futures contract for the period 1980 to 1986 from the reports submitted by exchanges under Part 16 of the Commission's regulations, EFP information submitted by FCMs, clearing members, and foreign brokers under Regulation 17.00(a), and information provided by the exchanges at the Division's request

(Footnote Continued)

cattle, and initially lumber, but there was insufficient information available upon which to base any conclusions.

^{10/} Some of these interviews also involved exchange governing members.

during the course of this study. ^{11/} These data were used to calculate both EFPs and deliveries as percentages of volume in each market. This information was also used to select markets for examination and to analyze the growth of and trends in EFP usage. After its initial review, the Division relied primarily on Part 16 data for the period 1983 to 1986 for the selected markets in order to limit the scope of analysis of the voluminous data.

The Division conducted an exhaustive search of available legislative materials in an effort to determine the intent of Congress in enacting the EFP exception under Section 4c(a) of the Act and the appropriate interpretation of that provision. ^{12/} In particular, the 1914 Cotton Futures Act, 1922 Grain Futures Act, and 1936 Commodity Exchange Act, and the entire legislative history of each of those Acts, as compiled by the Commission's library, were reviewed. In addition, selected portions of the legislative histories of the Futures Trading Act of 1921, 1968 amendments to the Act, the Commodity Futures Trading Act of 1974, and the Futures Trading Acts of 1978, 1982, and 1986 were

^{11/} These data were requested to confirm the statistics provided under Part 16 and to update the database as necessary. Among other things, the Division requested data on each stock index EFP occurring during 1986 and the number of contracts involved to confirm the number of contracts involved in EFPs and the number of separate EFP transactions.

^{12/} A bibliography of all legislative materials researched can be found in Appendix 1.

examined, focusing on amendments to Section 4c. ^{13/} Finally, the Division has reviewed Federal Register notices regarding Commission Regulations 1.35 (records of transactions), 1.38 (execution of transactions), 1.46 (offsetting positions), and 33.2 (applicability of the Act to exchange-traded option transactions), and Parts 15-18 (large trader reporting) and 21 (special calls) of the Commission's regulations, as well as the Administrative Determinations and Solicitor's Opinions of the Commodity Exchange Authority ("CEA"), ^{14/} Opinions of the General

^{13/} These materials included a section-by-section analysis of the 1974 Act prepared by the Senate Committee on Agriculture and Forestry, and for the 1978 Act, materials prepared by the Senate Committee of Agriculture, Nutrition, and Forestry, which included, among other things, the Conference Committee report, a section-by-section analysis, a statement by the Chairman of the House Committee on Agriculture, a description of changes in existing law, committee consideration (including summary of the hearing), and the need for legislation. For the 1982 Act, the materials reviewed included the Explanatory Statement of the Conference Committee on Agriculture, and the Report of the Senate Committee on Agriculture, Nutrition, and Forestry.

^{14/} The Commodity Exchange Authority was the office within the Department of Agriculture charged with the day-to-day administration of the Act and was composed of the Act Administrator and his staff. Prior to 1945, this office was known as the Commodity Exchange Administration (these offices replaced the Grain Futures Administration). For the purposes of this Report, the designation "CEA" will be used to refer to actions of either of these offices. This designation is not to be confused with the Commodity Exchange Commission, composed of the Secretary of Agriculture, Secretary of Commerce, and Attorney General, which was given authority to set trading limits and to take certain enforcement actions under the Act.

Counsel of the Department of Agriculture, and Agricultural Decisions under the Act. ^{15/}

The Division reviewed numerous periodicals, treatises on commodity futures trading, other related books and articles, law review articles, Commission and other government studies, and materials prepared for commodity industry seminars. ^{16/} Relevant case law (including decisions of the federal courts and of the Commission) was also examined, as were exchange disciplinary actions involving EFPs and any applications for Commission review of those actions under Section 8c of the Act. The Division also reviewed files developed in connection with its oversight of exchange rule enforcement programs.

Finally, as noted, the Act places the responsibility on the exchanges for establishing rules to govern EFPs. In this regard, to the extent exchange guidelines are available, they frequently appear in exchange rules, rule interpretations, notices to members, or through informal advice of staff. The Division reviewed all existing exchange rules, all amendments thereto filed with the Commission since 1975, as well as all documents made available by exchange staffs, whether in the form

^{15/} These decisions were searched for the period 1942-1975 (Volumes 1-34), beginning when the Agricultural Decisions were first published and ending with the creation of the Commission. No relevant cases were located.

^{16/} A bibliography of materials reviewed can be found in Appendix 2.

of formal interpretive notices to members or internal exchange memoranda and committee minutes. ^{17/}

C. Statistical Analysis

As described above, statistics were obtained from three sources, but the majority of the statistics cited in the Report were obtained from the Part 16 submissions. The Division's analysis focused on specific representative futures contracts from January 1983 through December 1986 period.

The simplest statistic presented is the total EFP volume in each futures contract. These data were compiled by monthly and yearly totals. The volume of EFPs as a percentage of total volume was also calculated for each month and year. This statistic reveals the relative importance of EFP volume in each contract, by placing the effect of absolute volume increases or decreases in proper perspective. Finally, the number of contracts involved in deliveries as a percentage of volume was also computed so that deliveries might be compared to EFPs as a percentage of volume. In the latter regard, EFP volume in each of the representative markets (except the stock indices, Treasury bills ("T-bills"), and Eurodollars), as well as in the 21 markets discussed below, exceeded the volume of deliveries, possibly because of the advantages of EFPs discussed throughout this

^{17/} Copies of all exchange EFP rules and related rules as well as formal interpretive notices can be found in Appendix 3, organized by exchange in alphabetical order.

Report. However, it is well known that futures contracts rarely result in delivery, and it should not be assumed that the parties using EFPs would make or take delivery under futures contracts if EFPs were not available. ^{18/}

For most futures contracts, EFP volume increased between 1983 and 1986. The total EFP volume in 21 contracts for which both 1983 and 1986 figures were tabulated grew from 3,736,942 to 4,774,626 contracts over that period. ^{19/} Thirteen of these contracts had an increased number of EFPs in 1986 over 1983. Of these, nine also had a substantial increase in EFPs as a percentage of volume. Eight contracts had decreased EFP volume (seven grain or grain products and Comex silver). However, notwithstanding a decrease in absolute numbers, EFPs comprised an increased percentage of volume in four of these contracts in 1986 as compared to 1983. For seven of the 21 contracts, EFPs as a percentage of volume remained fairly constant over the four-year

^{18/} Data showing these figures for the selected markets 1983-1986, and 1986 figures for each contract can be found in Appendix 4. In addition, graphs of trends in some of the selected markets can be found in that Appendix.

^{19/} These contracts were corn, wheat (CBT, MGE, KCBT), soybeans, soybean oil, soybean meal, silver (Comex), Treasury bonds ("T-bonds"), Japanese yen ("yen"), British pounds ("pound"), Deutsche marks ("D-mark" or "DM"), Swiss francs, coffee "C", sugar #11, cocoa, crude oil, heating oil, gold (Comex), live cattle, and Treasury notes ("T-notes"). A table showing percentage changes in volume and EFPs in these markets between 1983 and 1986 can be found in Appendix 5.

period (within .6 percent). EFPs as a percentage of volume declined significantly in the CBT and KCBT wheat contracts.

The increases in some contracts were more significant than others. For instance, EFP volume in T-bonds increased almost fivefold from 1983 to 1986, but as a percentage of volume remained less than one percent. Total EFP volume in the four major currency contracts (yen, D-mark, Swiss franc, pound) increased almost tenfold, while as a percentage of volume increased approximately sixfold from 1983 to 1986. In contrast, gold EFP volume increased by only approximately one-fifth, and as a percentage of volume increased less than three percent. In sugar #11, EFPs increased only slightly in number over the four-year period and remained relatively constant as a percentage of volume.

In the grains, the changes in EFP volume from 1983 to 1986 generally paralleled changes in contract volume. As noted above, the absolute number of EFPs in each of the grains and grain-related contracts declined. In contrast, the number of EFPs in crude oil increased five-fold from 1984 to 1986. Total crude oil futures trading volume quadrupled over the same time period.

EFP volume changes corresponded to futures volume changes in all but two of the 21 markets for which figures were tabulated. Of the 13 markets in which EFP volume and contract volume both increased, however, EFP volume accelerated at a faster pace than total volume in 10 markets. Further, EFP volume

declined less rapidly than overall volume in five markets, and declined more rapidly in three. In the following sections of this Report, specific statistics for individual markets and reasons behind the changes in EFP usage will be discussed.

D. Description of EFPs

An EFP involves simultaneous transactions in a cash commodity market and a futures market. The futures market transaction is a noncompetitive transfer of a futures position(s) between the parties to the EFP. As stated above, in an EFP, one party buys the physical commodity and simultaneously sells (or gives up a long) futures contract while the other party sells the physical commodity and simultaneously buys (or receives a long) futures contract. Subject to any applicable exchange rules, the parties to an EFP privately negotiate the price of the exchanged futures position, the quantity of futures and of the cash commodity to be exchanged, the price of the cash commodity, and other contractual terms, such as grade or quality and delivery terms. The physical transaction involved in an EFP reflects responsibilities and obligations for each side arising from a privately negotiated cash contract which are not altered merely as a result of being part of an EFP.

Depending on the existing futures positions of the parties at the outset of the transaction, an EFP may liquidate futures positions of both traders (reducing open interest), transfer a futures position from one trader to another (leaving open interest unchanged), or create futures positions for both traders

(increasing open interest). Once the price and quantity of the futures have been set by the parties and an EFP has been accepted for clearing, the futures market margin and delivery obligations of the parties arising from an EFP are not distinguishable from those for competitively executed futures contracts.

The essential characteristics of an EFP may perhaps best be understood through an example:

Grain elevator S contracts to sell wheat to an exporter, B, at a basis of 15 cents per bushel over the March futures price. The contract gives B the right to determine when to fix the price level of the cash trade. S is short March wheat futures contracts to hedge its inventory, and B is long futures to cover a fixed-price export sale. On February 15, B selects the desired March futures price. B sells futures to S, and S buys futures from B, thereby liquidating their existing futures positions. S will deliver wheat to B and will receive payment of 15 cents/bushel over the futures price, as agreed.

In this example, both B and S have liquidated their existing futures positions at an agreed-upon price, thus preserving the agreed-upon basis (i.e., the price differential between the cash commodity and the futures contract) of 15 cents per bushel.

Without the ability to specify the price through the use of an EFP, the parties to the trade would be subject to the risk that they each would not be able to obtain the desired price when they sought to lift their respective hedges, thereby affecting the basis of the trade to each party.

In an EFP such as this, in which the sale of the cash commodity is priced at a basis, the specific price at which the future is exchanged will not affect the net results of the trade

since the party realizing less on the futures portion of the transaction will receive more for the cash wheat and vice versa. This point may be illustrated by computing the profits and losses on the cash and futures for each party to the EFP based on two different futures prices, (e.g., \$3.50 and \$3.60). Assume that the elevator, S, has an inventory of 50,000 bushels of wheat currently valued at \$3.40/bushel and hedges it through a sale of 10 March futures contracts at \$3.45. Assume B is long 10 March futures purchased at \$3.43 to hedge an export sale at \$3.60. The profits and losses for each party would be as follows:

Futures at \$3.50

S	Wheat	\$3.40	Sell wheat	\$3.65	+ .25/bushel
	Sell futures	\$3.45	Buy futures	\$3.50	- .05/bushel
			net profit		+ .20/bushel
B	Buy futures	\$3.43	Sell futures	\$3.50	+ .07/bushel
	Sell wheat	\$3.60	Buy wheat	\$3.65	- .05/bushel
			net profit		+ .02/bushel

Futures at \$3.60

S	Wheat	\$3.40	Sell wheat	\$3.75	+ .35/bushel
	Sell futures	\$3.45	Buy futures	\$3.60	- .15/bushel
			net profit		+ .20/bushel
B	Buy futures	\$3.43	Sell futures	\$3.60	+ .17/bushel
	Sell wheat	\$3.60	Buy wheat	\$3.75	- .15/bushel
			net profit		+ .02/bushel

The EFP has enabled the parties to complete their cash transaction and liquidate their futures hedges in one transaction while preserving for both parties the agreed-upon basis relationship (15 cents) between the cash and futures prices.

An EFP in which a futures position is transferred from one trader to another may be illustrated as follows:

A trader, G, who has no existing cash or futures position, wishes to acquire 100 ounces of gold bullion and an accompanying short futures hedge. G contacts a bullion dealer, X, which has an inventory of 1000 ounces of gold bullion hedged with short futures positions, and agrees to purchase 100 ounces at \$350/oz. The parties arrange to effect this transaction via an EFP. X transfers one short futures contract to G at \$353/oz., offsetting one contract of its existing short futures position, and G, as the counterparty, receives one futures contract from X at \$353/oz., thereby acquiring a short futures position of one contract. X will deliver gold to G and will receive payment of \$350/oz., as agreed.

As a result of this EFP open interest will remain unchanged, since X's futures position has been transferred to G. The foregoing transaction can be illustrated in chart form as follows:

	<u>Trader G</u>	<u>Bullion dealer X</u>
Prior to EFP:		Long gold bullion (1000 oz.)
		Short futures (10 contracts)
EFP:	Buys 100 oz. gold, pays \$3,500	Sells 100 oz. gold, receives \$3500
	Sells 1 futures contract at \$353/oz.	Buys 1 futures contract at \$353/oz.
After EFP:	Long 100 oz. gold bullion	Long gold bullion (900 oz.)
	Short 1 futures contract	Short futures (9 contracts)

Finally an EFP may result in new futures positions for both parties.

A pension fund, P, with no existing cash or futures position, desires to buy stocks to replicate an index and sell the corresponding futures to establish an arbitrage position. P contacts its FCM to arrange the two trades. The FCM, which has no existing cash or futures position, agrees to establish the cash and futures positions for P via an EFP at a given differential. The FCM will purchase the stocks in the index and then sell them to P in the EFP. At the same time, P will sell futures to the FCM. After the EFP, P will have a long cash position and be short futures; the FCM will have a long futures position.

As a result of this EFP, new futures positions will have been created for both P and the FCM, thereby increasing open interest.

E. Reasons for the Use of EFPs

There are a variety of reasons for the use of EFPs, the relative importance of which varies depending on the market involved. As noted above, EFPs have long been an integral part of the hedging and pricing practices of commercial entities. Of course, the attractiveness of EFPs will also vary depending on the particular circumstances in which the parties find themselves. These circumstances may include the relative costs of an EFP compared to cash market or futures transactions, which will obviously affect the usefulness of an EFP in any particular situation. For instance, delivery on a futures contract may involve costs of inspection or grading which could be avoided through an EFP, or the bid/ask spread may be more favorable for an EFP than that available in the cash market or on a particular exchange.

As illustrated by the wheat example above, one of the primary advantages of an EFP is that it preserves the basis relationship of a cash commodity trade. In the absence of an EFP, the basis might be altered by a change in the futures price when the trades are executed in the pit or by market forces moving the price during the time required to execute separate cash and futures transactions. Another major reason for the use of EFPs is that they allow the parties to deviate from the delivery specifications of the futures contract and eliminate all uncertainties for the buyer and seller with respect to such delivery terms as grade, quality, location, and delivery date. This flexibility permits the buyer to obtain a specific grade or quality of product which may be essential to the intended use; the seller may avoid transportation costs which might be incurred if he had to deliver the goods against a futures contract at a designated location other than where desired. Further, the seller may be able to get a better price for the specific commodity he has than he would receive delivering it against the futures contract. EFPs also permit the parties to choose the opposite party (just as they may in the cash market) and thereby reduce credit risk or the risk of nonperformance by the opposite party with respect to deliveries which generally are not guaranteed by exchange clearing organizations. ^{20/}

^{20/} Most contract market clearing organizations do not guarantee
(Footnote Continued)

In addition, EFPs have become an increasingly common means to limit risk as a result of, or to participate in, price changes when domestic futures exchanges are closed. Moreover, EFPs offer opportunities to lock in favorable interest rates where, for instance, the spread between the spot cash price and a deferred future is wider than the prevailing interest rate for the same period, thereby facilitating arbitrage transactions. The use of EFPs for arbitrage is particularly important in the currency, gold, and stock index markets.

Finally, EFPs have some uses which are unrelated to the commercial needs or profit opportunities of the participants. For instance, EFPs have been employed to allow traders to avoid additional margin obligations by liquidating losing positions. In such cases, a party could enter into an EFP to eliminate further calls for margin on a hedged position. In addition, an exchange might encourage EFPs to permit delivery of different qualities or grades or at different locations than would be

(Footnote Continued)

actual delivery of the cash commodity in fulfillment of the parties' obligations on a futures contract but only the payment/collection of futures profits or losses to the clearing members involved. A clearing member firm is responsible for the financial and delivery obligations of its customers. See, e.g., Board of Trade Clearing Corporation Bylaws 705 and 709(e); Comex Clearing Association Bylaw §8.1(b)(iii); CME Rule 803; NYMEX Rule 9.08; CSC Clearing Corporation Rules 301(c), 702(c), 703, 704. This practice is not universal, however, and some clearing organizations do guarantee delivery, often by making and taking delivery directly from performing clearing members for their net positions. Intermarket Clearing Corporation Rules 1206(c), 1209, and 1210.

deliverable under the futures contract in order to alleviate tight market situations going into the delivery period.

In summary, EFPs serve a variety of commercial needs and can contribute to the efficiency of the futures markets. EFPs have accounted for an increasing percentage of volume in a number of markets in recent years and are employed in an expanding array of trading strategies. However, this increased use of EFPs has given rise to certain situations which raise questions concerning the intended scope of the EFP exception. This Report will explore the legislative and regulatory framework for EFPs, describe current EFP practices in the selected markets, explain exchange rules and interpretations governing EFPs, and suggest possible criteria to be examined in evaluating EFPs.

II. Legal and Administrative Background

A. Section 4c(a) of the Commodity Exchange Act

Section 4c(a) of the Act prohibits wash sales, cross trades, accommodation trades, fictitious sales, and transactions which are used to cause a price to be reported which is not a true and bona fide price, but provides an exception for EFPs:

Nothing in this section shall be construed to prevent the exchange of futures in connection with cash commodity transactions or of futures for cash commodities, or of transfer trades or office trades if made in accordance with board of trade rules applying to such transactions and such rules shall have been approved by the Commission.

The provisions relating to EFPs were first adopted (in somewhat different form) in 1936. Language paralleling that presently contained in Section 4c(a) first appeared in H.R. 12287, introduced on May 24, 1932. ^{21/} The pertinent language prohibited any transaction in futures:

[i]f such transaction is commonly known to the trade as a 'wash sale,' 'cross trade,'

^{21/} That bill did not include an exemption for office trades or transfer trades. An earlier bill, H.R. 7608, 72d Cong., 1st Sess. (1932), prohibited accommodation trading, wash sales, cross trades, office trades, and fictitious sales but contained no exemption for EFPs. Other bills introduced prior to the enactment of the Commodity Exchange Act in 1936 were aimed at prohibiting short sales, (H.R. 4545, 72d Cong., 1st Sess. (1931) and H.R. 7235, 72d Cong., 1st Sess. (1932)), prohibiting futures trading in grain or cotton altogether (H.R. 7007, 72d Cong., 1st Sess. (1932) and H.R. 5883, 72d Cong., 1st Sess. (1931)), or amending the Cotton Futures Act (H.R. 4661, 72d Cong., 1st Sess. (1931), H.R. 2795, 74th Cong., 1st Sess. (1935), and H.R. 5367, 74th Cong., 1st Sess. (1935)). These bills also contained no reference to EFPs.

'accommodation trade,' 'office trade,' or 'fictitious sale,' but this paragraph shall not be construed to prevent the exchange of cash commodities for futures in accordance with board of trade rules applying to such exchange of cash commodities for futures.

H.R. 12287, 72d Cong., 1st Sess. (1932). The report of the House Committee on Agriculture accompanying this bill indicates that the exception for EFPs was intended to permit the continuation of what was described as an accepted commercial practice:

Transactions involving the exchange of cash commodities for futures in accordance with exchange rules applying to such exchanges are exempted, even though they take the form of office trades, it being understood that the exchange of cash commodities for futures is a common and necessary practice.

Commodity Short Selling, H.R. Rep. No. 1551, 72d Cong., 1st Sess. 3 (1932).

Beyond this brief statement as to the need for an EFP exception, the hearings on commodity short selling held in 1932 contain only isolated references to EFP transactions and Section 4c. In hearings before the House Committee on Agriculture, the Vice President of the NYCE referred to a situation in which a buyer of cotton who was hedged in the futures market would buy the actual grade and staple of cotton desired from a spot merchant and turn over his futures contracts to the merchant as a basis on which the price is fixed. ^{22/} Later in the same

^{22/} Commodity Short Selling: Hearings Before the House Committee on Agriculture, 72d Cong., 1st Sess. 39 (1932). (statement of William S. Dowdell).

hearings, a grain company representative, who was also a member of the KCBT, stated that the provision in Section 4c was consistent with the rules on the exchanges. ^{23/}

A Senate bill introduced in 1934 also contained an exception for EFPs. The language of the EFP exception differed somewhat from that which had been contained in the earlier House bill, as indicated below:

Nothing contained in this Act shall be construed to prevent the exchange of futures in connection with cash commodity transactions or of futures for cash commodities, or of 'transfer trades' or 'office trades' if made in accordance with board of trade rules applying to such transactions and such rules shall not have been disapproved by the Secretary of Agriculture.

S. 3180, 73d Cong., 2d Sess. (1934). ^{24/} This version expanded the exception from the proscriptions of Section 4c(a) to transfer trades and office trades and required that the rules governing all three types of transactions not be disapproved by the Secretary of Agriculture ("Secretary").

There were no further modifications to what was to become Section 4c(a) until H.R. 6772 (which was to become the final version of the Act) was introduced in the House of Representatives on March 15, 1935. At that time the exception took this form:

^{23/} Id. at 329 (Statement of George H. Davis).

^{24/} The changes in the language from H.R. 12287 are underlined. Deletions in subsequent versions will be shown in brackets.

Nothing [contained] in this section shall be construed to prevent the exchange of futures in connection with cash commodity transactions or of futures for cash commodities, or of transfer trades or office trades if made in accordance with board of trade rules applying to such transactions and such rules shall not have been disapproved by the Secretary of Agriculture. Nothing in this section or section 4b shall be construed to impair any State law applicable to any transaction enumerated or described in such sections.

H.R. 6772, 74th Cong., 1st Sess. (1935). The hearings before the Senate Committee on Agriculture and Forestry on this bill contain one passing reference to an EFP by a witness. The President of the Kansas Farmers' Union, in testifying regarding hedge practices, referred to a situation in which a miller would "sell flour for future delivery . . . go into the market and buy the future wheat to cover the sale of flour, and afterward exchange this purchase of future wheat for cash wheat whenever he buys the cash." 25/

None of the amendments to Section 4c(a) since 1936 provides any further guidance on the scope of permissible EFPs. In 1974, the Commission was substituted for the Secretary, and, consistent with the Commission's exclusive jurisdiction over futures trading, the state law preservation

25/ To Amend the Grain Futures Act, Hearings on H.R. 6772 Before the Senate Committee on Agriculture and Forestry, 74th Cong., 2d Sess. 200 (1936) (statement of John Vesecky, President, Kansas Farmers Union).

clause was deleted. ^{26/} In 1978, Section 4c(a) was amended to require that board of trade rules permitting EFPs be approved by the Commission (to conform Section 4c with Section 5a(12) of the Act which generally requires Commission approval of exchange rules).

Thus, the legislative history of Section 4c indicates that Congress intended to preserve an established commercial practice in enacting the EFP exception, but neither the legislative history nor the evolving language of Section 4c provides more than minimal guidance as to the intended scope of that exception. As discussed in detail in subsequent sections of this Report, the use of EFPs has evolved to include practices not contemplated at

^{26/} The Commission's jurisdiction over futures trading is set forth in Section 2(a)(1)(A) of the Act. In deleting the state preservation clause from Section 4c, the Joint Conference Committee emphasized that the Act "would preempt the field insofar as futures regulation is concerned," and further that the conferees did "not contemplate that there [would] be a need for any supplementary regulation by the States." H.R. Rep. No. 93-1383, 93d Cong., 2d Sess. 35-36 (1974). However, state law with respect to the private obligations of the parties under their cash market contract is preserved by the "savings clause" of Section 2a(1) which states that "[n]othing in this section shall supersede or limit the jurisdiction conferred on courts of the United States or any State." The Chairman of the House Committee on the Judiciary testified that without such a savings clause the grant of exclusive jurisdiction to the Commission would deprive the state courts of jurisdiction to enforce commodity futures contracts which were "enforceable in State courts under recognized commercial law and contract principles." Hearings on S. 2485, S. 2578, S.2837, and H.R. 13113 Before the Senate Comm. on Agriculture and Forestry, 93d Cong., 2d Sess. 257-62 (1974); see Johnson, The Commodity Futures Trading Commission Act: Preemption as Public Policy, 29 Vand. L Rev. 1 (1976).

the time Section 4c originally was enacted. The Division believes that an interpretation of Section 4c which accommodates some of these practices, many of which arise out of trading practices in the various cash markets and which accomplish a variety of commercial purposes, is not inappropriate. However, the Division also believes that the historical context in which the EFP exception first was enacted and the statutory language of Section 4c(a) itself necessarily imply certain limits on the permissible scope of EFPs as an exception to the general requirement of competitive execution.

B. Commission Regulation 1.38

Commission Regulation 1.38 requires that futures and options transactions "be executed openly and competitively" but further provides that:

 this requirement shall not apply to transactions which are executed noncompetitively in accordance with written rules of the contract market which have been submitted to and approved by the Commission, specifically providing for the noncompetitive execution of such transactions.

17 C.F.R. §1.38(a). This exception applies to EFPs, transfer trades, and office trades. Any such trades which are not executed in accordance with exchange rules, or are otherwise not bona fide EFPs as described in this Report, are noncompetitive trades in violation of this Regulation. ^{27/}

^{27/} Congress noted in its report on the Commodity Exchange Act
(Footnote Continued)

Regulation 1.38 originally was adopted as Section 38 of the regulations promulgated by the Secretary under the Act, effective August 2, 1937. At that time, the Regulation required that members identify EFPs by appropriate symbol and further provided that:

No transaction or trade shall be considered to be a transfer trade or office trade or an exchange of futures for cash commodities or an exchange of futures in connection with cash commodities unless made in accordance with the written rules of a board of trade applying to such trades and transactions and such rules have not been disapproved by the Secretary of Agriculture.

2 Fed. Reg. 1223, 1227 (July 16, 1937).

In 1953, what was now designated as Regulation 1.38 was amended to require the competitive execution of all trades with an exception for those trades executed in accordance with exchange rules providing for noncompetitive execution. The amended language read in pertinent part as follows:

All purchases and sales of any commodity for future delivery . . . shall be executed openly and competitively as to price . . . Provided, however, That this requirement shall not apply to such transactions as are executed in accordance with written rules of the contract market. . . .

(Footnote Continued)

in 1974 that both the Act and exchange rules require that futures transactions be executed openly and competitively and cited the provisions of Regulation 1.38. The report further stated that "certain carefully prescribed exceptions to competitive trading are allowed, but they do not nullify the general requirement of open and competitive trading." S. Rep. No. 1131, 93d Cong., 2d Sess. 16 (1974).

18 Fed. Reg. 176 (January 9, 1953). The original requirement of Section 38 that all such trades be marked by appropriate symbol or designation was retained. The amended language, which was promulgated pursuant to the Secretary's general rulemaking authority under Section 8a(5) of the Act, was intended to tighten enforcement by writing into the regulations a "general requirement that all purchases and sales be competitively executed 'by open outcry'. . . with only such exceptions permitted as are specifically provided for in written rules of the exchange. . . ." It was also reported that the rules adopted by the exchanges in response to the regulatory amendment required members to make full reports with respect to noncompetitive transactions and specified the types of related records which were to be maintained. ^{28/}

In 1966, the Regulation was clarified by the following changes:

All purchases and sales of any commodity for future delivery . . . shall be executed openly and competitively [as to price] . . . provided, however, that this requirement shall not apply to such transactions as are executed noncompetitively in accordance with written rules. . . .

31 Fed. Reg. 5054 (March 29, 1966). The expressed purpose of the amendments was to clarify that the Regulation did permit certain

^{28/} Report of the Administrator of the Commodity Exchange Authority, Annual Reports of the Department of Agriculture, 1953, at 6.

noncompetitive transactions. The 1966 amendment, however, "[did] not impose any additional requirements or change the present requirements under the regulation." Id.

In 1976, the Regulation was amended further to reflect the transfer of authority to the Commission from the Secretary and to conform with the requirement of Section 5a(12) of the Act that rules of a contract market be approved by the Commission. 41 Fed. Reg. 3192 (January 21, 1976). ^{29/} Regulation 1.38 was last amended in 1981, in connection with the adoption of regulations implementing the option pilot program, to require exchange-traded commodity options to be competitively executed. 46 Fed. Reg. 54500 (November 3, 1981). ^{30/}

^{29/} At the same time, Regulation 1.54 was promulgated to make clear that any exchange rules submitted to the Secretary of Agriculture under §1.38(a) or §1.39(a) which either had been approved by the Secretary or not disapproved by April 21, 1975 would continue in full force and effect unless and until disapproved, altered or supplemented by the Commission.

^{30/} Regulation 1.35(e) was amended in 1982 to require that contract markets' trade registers identify any transaction made noncompetitively in accordance with exchange rules. 47 Fed. Reg. 56996, 57008 (December 22, 1982). Previously, §1.35(e) specifically required only that EFPs and transfer trades be so identified. The Commission's intent, as described in the proposed rulemaking, in amending the regulation was to conform it to §1.38 and to ensure that appropriate records would be maintained if the Commission were to approve any exchange rules permitting option transactions to be made noncompetitively. The Commission stated that it would review any such proposals on a case-by-case basis. 47 Fed. Reg. 28401, 28406 (June 30, 1982).

In summary, the Act and the Commission's regulations authorize the exchanges in the first instance to establish rules permitting and governing EFP transactions. However, there are certain essential elements and indicia, as discussed in greater detail below, which the Division believes should be considered when evaluating the legitimacy of any EFP transaction under particular exchange rules.

C. Administrative Determinations

The CEA issued four Administrative Determinations ("A.D.") specifically related to EFP transactions. The Division believes these A.D.s are of continuing value in providing guidance with respect to certain aspects of EFPs. ^{31/}

In A.D. 48 (February 26, 1938), the CEA expressed the view that an order of the Secretary ^{32/} would not affect the ability of a contract market to provide for the settlement of outstanding futures positions by EFP after trading in the contract had ceased where the effect of the EFP is to liquidate an open futures position incidental to the "actual and bona fide transfer" of an interest in the actual cash commodity. As discussed in greater

^{31/} Copies of these A.D.s can be found in Appendix 6.

^{32/} The Secretary's decision in C.E.A. Docket No. 2 revoked the registration of an individual after his expulsion from the CBT. The relationship between the opinion of the CEA and the order cited is not apparent, the latter containing no references to settlement of positions, EFPs, or cessation of trading. However, the order located by the Division may not be that referenced in the A.D. since not all decisions pertaining to a single docket number were published.

detail elsewhere in this Report, the CBT, CME, Comex, and NYMEX permit EFPs after trading has ceased, under certain conditions or within a given period of time; CSC does not permit EFPs after the cessation of trading. ^{33/}

On June 15, 1939, the CEA notified a commission firm in A.D. 87 that there was nothing in the Act requiring it to obtain statements from its customers in connection with EFPs, but "some responsibility rests upon commission firms making such trades to know their nature and have some evidence thereof as a matter of record." In particular, A.D. 87 indicated that the EFP should be clearly identified on the firm's records in sufficient detail to enable identification of the related cash transaction in the traders' records. Statements from the parties to the transaction would be sufficient evidence of the cash transaction for this purpose. ^{34/}

In A.D. 211 (March 14, 1968), the CEA stated that anyone on the floor of the exchange executing futures trades for any

^{33/} CRCE also permits EFPs after the cessation of trading with approval. The other exchanges' rules are silent on this point.

^{34/} The recordkeeping requirements under Commission regulations and exchange rules are described in detail in Section X. of this Report. The Court of Appeals in Ryder Energy Distribution Corp. v. Merrill Lynch Commodities, Inc. ("REDCO"), 748 F.2d 774, 782 (2d Cir. 1984) cited A.D. 87 as guidance in determining that the FCM clearing an EFP for a buyer of petroleum products has no independent duty, under NYMEX rules, to conduct an inquiry into the cash product seller's ability to perform. The REDCO case is discussed infra at part D. of this section.

other person must be registered as a floor broker and further indicated that, among other things, registration as a floor broker would not be required for a person handling only noncompetitive trades covered by Commission Regulation 1.38 (i.e., EFPs, transfer trades, and office trades). This interpretation was reaffirmed by the Division in Interpretative Letter No. 85-20 (October 30, 1985), in which the Division reiterated that any person executing an order on the floor of an exchange for another person must be registered. ^{35/}

Finally, on December 16, 1974, the opinion was expressed in A.D. 239 that in determining what commodity, product, or by-product will qualify as the cash part of an EFP one "should use the definition of bona fide hedging as a guide." That is, "[i]f a commodity, product or by-product is hedgeable under the Act, it may be exchanged for futures. If it is not hedgeable it may not be exchanged." As discussed elsewhere in this Report, the Division is of the opinion that the definition of bona fide

^{35/} [1984-1986 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶22,788 (1985). The Interpretative Letter was issued in response to requests for clarification of the registration requirements of Section 4e of the Act. The letter principally addressed registration requirements as they pertain to sole shareholders of corporations, general partners, and joint accounts where the individual involved is executing futures or option trades for the corporation, partnership or joint account. Depending upon the facts and circumstances of particular transactions, however, persons engaged in EFP transactions on behalf of customers may have to register as an associated person or introducing broker, and, if handling customer funds, would have to register as an FCM.

hedging contained in Commission Regulation 1.3(z) may be of some utility in identifying an acceptable cash component for an EFP, and several exchanges employ it as a guideline. The hedge definition is consistent with an examination of the correlation between the cash commodity to be exchanged and the futures contract. ^{36/}

D. Case Law

The Division conducted an extensive search for Federal case law and Commission decisions regarding EFPs. That search revealed only three Federal court cases, four Commission decisions, and one Commission review of an exchange disciplinary action which refer to EFPs. Three of the Commission decisions pertained to recordkeeping violations and are discussed elsewhere in this Report. Only one of the Federal cases and the Commission's review of exchange disciplinary action contain discussions which are useful to the Division's analysis. ^{37/}

^{36/} For additional discussion of the Commission's hedge definition in connection with EFPs see, Section V.B.1. of this Report, infra.

^{37/} Of the remaining cases, one, Apex Oil Company v. Joseph DiMauro, No. 86-7898 (2d Cir. June 17, 1987), is instructive in the use of EFPs to offset delivery obligations and is discussed infra, at note 222. The other two, Sam Wong & Son, Inc. v. N.Y. Mercantile Exch., 735 F.2d 653 (2d Cir. 1984), and Indiana Farm Bureau Cooperative Association, Inc., [1977-1980 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶20,964 (CFTC Docket No. 75-14) (1979), contain descriptions of EFPs or ex-pits used to offset positions but are not helpful to this discussion. The Division also reviewed some cases concerning Section 4c of the Act other than those concerning EFPs and some early commodities cases.

1. Ryder Energy Distribution Corporation v. Merrill Lynch Commodities, Inc., 748 F.2d 774 (2d Cir. 1984)

In this case, plaintiff REDCO sought out Two Oil Inc. ("TOI") as a partner for an EFP to offset its long position in No. 2 heating oil futures. REDCO introduced TOI to one of its FCMS, Merrill Lynch Commodities, Inc. ("Merrill Lynch"), and Merrill Lynch opened an account for TOI. The EFP resulted in the liquidation of existing futures positions for REDCO and TOI. With respect to the cash commodity transaction, REDCO paid for the heating oil but did not wish to take immediate delivery. Instead, the parties agreed that TOI would retain physical possession of the oil, which was transferred to REDCO on TOI's books and then reentrusted to TOI as agent for REDCO in contemplation of future delivery upon REDCO's demand. When REDCO made the demand for the physical oil, however, TOI was insolvent and did not have possession of any heating oil with which to meet its obligation. As a result of TOI's default on the cash contract, and REDCO's prior payment for the oil, REDCO sustained a \$3.4 million loss.

The Second Circuit held that the Exchange's rules governing delinquency and default do not apply to the cash obligations of the parties to an EFP, which are governed by private contract. Thus, the Exchange had no duty to invoke its rule governing delinquency, and REDCO failed to establish a cause of action against NYMEX on that basis.

The Second Circuit further held that Merrill Lynch had a duty, arising from NYMEX rules, as TOI's FCM to inquire into

TOI's ability to fulfill its obligation on the EFP and to certify that the seller of the cash commodity, heating oil, had ownership and possession of such commodity for delivery. That duty, the court held, was owed by Merrill Lynch directly to REDCO, the buyer of the oil. In so holding, the court rejected Merrill Lynch's argument that its duty under NYMEX rules extended solely to the market as a whole as a means to maintain its price integrity by preventing noncompetitive offsets via EFP.

The Second Circuit remanded the case to the district court for a determination as to whether the seller FCM's (Merrill Lynch) breach of duty caused the buyer's (REDCO) loss and whether it is liable for that loss. That case is still pending.

Although REDCO could have implications for the duties of all FCMs transacting EFPs, the decision appears to be of limited applicability because it principally relates to the duties of FCMs with respect to EFPs under NYMEX's relatively stringent EFP rules. At that time, NYMEX's EFP rule 53.12 and heating oil rule 150.14 expressly required that the seller of the cash commodity have possession of the commodity at the time of the EFP. Also, the Exchange's EFP-1 form required that the seller's FCM certify that the seller had possession of the cash commodity in sufficient quantity to satisfy the cash commitment. ^{38/}

^{38/} The Exchange Rule 6.21 (previously 53.12) has since been amended to delete the requirement of possession. Also, the EFP-1 form no longer contains this certification.

(Footnote Continued)

The case demonstrates the possible financial risk to the parties to an EFP on the cash side of the transaction upon default of the counterparty because, unlike futures trades, a cash market default is unsecured by the exchange clearing-house. ^{39/} The parties would have contractual remedies, as governed by the Uniform Commercial Code ("UCC") and pre-Code law as adopted by the states. ^{40/}

In REDCO the UCC remedies against the seller were unavailable or inadequate because TOI did not have the oil which was to be delivered and was bankrupt. It should be noted, however, that the same outcome would have obtained had the cash contract between REDCO and TOI not been part of an EFP.

2. Lonconex

On November 16, 1984, the Commission denied review of a Comex disciplinary action against Primary Metal and Mineral Corporation ("Primary") and its affiliate, Lonconex, Ltd. ("Lonconex"), in which the Exchange found violations of its rules

(Footnote Continued)

Nevertheless, Exchange staff continues to examine EFPs to determine whether a seller has the ability to fulfill its delivery commitment under the EFP. See Section VII.A., infra.

^{39/} However, as noted in footnote 20, supra, generally the clearinghouse does not guarantee delivery of the cash commodity against the futures position in the event of delinquency or default, but only the transfer of futures profits or losses from one clearing member to another.

^{40/} A discussion of contractual remedies which may be available to the parties in an EFP-related cash transaction can be found in Appendix 7.

prohibiting wash trading and conduct inconsistent with just and equitable principles of trade, relating in part to certain EFP transactions. However, no violation of the Exchange's EFP rule was found.

This case involved a series of transactions in a foreign cash market, Comex gold futures, and EFPs as a result of which Lonconex and its customers' positions netted out. First, Primary established spread positions in forward contracts on the foreign market for its customers. Lonconex also established spread positions for its own account. Second, following a drop in cash market prices, Primary entered orders on Comex to buy and sell futures contracts corresponding to one leg of the customers' and Lonconex's spread positions. Virtually all of these orders were executed via cross trades within a short time period. At the same time as these cross trades were being executed on Comex, one leg of the customers' and Lonconex's forward spread positions were liquidated in the foreign market. As a result, the customers and Lonconex remained spread cash/futures. These remaining positions were then liquidated via EFP transactions.

The Exchange found that all of the trades, including the forwards, and the EFPs, were part of a prearranged scheme of interrelated transactions. Taken together the transactions were substantially risk-free and resulted in no change in futures or forward positions, and thus, were wash trades. Moreover, the Exchange found that the futures trades were prearranged and intended to be executed noncompetitively as cross trades.

Because the trades were prearranged, and the Comex positions were liquidated almost immediately by EFP, neither Lonconex nor its customers were subject to market risk and hence, never took a bona fide position in the market. In denying review, the Commission noted that there was ample evidence to support a conclusion that the trading of Lonconex and its customers was prearranged, noncompetitive, and substantially risk free.

III. Individual Market Practices

The reasons for the use of EFPs and the manner in which they are transacted vary from market to market depending to a large extent on the nature of the underlying cash and futures markets. Further, in order to understand EFP trading strategies, it is necessary to understand the relationship between the cash and futures markets and practices in those markets. The discussion of EFPs in each of the markets is, therefore, prefaced by a description of background information regarding domestic cash and futures markets. The discussion of EFPs, for the most part, describes current practices as articulated by the various interviewees and does not attempt to describe other possible uses for the EFP mechanism.

A. Grains

1. Significant Characteristics of the Cash Grain Market

Prior to the development of futures markets, it was difficult to gauge accurately the fundamentals of supply and demand due to a general lack of information and communication which made it difficult to price grain. ^{41/} Violent price fluctuations resulted, and merchants charged higher prices to compensate for the price volatility. With the founding of the CBT in 1848, however, futures contracts provided a means to hedge

^{41/} For the purposes of this Report, and consistent with the practice at CBT, "grain" refers to wheat, corn, and soybeans.

and price grain. Grain inspection and quality standards subsequently were developed. Futures markets caused cash market prices to be less volatile and also provided farmers and grain elevators with a better price discovery mechanism.

Today, the major participants in both the cash and futures grain markets are international grain companies, country elevators, millers, bakers, and exporters. In addition, grain futures prices are used as a reference point by many, such as farmers, who do not trade for themselves but who nonetheless rely on futures prices to estimate the value of their crops.

Within each category of grain there are various classes, grades, and quality factors. These factors are important to grain users since certain grades are not suitable for particular processes. Grains are delivered from farms to local elevators, cash grain markets, or processors. These markets usually are situated near transportation centers and may be either regional or international. Deliveries in commercial transactions may be accomplished by means of warehouse receipts or actual movement of the grain between storage facilities.

The cash grain and futures markets are tightly integrated, and major grain traders generally use both markets. Large numbers of cash grain transactions are priced at a basis (the difference between the futures price and the local cash

price). ^{42/} Since both sides of a cash grain trade are often hedgers, this basis transaction frequently will be fulfilled through the execution of an EFP.

2. Grain Futures Trading

Grain futures are traded on the CBT, KCBT, MGE, and MidAm. ^{43/} During 1986, volume in both CBT corn and soybeans exceeded six million contracts. CBT wheat volume was over two million contracts. The volume in these contracts has fluctuated significantly in the past few years. In 1983, CBT corn and soybean volumes were twice their 1986 volumes. Nonetheless, both contracts remain active -- in 1986, corn and soybeans were the seventh and eighth most actively traded futures contracts.

All grain futures at the CBT and KCBT are traded in 5,000-bushel contracts. ^{44/} Delivery months are established by the

^{42/} If a country elevator buys local corn at \$2.00 a bushel and the futures price is \$2.15, the basis is "\$.15 under." If, several miles away, a country elevator buys local corn at \$1.99, its basis is -\$0.16. Cash and futures prices usually will move in the same direction but may move at different rates. Grain traders calculate historical basis relationships to develop hedging strategies for grain located away from futures delivery points.

^{43/} The U.S. is the worldwide center for grain futures. Grain futures trading is conducted on Canadian exchanges, but these contracts are substantially less active. The trading on all other foreign exchanges in the grains is relatively insignificant.

^{44/} The MGE wheat contract can be traded in 5,000-bushel "round" lots or 1,000-bushel "job" lots, and the MidAm contracts are for 1,000 bushels.

exchanges. ^{45/} The rules of each of these exchanges provide that delivery in the grain contracts can occur on any business day during the delivery month. Trading in the futures contract continues until seven business days prior to the end of the delivery month.

The CBT corn futures contract specifies delivery of No. 2 yellow corn in Chicago at par, while others of the numerous grades of corn are deliverable at differentials, and deliveries in other locations are discounted. The CBT has established No. 2 yellow soybeans delivered in Chicago as the par delivery unit with differentials for other grades and a discount for Toledo delivery. The CBT wheat contract specifies delivery in Chicago of No. 2 soft red, No. 2 hard red winter, No. 2 dark northern spring, or No. 1 northern spring, with differentials for other grades and a discount for delivery in Toledo.

A country elevator could use the basis to implement pricing and hedging strategies. For example, on November 1, a country elevator buys corn at \$2.15 from a local farmer and hedges it with a short December futures position at \$2.40/bu., thereby owning the corn at \$.25 under the December future. The elevator expects its local basis in December to be 15 cents under the December future. If the elevator believes that is an

^{45/} Delivery months for all four wheat contracts and for corn are March, May, July, September, and December. For soybeans, the delivery months are January, March, May, July, August, September, and November.

attractive basis, it might execute a cash sale contract (basis trade) priced at 15 cents under the futures price. The elevator is then assured of a profit of 10 cents per bushel, less any handling costs. For instance, if the futures price in December is \$2.30, the elevator would have a \$.10/bushel profit on the short futures, and the cash sale would be consummated at \$2.15 (\$2.30 less the agreed-upon -\$0.15 basis) for a return of \$2.25 on the hedge and cash sale. If the futures price were \$2.50, the elevator will have a \$.10/bushel loss on the futures and sell the cash at \$2.35 (\$2.50 minus \$.15) for a return of \$2.25 on the hedge and cash sale. An EFP may be used later to liquidate both the cash transaction and the futures trade.

3. Grain EFPs

EFPs are a substantial part of commercial grain activity, although the number of EFPs and percentage of volume has declined in some grain markets. The usage of EFPs in wheat declined in the 1983 to 1986 period in all three markets, Chicago, Kansas City, and Minneapolis. For instance, in 1983, CBT wheat EFP volume was 124,557 contracts but fell to 48,499 contracts in 1986. Similarly, EFPs as a percentage of total volume fell from 3.21% to 2.32% between 1983 and 1986. The Kansas City wheat contract also experienced decreasing EFP activity; in 1983, EFPs as a percentage of total volume was 21.25%, which declined to 15.61% in 1986. KCBT wheat EFP volume declined from 320,881 to 116,670 contracts. The percentage of EFPs in the Minneapolis contract was relatively steady from 23% in 1983 to 25% in 1986,

but the volume of EFPs declined from 87,323 to 70,180 contracts. The percentage of EFPs relative to volume in the wheat contracts is generally high since these markets are used predominantly by commercial grain merchants and have substantially less retail business and a smaller trading floor population.

Total EFPs in CBT corn declined from 925,195 contracts in 1983 to 501,543 contracts in 1986. During this period, overall trading activity declined in parallel fashion. At the same time, EFPs as a percentage of total volume were 7.77% in 1983, 9.91% in 1984, 11.39% in 1985, and 8.14% in 1986. In the CBT soybean contract EFP volume declined from 481,103 contracts in 1983 to 332,616 contracts in 1986. Although the number of EFPs declined, EFPs as a percentage of volume showed a steady increase, from 3.5% in 1983 to 5.42% in 1986.

Thus, the total volume of EFPs has fallen in the grain markets, due primarily to the decrease in overall grain activity. CBT grain futures volume has declined steadily for several years. Nonetheless, grain trading is still very active, and EFP volume is substantial.

As noted above, the cash and futures markets in the grains are integrated markets, and cash transactions are often priced at a basis. EFPs in these markets, therefore, integrate basis trading with hedging. ^{46/} A basis trade combined with an EFP

^{46/} EFPs in live cattle are similar to traditional grain EFPs
(Footnote Continued)

assures the net value of the transaction, as illustrated by the examples above (Sections I.D. and III.A.2.) in which the profit of the seller and the net price to the buyer were unaffected by the futures price. When the transaction is ultimately completed through the use of an EFP, both traders will use the same futures price to price the cash transaction. By comparison, if each trader had competitively executed a pit trade, the result could be several and different prices for each trader. ^{47/} For instance, if one trader liquidated his futures position at \$2.00 and the other trader liquidated his position at \$1.98, it would be problematic to determine to which price the basis would be applied in order to calculate the final sale price.

Grain EFPs usually are arranged directly between the cash market participants and not through a broker or dealer. Many of these participants are members of the CBT and handle every aspect

(Footnote Continued)

because they are used to integrate the use of forward contracts with futures. Cattle producers enter into a forward agreement to sell cattle to a packer at a basis. If both parties to the forward contract are hedged with futures, the EFP provides an efficient method to unwind the hedge and fulfill the cash obligation.

However, there are very few EFPs in cattle. The use of EFPs in cattle is insignificant when compared to the volume of the contract. During 1986 only 2,617 contracts were settled by EFPs of the total 4.7 million cattle contracts traded. The Division contacted two major commercial participants in cattle in an attempt to obtain information about EFPs. However, those interviews provided no concrete data beyond the description above.

^{47/} Depending on the size of the order, each trader might also receive more than one price on his contracts.

of the trade, except possibly clearing. In transactions between United States parties, the cash buyer typically has the option of pricing the contract. The EFP agreement (i.e., the cash grain contract which specifies that the price of the grain will be determined by an EFP) typically states that this price must be within the futures price range for that day. Since the cash grain buyer sells futures to complete the EFP, he selects the high price of the day. If the high price of the day is not selected, the buyer will have to pay funds to the clearinghouse and as a result incur a one-day cost of funds because the cash contract which preserves the basis is not satisfied until the following day. Once the futures price has been selected, the cash grain is priced at the previously agreed-upon basis. The EFP contract usually will state that the trade will be executed during regular exchange trading hours. ^{48/} In addition, the cash contract underlying the EFP will specify the quality and characteristics of the grain and the location of the physical delivery. ^{49/}

^{48/} This appears to be a longstanding practice of the grain trade, and may be related to clearing EFP trades promptly, but is not an Exchange requirement.

^{49/} In contrast to other markets in which there are a large number of deliverable grades making EFPs an essential practice, EFPs in the grains are not motivated by the need for a particular grade, since there is an existing cash transaction. Instead, as noted, the EFP is motivated by pricing. Copies of sample grain contracts can be found in Appendix 8.

In another method of effecting an EFP, a "pass-through" or "string trade," the two parties to the EFP each have cash commodity contracts with another party or parties which require them to buy/sell cash and correspondingly sell/buy futures to set the price for the cash transaction. Rather than execute a series of EFPs in which the intermediate futures positions transferred among the parties would net out for the common parties, the first and last parties in the "string" execute a single EFP and the other mutually exclusive futures obligations are cancelled. For instance, A has a contractual commitment to sell grain to B and buy futures from B, and B has contracted to sell grain to C and buy futures from C. When C is ready to sell futures to B to fix the cash price, B directs C to contact A to sell those futures to A (since B has an obligation to sell futures to A). A and C execute an EFP in which A buys futures and C sells futures. ^{50/}

Delivery on the cash contract can be consummated through a physical movement of grain between storage facilities or by warehouse receipt. The cash component of the EFP (i.e., the

^{50/} On April 21, 1987, CBT's Business Conduct Committee interpreted Exchange Regulation 444.01 not to permit this type of transaction. The Committee stated that an EFP requires that the buyer of the cash be the seller of the futures and the seller of the cash be the buyer of the futures, and that because the above-described transaction does not involve an exchange of the cash and futures between the same two parties, the transaction would not be permissible. However, the Division notified the CBT on May 27, 1987 that such an interpretation is required to be submitted for prior Commission approval pursuant to Section 5a(12) of the Act and Commission Regulation 1.41.

grain that has been exchanged) usually is the same cash commodity which is covered by the futures contract. This is not necessarily the case, however. For example, EFPs involving corn futures sometimes involve cash contracts requiring the delivery of milo. ^{51/}

The majority of grain EFPs reduce open interest because both parties previously had futures hedge positions which are offset. However, perhaps 20 percent of grain EFPs either have no effect on open interest or increase open interest, creating a new futures position for one party. Grain EFPs usually are initiated prior to the first notice day of the delivery month. This is done so that the trader who is hedged with a long position is not assigned a delivery notice by the clearinghouse, which would increase costs because redelivery would be necessary. ^{52/} EFPs occur throughout the year, but there is increased activity during harvest and other periods of heavy commercial activity.

^{51/} Milo is a grain sorghum which is similar to corn in pricing fundamentals and uses and has a predictable basis relationship with corn.

^{52/} If a trader with a long position is assigned a delivery notice but does not wish to take delivery he will have to execute a short futures trade on which to deliver the grain. Because there will be a one day time lag between the original delivery and redelivery processes, he will have to pay for the cash commodity overnight, plus storage costs, and will not receive payment until the next business day. He will also incur commission costs and will incur the risk of price movement in the futures prior to the time he can execute the trade. Also, if the trader wants to remain long futures, he will have to execute another long futures trade with the resultant commission costs.

The following description of a typical grain EFP recapitulates these principles. A country elevator has an inventory of cash corn and desires to set a price for the sale of the corn. A grain exporter is short cash corn and desires to price the purchase of corn. They enter into a cash forward contract that will be completed through an EFP. The elevator is short July futures at \$2.00 per bushel, while the exporter is long July futures at \$2.03. The agreed-upon price of the cash corn is expressed at a basis to the futures, with the elevator agreeing to sell and the exporter agreeing to buy the corn at 10 cents under the July futures price. The cash grain contract will require the elevator to buy futures and the exporter to sell futures when the sale price is to be fixed. The exporter -- as the buyer of the cash corn and the seller of the futures -- has the option of selecting the futures price, but it normally must be in the futures price range for the day on which the EFP is executed. In addition, the exporter decides the day on which the EFP will be executed.

On June 29 the exporter notifies the elevator that it is executing the EFP. The exporter prices the futures at the high of the day, \$2.20. The exporter, therefore, is deemed to have sold futures at \$2.20, while the elevator is deemed to have bought at the same price. (No transaction is executed in the pit for this purpose. Instead, the agreed-upon price -- \$2.20 -- will be reported to the clearinghouse by the exporter's and elevator's respective clearing members.) As previously agreed,

the cash transaction is executed at 10 cents under the futures price, or \$2.10. The EFP liquidates both hedges and the exporter now has ownership of the cash corn at the location agreed-upon in the cash corn contract.

B. Sugar and Cocoa

1. Significant Characteristics of the Cash Markets

Sugar and cocoa are characterized by a large number of growths (countries of origin) and quality factors which are important to the commercial users of the product. Most of the sugar imported into the United States is raw cane sugar. ^{53/} The largest worldwide producers of cane sugar are Brazil, India, Australia, the Philippines, Mexico, and South Africa. The major participants in the cash raw cane sugar market are origins (producers/millers), operators, importers/exporters, and refiners. Major users of refined sugar are bakers and cereal makers, beverage companies, confectionaries, institutions, food processors, and grocers (retail and wholesale).

Cash sugar contracts provide for delivery at the country of origin or the customary port of export for land-locked countries. Generally, cash sugar is handled in bulk transactions involving boatloads of 5,000 to 10,000 metric tons (the

^{53/} Beet sugar, the other type of sugar, is produced in the U.S.S.R., Europe, and the United States. The presently traded CSC futures contracts are for raw cane sugar. Therefore, this Report will address only the cane sugar market.

equivalent of 100 to 200 futures contracts). The buyer of the sugar is responsible for providing, at the port of export, a vessel suitable for carriage under a freight agreement. ^{54/} Thus, the buyer will incur the freight costs in transporting sugar from the point of origin to its ultimate destination. The seller is responsible for loading the sugar and usually has facilities which are devoted to that specific purpose. In order to allow adequate time for arrangement of shipping and placement of sugar for delivery, a cash sugar contract typically will call for delivery within a given time period in the future of two and one-half months (for instance, delivery to occur between October 1 and December 15, 1987).

Some of the major producers of cocoa are Ghana, Ivory Coast, and Brazil. The primary participants in the cash market are cocoa producers (growers), government marketing boards, importer dealers, converters (grinders), processors (grinder-manufacturers), ^{55/} confectioners and institutions (schools, hospitals, etc.). Cocoa is classified by growth (i.e., origin), description (growth season and method of selection or curing),

^{54/} There is in the sugar trade a standardized freight contract, called the "Standard Form of Charter Party" which sets forth terms with respect to dispatch, demurrage, loading conditions, and the vessel's responsibility for the cargo, and which allocates responsibility for the payment of taxes, duties, etc.

^{55/} Derivatives of cocoa beans are cocoa butter, cocoa liquor, and cocoa powder. Grinding is the process which turns cocoa beans into cocoa liquor.

grade (percentage of defective or slatey beans), condition (hammy or smoky), and count (number of beans per kilogram). ^{56/} The buyers of cocoa beans have very specific product needs to assure the quality of the products they produce. The flavor of a cocoa bean is affected by all of the classification standards. Most cocoa coming into the United States is imported through the Port of New York, Delaware River Port, or the Port of Hampton Roads because of the proximity of those ports to the end-product manufacturers. Most cocoa is committed to a particular buyer before it leaves the country of origin (possibly even before the crop has matured), again because of the importance of quality. The point of delivery is established by mutual agreement. Cocoa is stored in bags at warehouses and covered by either a negotiable or non-negotiable warehouse receipt.

Many cash contracts in the sugar and cocoa markets are priced either on a fixed price or price-to-be-fixed basis. In the latter type of transaction, the commodity is sold at a given differential over or under a futures contract price to be fixed at the buyer's option by a certain date (although the contract often requires that the price be fixed prior to the first notice day for the futures). ^{57/} This type of transaction is

^{56/} A certificate of grade (issued by a panel of three licensed graders within 15 working days of the date of initial delivery) encompasses each of these factors.

^{57/} A similar type of transaction in the sugar market is an
(Footnote Continued)

increasingly common in these markets, and is very similar to the pricing of contracts at a basis in the grain markets, the primary distinction being the wide range of qualities and growths in the sugar and cocoa markets.

2. Sugar and Cocoa Futures Trading

The CSC is the only U.S. exchange that trades sugar and cocoa futures, and most of its futures trading volume is in the sugar #11, cocoa, and coffee "C" futures contracts. ^{58/} During 1986, the volume of trading in sugar #11 was 3,583,814 contracts, and in cocoa was 777,765 contracts. ^{59/}

(Footnote Continued)

"executable order" which gives the seller (producer) the option to fix the price based on the futures at any time prior to expiration. The producer does not generally carry a futures position. The buyer will establish a short futures (hedge) position at the time the cash price is fixed.

^{58/} CSC also trades the sugar #14 futures contract which is a domestic cane sugar contract, and is designated for a white sugar contract (refined cane or beet sugar). MidAm is designated as a contract market in refined sugar, but the contract is not actively traded. On March 10, 1987 the Commission designated MGE as a contract market for high fructose corn syrup, a major commercial substitute for sugar. These and other related commodities are also traded on foreign markets. Raw sugar is traded on the London Commodity Exchange, Tokyo Sugar Exchange, and the Osaka Sugar Exchange, and white sugar is traded on the Paris Futures Exchange. Cocoa is also traded on the London Commodity Exchange, and a cocoa butter contract is traded by the Paris Commodity Brokers' Association.

^{59/} Coffee "C" trading volume was 1,074,142 contracts during 1986. Because of similarities in the cocoa and coffee markets, only cocoa will be addressed specifically in this Report. Options on futures in sugar, coffee, and cocoa are also traded. Sugar options have been fairly active, but

(Footnote Continued)

The sugar #11 futures contract is a world sugar contract requiring the physical delivery of fifty long tons of sound raw centrifugal cane sugar. Delivery is made in bulk, in vessels supplied by the receiver to a port in the country of origin (or the customary port of export), following the cash market practice. The risk of loss passes to the buyer at the time the sugar crosses the rail of the vessel, and title passes at the time of effecting payment. The seller is responsible for expenses of delivery and loading, and the buyer is responsible for expenses pertaining to the exit or entry of the vessel at the loading port. ^{60/} Twenty-eight growths of sugar are deliverable under the contract without any price adjustments among them. Trading ends on the last day of the month preceding the delivery month (i.e., there are no futures trades during the delivery month). The buyer may select a delivery date up to two and one-half months after the expiration of trading.

The Exchange's cocoa contract calls for the delivery of ten metric tons of cocoa beans only from licensed warehouses located in the Port of New York District, the Delaware River Port

(Footnote Continued)

there has been little volume in the coffee and cocoa options.

^{60/} Settlement of weights and tests is determined either at the port of discharge or port of loading depending on the destination. Usually all expenses of weighing, sampling, and testing at customary rates are borne by the deliverer, unless shipped to the United States (in which case they are shared by buyer and seller).

District or the Port of Hampton Roads in Exchange-segregated lots (a ten metric ton lot of cocoa of one growth designated as deliverable against the futures contract and stored separately from other lots). Cocoa from Bolivia, Haiti, Malaysia, Brazil, Peru, and the Dominican Republic are deliverable at par with premiums for other growths. All cocoa must be certified as deliverable with respect to growth, description, condition (beans which are hammy or smoky are not deliverable), count, and grade. The Exchange has set forth certain minimum standards for count and grade with differentials for variations from those standards. Trading ends ten business days before the end of the delivery month. The first notice day is ten business days prior to the beginning of the delivery month.

3. Sugar and Cocoa EFPs

Total EFP volume in sugar #11 increased from 106,957 contracts in 1983 to 138,504 contracts in 1986. EFPs as a percentage of volume remained relatively stable during this period, being 3.32% in 1983, 4.19% in 1984, 2.66% in 1985, and 3.85% in 1986.

EFPs in cocoa futures increased significantly in the 1983 to 1986 period in both absolute and percentage terms. Cocoa EFP volume increased from 33,974 contracts to 48,480 contracts in this period, while EFPs as a percentage of total volume rose steadily from 2.92% to 2.98% to 4.25%, to the 1986 level of 6.24%.

EFPs in sugar and cocoa (which are known as "against actuals" or "AAs" at the CSC) are used primarily by commercial participants and are used for three major reasons -- to price cash transactions; to secure a particular grade or quality of product instead of any of the numerous grades or qualities permitted to be delivered by the futures contract; and to specify a particular delivery location. The pricing function of EFPs in these markets is often intertwined with the other purposes for the transaction. ^{61/}

As discussed above, these markets involve a large number of deliverable growths and, in cocoa, a wide range of qualities of product. In part as a result of these factors, merchants are concerned with and view cash and futures market transactions in terms of differentials between the cash commodity and the futures. The price clause in contracts for the purchase/sale of the commodity, therefore, very often will be based on a negotiated differential to reflect these differences (a "price-to-be-fixed" contract). As in grain EFPs, CSC EFPs provide an easy mechanism to unwind futures hedges while completing a cash transaction. The EFP serves to integrate the fixing of the price and consummation of the cash transaction which will provide the

^{61/} As noted above, the coffee and cocoa markets are very similar. Unless otherwise noted, EFP reasons and practices are the same in the coffee trade as in cocoa.

buyer with the desired product or delivery at a particular location.

For example, a "trade house" (dealer) and a processor (in cocoa, a "refiner" in sugar) may have a contract for the sale of a cash commodity, the price of which is to be fixed at a premium or discount to the futures contract corresponding to the delivery period set forth in the contract. ^{62/} It is likely that both parties will be hedged in the futures market. When ready to fix the price, the buyer may contact the seller to initiate an EFP at the then-trading futures price and complete the cash transaction at the agreed-upon differential. ^{63/} Both parties will liquidate their futures hedge positions via the EFP. The EFP also preserves the agreed-upon differential, insulating the parties from basis risk prior to completion of the cash transaction. In the cocoa trade, for instance, chocolate manufacturers may enter into contracts for the purchase of cocoa 18 months forward!

^{62/} Sample copies of cash contracts in these markets can be found in Appendix 9.

^{63/} Alternatively, at the buyer's option, the futures price could be established by a "give up" or instructing the seller to purchase futures (if the buyer does not have a futures account). In the latter case, the futures price would be that at which the seller effected the futures trade. This procedure is similar to the price-to-be-fixed contract and executable order transactions described above. A "give up" is a futures transaction executed by one clearing member which then "gives up" the name of another clearing member so that the trade accrues to the latter's account. CBT and MGE no longer permit "give ups" as defined by their rules to be used for the pricing of cash transactions (CBT Regulation 350.06, MGE Rule 940).

According to one interviewee, the seller, particularly a dealer who does not have cocoa to cover the commitment, could not afford the risk of price changes over that period if not assured of the differential guaranteed by the availability of the EFP.

EFPs in sugar and cocoa are also used by traders who have hedged their cash needs or commitments in the futures market without an existing cash market transaction. Because of the special requirements of the buyers in these markets detailed above, the prospective cash buyer (who is long futures) will not take delivery under the terms of the futures contract. An EFP enables them to obtain the product and offset the hedge positions without entering the futures trading pit.

In sugar, the primary disadvantage to taking delivery under the futures contract is that there are 28 deliverable growths worldwide at the election of the short, and the freight costs will vary dramatically between one point of origin and another, depending on the destination. In addition, the buyer may not receive a full cargo (boatload) of sugar from one origin but instead may be assigned delivery notices at multiple delivery points, again significantly adding to the freight costs. Moreover, the differential between the cash and futures prices may not be adequate to cover the cost of taking delivery. Because this cost will be assumed by the buyer, and the seller may tender delivery against the futures contract, the buyer has the greatest incentive to initiate an EFP. Therefore, the buyer frequently will enter into a cash contract to obtain sugar from

the desired origin and effect an EFP to consummate the cash transaction.

Similarly, in the cocoa market, the futures contracts permit delivery of numerous grades and growths at specified differentials, and the buyer cannot be assured of receiving the desired product. As a result, EFPs have become an integral part of the cocoa market. (Indeed, one interviewee, a cash cocoa marketer, stated that most cocoa and cocoa products bought and sold end up in EFPs.) Rather than take delivery under the futures contract, the grinder, confectioner, or processor will negotiate to do an EFP. These participants are willing to pay a premium to secure the particular grade of cocoa desired. ^{64/}

EFPs in cocoa generally are arranged between a trade house and a user of the commodity, such as a grinder, and not directly between commercial participants in the cash market, reflecting trading patterns in the cash markets. As a result, a dealer is usually on one side of these CSC EFP transactions.

In sugar, EFPs are arranged directly between trade houses and refiners or other users, but producers do not usually use EFPs. Less frequently, an FCM's customer (trade house or other user) which wishes to engage in an EFP transaction will locate

^{64/} For instance, Brazilian cocoa of the Bahia growth with 1,200 beans per kilogram and 5% defective beans could be delivered under the futures contract. If the confectioner needs Ivory Coast, main crop cocoa, 1,100 beans per kilogram and no greater than 4% imperfections, the cocoa delivered against the futures contract would be unacceptable for its purposes.

another customer willing to take the opposite side of the transaction and then notify the FCM, or request that the FCM locate a suitable trading partner for the other side. Typically, customers and their FCMs will in these circumstances contact several dealers to determine which firm will give them the best price differential for EFP transactions. The FCM then will clear the posted trades and record them in the customer's account.

In practice, the parties generally will use the futures price prevailing at the time the trade is reported and have the cash price fixed accordingly. However, there are times when one side of the trade, usually a commercial firm, will request a specific futures price, and the cash price then will be based on the premium or discount previously established. On the other hand, dealers that participate in EFP transactions do not care at what price the futures trade is executed because the basis is preserved and normally would fix the price at the prevailing market. Overall, most CSC EFPs are executed within the futures trading range, with the cash priced at the agreed-upon premium or discount. ^{65/}

The flexibility of the parties with respect to the price of the futures is limited by CSC Rule 3.06(e), which requires that in cases where the EFP price is reported the price reported must be the "current market price and shall not be higher than

^{65/} For a more detailed discussion of EFP pricing practices, see Section VI. of this Report, infra.

the lowest offer nor lower than the highest bid current on the floor at the time the transaction is reported." The report of a cocoa EFP must include the price at which the futures transaction was effected. Thus, the futures price for a cocoa EFP always will be within the current futures trading range. In the case of sugar, the report may include the price of the futures. If it does, the price must be within the range, as required by Rule 3.06(e); if not, there is no restriction on the futures price, and the price is included when the trade is submitted for clearing. ^{66/} No EFPs can be effected after the contract ceases to trade. ^{67/} CSC Rule 3.06(c) requires that EFP transactions be "made during the trading hours," with some limits on EFPs during the opening or closing call or the final three minutes (five minutes in sugar) of trading.

On the CSC, the EFP cash component always has been the commodity covered by the futures contract. However, Exchange staff indicated that it would permit EFPs exchanging physical sugar #14 (deliverable on the domestic delivery contract) for

^{66/} Coffee is included within the rules applicable to sugar in this regard.

^{67/} There is, however, a "commercial settlement" procedure in the sugar contract which permits the buyer and seller to enter into a mutually acceptable written agreement to deliver and receive under conditions other than those stipulated in the Exchange's rules. Further, Exchange rules permit receivers to exchange among themselves any contracts listed on a multiple delivery notice at any time up to 3:00 p.m. on the date the notice is received from the clearinghouse.

sugar #11 futures (world delivery), although there would be a price difference on the cash side, as well as EFPs involving a derivative, by-product, or related product, such as cocoa butter for cocoa futures.

EFP transactions at CSC tend to be concentrated close to the delivery months, although delivery on the cash portion of the EFP may be deferred for several months. In addition, according to the Exchange, because EFPs are used to facilitate cash transactions in which the parties have agreed that the price of the future on which the differential will be based must be set prior to the first notice day, there are a large number of EFPs transacted within approximately a week of that date. CSC staff has not noted any other patterns in EFP volume related to futures volume, seasonality, or open interest except that there may be more EFPs if the open interest is high going into the delivery month.

The following description of a typical sugar EFP illustrates these points. A sugar dealer has a commitment to deliver a cargo of cane sugar to a buyer in New Orleans in October and, therefore, would prefer South American sugar over Asian or African growths. The dealer is long 236 futures contracts. ^{68/} A merchant owns a cargo of Brazilian sugar and is short 236 contracts in the futures market. The dealer agrees to

^{68/} A cargo of sugar is 12,000 metric tons. A contract of sugar on the Exchange is 50.8 metric (50 long) tons. Thus, a cargo of sugar is equivalent to 236 sugar futures contracts (236 x 50.8 = 11,989).

purchase the sugar from the merchant at a 20-point premium to the October futures price, to reflect the locational differential and a differential for grade if appropriate. ^{69/} When their contract is priced, the merchant will need to buy, and the dealer will need to sell, 236 futures contracts to offset their existing positions. In order to complete this transaction efficiently, on August 20 an EFP is executed between the merchant and the dealer. The dealer selects a futures price of \$7.25 per pound. The parties to the sale will make an exchange of the physical sugar at \$7.45, 20 cents over the futures price, for futures positions exchanged at \$7.25. The merchant who sold the cargo will get a long futures position to cover his existing short position and, therefore, be flat in the futures market, and the trade house will get a short position to liquidate a previously held long futures position. The dealer will take delivery of the sugar in Brazil for transport to New Orleans in fulfillment of its pre-existing cash commitment.

C. Crude Oil

1. Significant Characteristics of the Cash Crude Oil Market

The growth of a more competitive oil market following the decline of control by the Organization of Petroleum Exporting

^{69/} The major factor involved in sugar deliveries is growth or location rather than grade (polarization), but a differential will apply to grades other than 96 percent polarization.

Countries ("OPEC") in the early 1980's aided the development of spot oil markets in the United States and Europe which, in turn, provided an impetus to the development of futures markets in petroleum products. ^{70/} The oil industry cash market is global in nature and is today made up of major international oil companies, national oil companies, fully integrated oil companies, independents, refiners, marketers and/or distributors, and traders-resellers. ^{71/}

There are various grades of crude oil, which are defined on the basis of three variables: field of origin, API gravity,

^{70/} OPEC dominated the world oil market beginning in the early 1970's. OPEC's control began to decline in the early 1980's due to an increase in the supply of oil from non-OPEC countries and a decrease in demand due to increased conservation and fuel substitution.

^{71/} The term "major international oil company" is used to refer to those companies which produce, refine, market, and distribute crude oil and a wide range of petroleum products on a worldwide basis. The term "national oil company" is used to refer to an organization owned by an oil-producing country. An "integrated oil company" is a company which participates in all phases of the petroleum industry (i.e., production, marketing, shipping, etc.). An "independent" is a non-integrated oil company which typically is active only in one or two sectors of the industry -- i.e., production, refining, or marketing. A "refiner" is primarily engaged in refining and marketing. A "marketer and/or distributor" is primarily engaged in wholesale/retail marketing and distribution. A "trader-reseller" is engaged in oil trading, as well as marketing and distribution.

and sulfur content. ^{72/} The major refinery yields of crude oil are gasoline, aviation fuel, and distillate, and residual fuel oil. ^{73/} Depending upon the structure of a refinery, different grades of crude provide varying refining yields and operating efficiency. Crude oil can be stored in tanks, in ships, or underground.

At present, there are three prevalent crude oil reference prices: "spot," "futures," and "posted." "Spot" involves crude oil not under long-term contract, with trades being made by telephone or telex for delivery within 30 days. ^{74/} A "posted" price is a published average of prices posted by refineries for the purchase of a specified type of crude oil to be delivered on

^{72/} The field of origin will be indicative of various qualities of the oil, including the pour point of the oil, the viscosity (a measure of a liquid's resistance to flow), flash and fire points, percentage of water, metallic contaminants and distillation yields. The API (American Petroleum Institute) gravity is an indication of what volume of products is yielded from refining. Sulfur content is essential to determine the effect on pollution and on damage to equipment from sulfur.

^{73/} Residual fuel oil is the heaviest level of fuel refined and may be used as bunker oil in ships or by utilities. Distillate fuel oil is lighter fuel oil and is refined into heating oil and diesel fuel.

^{74/} The Wall Street Journal publishes daily crude oil prices based on domestic spot quotes for West Texas Intermediate (Cushing, Oklahoma), West Texas Sour (Midland, Texas), Louisiana Sweet (Louisiana Gulf Coast), and North Slope (Alaska), and European spot quotes for Arab-Light, Arab-Heavy, Iran-Light, Forties, Brent, Bonny-Light, and Urals.

a certain date, but will not necessarily reflect any actual transactions. ^{75/}

Outside of outright purchases and sales, the most commonly used spot market transactions are "swaps," "exchanges," or "trades," and their use depends on the quality of the oil and the location and timing of the transaction. A "swap" or "exchange" is a transaction in which one grade or location of crude oil (or product) is swapped for another grade or location. For instance, a refiner may arrange a swap of one grade of crude for another to fulfill its changing refining needs if it can locate a willing opposite party. A location swap can be used to obtain crude oil in the desired location thereby permitting a refiner to avoid transportation costs and associated delays in moving the oil to the refinery. A swap could also involve an exchange of crude oil for products. Since swap arrangements are beneficial to both parties, the price for the transaction generally will depend on the difference in value of the commodities exchanged.

"Trades" include both standard contracts for the sale of crude oil in the cash market and trades of "paper barrels" in which physical oil does not change hands, but a book entry

^{75/} Another pricing system which generates a reference price particularly for refiners of crude oil is the net-back pricing arrangement that was introduced by Saudi Arabia and other OPEC members. Under this arrangement, these countries sell crude oil at prices determined by the spot market value of the products ultimately refined from the oil. Net-back prices for various grades of crude oil are published in industry newsletters such as the daily Platt's Oilgram.

transfer is made among traders. Most petroleum transactions (swaps, exchanges, or trades) take place among the same parties on a regular basis, and thus, settlement of transactions is usually made at the end of a given period (perhaps monthly) on a net basis.

Cash trades in which actual barrels are transferred are priced depending on location. For light "sweet" crude oil, the United States industry-wide standard is to price crude oil basis f.o.b. Cushing, Oklahoma, reflecting the cost to the seller to position the oil in Cushing. If a buyer wants to take delivery at another location, the price will be set at a differential to Cushing. Trades in the "paper barrel" market are usually priced basis Cushing also, taking into account the current NYMEX futures price (which specifies Cushing delivery) and the prices for cash transactions which are taking place.

2. Crude Oil Futures Trading

NYMEX trades futures contracts on crude oil, heating oil (New York harbor delivery), and unleaded gasoline (New York harbor delivery). ^{76/} Crude oil has become NYMEX's most actively traded futures contract, constituting 56.8% of Exchange futures

^{76/} NYMEX also traded a leaded gasoline contract through October 1986 when the November contract expired. NYMEX is also designated to trade options on crude oil and heating oil. The only actively traded energy contract that is similar to a NYMEX contract is the "gas oil" (the European equivalent of heating oil) contract on the International Petroleum Exchange of London.

volume in 1986. The major market participants in NYMEX energy futures contracts during 1986 were integrated oil companies, refiners, marketers, and traders (resellers), who together comprised 80% of the market. Other participants were producers, traders (defined as firms primarily engaged in commodities trading), investment houses (investment banks with cash/futures oil trading operations), and option market makers. ^{77/}

Energy futures are used for hedging various cash market price exposures. Hedging can be done to fix a price of crude production, to establish a fixed price sales contract to protect the price of a foreign cargo in transit, to guarantee a refiner's margin by pricing a cargo's price on a destination net-back basis, ^{78/} or to hedge incremental production or sales, purchase commitments, exchange agreement balances, or to fix fuel costs, incremental refinery output, etc.

The NYMEX crude oil contract calls for delivery of 1,000 barrels ("bbl.") of light "sweet" crude from one of 12 domestic

^{77/} NYMEX conducted an energy market profile survey based on an analysis of open interest from July to December 1986. "NYMEX Energy Market Profile Reveals 15%+ Foreign Participation." NYMEX, This Month at NYMEX (October 9, 1986).

^{78/} This is the same as the net-back price referred to above (supra note 75) except that the prices of the products used to make up the price are the prices of product at the destination.

and foreign fields of origin. ^{79/} The par delivery quality is West Texas Intermediate with 40 degrees gravity and .4% sulfur. The contract also sets forth a number of additional grade and quality specifications ^{80/} and has set a range of price differentials for variations from the par delivery quality.

Delivery on the crude oil contract is f.o.b. at any pipeline or storage facility in Cushing, Oklahoma, with pipeline access to one of two storage facilities. Delivery of crude oil must take place between the first and last calendar days of the delivery month, with the timing of deliveries determined by pipeline scheduling. Delivery may be made, at the buyer's option, by transfer into a designated pipeline or storage facility, in-tank transfer without physical movement of product, in-line transfer or "book-out" (if the seller agrees to such transfer), ^{81/} or by inter-facility transfer ("pump-over"). Where there are no quality specifications available from a

^{79/} Blends of these crude streams are not deliverable in a single contract except such blends that constitute a pipeline's designated "common stream" shipment (*i.e.*, oil piped through a pipeline at the same time) which meets the grade and quality specifications of the contract.

^{80/} These apply to sulfur content, gravity, viscosity, Reid vapor pressure, level of basic sediment, water and other impurities, and pour point.

^{81/} In-line transfer is a transfer of crude oil which is physically in the pipeline. Transfer is effected by notifying the pipeline of a change in ownership. Book-out transfer is a transfer by book entry or by netting against previous commitments.