

## **CFTC Policy Statement on Price Differentials**

(Commodity Futures Law Reports, Number 48, page 6, May 20, 1977)

A policy for evaluating contract price differentials for reviewing contract market rules, continued designation submissions and applications of new contract markets has been approved by the Commodity Futures Trading Commission.

Generally, locational and quality differentials in futures contracts should reflect normal commercial price differences as they are represented by cash price differences between different points or grades. However, when cash market differences are unstable or where the product flow in the cash market is not relevant to the two points in the futures contract, differentials must be set at levels which fall within the range of values which are commonly observed or expected to occur in the future, which range can be adjusted by the elimination of any unusual or extreme differences.

According to Chief Economist Mark J. Powers, these differentials for non-primary delivery points should be set in order to maximize commercial participation while minimizing the potential for the basis at the par point to be moved away from "natural" values. Also, most deliveries should still take place at the par delivery points and the futures contract should ordinarily reflect the price for those points.

The same expected acceptable differential principle is applicable to different grades which are deliverable on a contract.

March 22, 1977

MEMORANDUM

TO: The Commission

FROM: Mark J. Powers  
Chief Economist

SUBJECT: Contract Terms and Conditions--Location and Quality Price Differentials

The Advisory Committee on the Economic Role of Contracts addressed, among other things, the issue of price differentials reflected in the terms and conditions for non-par delivery locations and non-par product qualities.

The attached paper discusses these issues and recommends an internal working policy the Commission could adopt for application by the staff in review of contract terms and conditions as part of 1.50 designation, 5a(10) rule reviews, etc.

If you have any question on this, please call my office. I will be happy to discuss it with you.

Attachment

March 17, 1977

## CONTRACT TERMS AND CONDITIONS

### Price Differentials

#### Introduction

In amending the Commodity Exchange Act and creating the commodity Futures Trading Commission, Congress gave special attention to the subject of contract terms and conditions, particularly the matter of delivery points, deliverable grades and the corresponding price differentials specified in the contract.

Section 5a(10) of the Act <sup>1</sup> as amended requires that "each contract market shall permit the delivery of any commodity on contracts of sale thereof for future delivery of such grade or grades, at such point or points, and at such quality and locational price differential as will tend to prevent or diminish price manipulation, market congestion, or the abnormal movement of such commodity in interstate commerce."

In addition, two other sections of the Act also apply to contract differentials. Section 5(a) provides that an exchange not located at a terminal market shall be designated as a contract market only when (among other things) it provides for the delivery of commodities on such contracts at a delivery point or points and upon terms and

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<sup>1</sup> Section 5a(10) further provides that if a contract market does not have adequate rules and regulations to achieve the objectives of section 5a(10), and fails to make necessary changes within 75 days of notification by the Commission, the Commission is authorized to order appropriate changes in rules and regulations of the contract markets after opportunity for hearing. Thus, the Act specifically leaves the first level of decisionmaking on delivery locations, grades and differentials to the exchanges. Only if the exchanges refuse to act and only after opportunity for a hearing can the Commission order changes in the rules which in the opinion of the Commission are necessary to accomplish the objectives of section 5a(10).

conditions approved by the Commission. Section 5(d) of the Act provides that an exchange shall be designated as a contract market only when (among other things) the exchange provides for the prevention of manipulation or prices and the cornering of any commodity by the dealers or operators upon the exchange.

At the present time, the staff has been reviewing fixed contract price differentials using the "normal" commercial price differential and/or transfer costs as the standard. These standards are not relevant in the cases where differentials observed in the cash markets are highly unstable or where the product flow in the cash market is not relevant to the two points being considered in the futures contract. As a result, the staff has been forced to reserve judgment on contract differentials in several of its contract reviews. The purpose of this paper is to suggest more comprehensive standards for review purposes.

#### Report of the Advisory Committee on the Economic Role of Contract Markets

The Advisory Committee on the Economic Role of Contract Markets recognized that the ideal contract was one that reflected a balance in the terms and conditions so that neither the buyer nor the seller was favored during the delivery process. In their view, such a contract potentially provided the most useful price discovery and hedging instrument to commercial interests. The committee also recognized that properly drafted contract terms and conditions can be more effective in preventing market abuse than most regulatory actions taken after the fact.

The committee addressed the issues relating to the following conditions of delivery:

1. The number and location of delivery points.
2. The characteristics of the designated delivery point or points.
3. The differential specified for various delivery locations.

4. The quality or grades which are deliverable.
5. The differential specified for different deliverable grades.

Although the committee identified these terms and conditions as being particularly important, they did not recommend the development of any uniform standards which could be used in evaluating every contract. Instead they emphasized that each contract must be tailored to the characteristics of the particular commodity being traded and the "sufficiency" of the economic terms and conditions of a contract should be determined on a case-by-case basis. Their concept of "sufficiency" relates to sufficient delivery capability on the contract to assure normal convergence of cash and futures prices.

The committee agreed with the Commission's present policy of assuring that the economic terms and conditions of a futures contract mirror the marketing pattern of the cash commodity underlying the futures contract as closely as practicable. Deviations, they agreed, should be allowed from such a policy only when such are essential to economically viable futures trading.

The most important issue raised by the committee, and the one with the most substantive policy implications, relates to different locations for delivery, different qualities of the product, and the respective differentials.

The committee did not endorse any particular concept as a standard by which all price differentials should be judged. Rather, it recommended that differentials be judged relative to normal commercial price differentials reflected by quoted prices or, if such quotes were not available, that they be approximated by the estimated cost of transfer. It recognized, however, that in some instances, where the differentials are highly unstable and the costs of transfer are irrelevant, neither of these standards would be appropriate and in such cases recommended that the differentials be established at some acceptable level within an expected normal range of differentials (hereinafter referred to as the

expected acceptable differential). The committee also recognized that the pricing pattern for each commodity is unique and the differentials should be analyzed on an individual basis under a general policy of "sufficiency" of deliverable capability to assure convergence of prices.

### The Need for a Policy

Although a number of elements related to delivery points were discussed by the Advisory Committee on the Economic Role of Contract Markets, the most pressing area in which the CFTC staff needs guidance from the Commission relates to the establishment of a policy for evaluating contract price differentials.

Once such a policy has been established, the staff will then have a basis for reviewing changes in exchange rules submitted for approval pursuant to section 5a(12), submissions under section 1.50 of the regulations, and applications for designation of new contract markets. In addition, the policy will assist the staff in determining when to recommend that the Commission request revisions under section 5a(10) and in reviewing the revisions.

### The Economics of Delivery Provisions

Although much of the attention in recent years has focused on the number and location of delivery points represented in a contract, the issues are much broader than that. Equally important are the locational differentials established for each non-par delivery point, the quality standards of the par unit and of substitute units, the differentials for substitute qualities, the delivery procedures, and the mode of transportation. All of these elements, along with others, affect the ease with which delivery is accomplished and the real effectiveness of the threat of delivery at any particular delivery point. The real effectiveness of the threat of delivery is the crux of section 5a(10) and the natural means of assuring convergence of cash and futures prices.

[CFTC staff memorandum on price differentials (3/22/77)]

The policy issues at stake here go to the heart of real effectiveness and how real it must be in order to:

1. Maintain the widest possible usefulness of the contract to commercial interests for pricing and hedging, and
2. Minimize the susceptibility of the contract to price manipulation and market congestion.

It is with each of these objectives in mind that the delivery issues are discussed below.

### Expanding Commercial Appeal

The major economic function of futures markets is the provision of pricing and hedging services. To the extent that the prices of a futures contract correspond closely with those which are relevant to a particular producer, merchandiser, or processor, that firm can use the contract for pricing or hedging. To the extent that the firm faces futures prices which periodically diverge from their own cash prices, the hedging and pricing functions of the contract are diminished.<sup>2</sup>

The location of delivery points, quality specifications, and the respective differentials are therefore integral to a contract's commercial appeal. This is because the essence of hedging is either a stable or predictable relationship between the futures price and the cash price relevant to the hedger. To the extent that the hedger's cash price reflects the same location, the same quality, the same product, and the same time reference as specified in the futures contract, the higher the probability of a stable basis. To the extent that any one or all of these elements vary, the less certain he may be of having a stable basis.

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<sup>2</sup> It is important to note that it is not necessary that a firm make or take delivery to make commercial use of the futures contract. It is necessary only that a firm enjoys a reasonable degree of stability between its own prices and those of the futures, i.e., a stable basis.

For example, with a single delivery point, the contract price will reflect the value of the commodity at that point and any producer attempting to calculate his basis knows he needs to take into account only one location. Thus, one of his variables in basis calculation is fixed. In the case of multiple delivery points, however, the contract price will reflect the value of the commodity at the point which, at the time of delivery, is most advantageous to the party who has the option of selecting the location of the delivery. Usually this is the seller. Thus, the futures contract can come to represent different locations for different months, and sometimes for different days within the same delivery month. Since it is usually the short who specifies the location for delivery, this increased uncertainty concerning the location of deliveries and the basis normally accrues to the long. To the extent that the contract terms and conditions can be drafted to reduce uncertainty concerning basis, the commercial appeal of a particular contract can be broadened.

#### Preventing Market Congestion

The specification of delivery points, deliverable grades and their corresponding differentials have a direct bearing on the susceptibility of the contract to price manipulation and market congestion. For example, when supplies for a single delivery point are insufficient, demand for futures contracts for purposes of liquidation can lead to distortions in the price of the futures and, perhaps, even in the cash market.

In the case of multiple delivery points, market congestion may result in a divergence of the cash and futures prices, but usually this congestion occurs at the point which is most economically favored for deliveries. The existence of additional delivery points at differentials reflecting normal locational differentials limits these price divergences by allowing natural market forces to come into play, i.e., additional supplies are attracted from the non-par delivery points.



### Practical Problems in Setting Differentials

There are several elements to keep in mind when considering the establishment of differentials. First, in many cases, the cash market differences between delivery points and between different qualities of a product are not normally stable. They respond to short term market forces such as regional shifts in supply and demand, the immediate availability of transportation and storage, etc. In these cases, it is probably more appropriate to describe normal differences in terms of ranges of price values rather than specifying a discrete value. Second, for differentials which are stable in the short run, it is difficult--if not impossible--to determine in advance what will be normal in a delivery period which is months or years away. Hence, in setting fixed contract differentials, the best one can hope for is a small margin of error.

The magnitude of these problems is related to the physical properties of the product, its production characteristics, the nature of the marketing channels, the nature of the consumption patterns, etc. For example, the differentials remain more stable when the product flow in the physical channel tends to be in one direction. In such instances cash market differentials largely represent transportation costs. Further, if the product is easily transportable, and if there exists a broad and fluid cash market at diverse locations, it is less difficult to specify differentials.

When those conditions (unidirectional flow of product, easily transported product, and broad, liquid cash markets) do not hold, however, difficulties arise.

It is under this latter, more complex, set of circumstances that the differentials must be set at levels which simply fall within the range of expected commercial differences, that is, the observed or expected range as adjusted by the elimination of unusual or extreme differences. These differentials for the non-primary point(s) should be set to maximize commercial participation in the market while minimizing the potential for the basis at the par point to be moved away from natural values. Most deliveries should

take place at the par delivery point(s) and the futures contract will ordinarily reflect the price for that point or points. The same expected acceptable differential principle can be applied to the specification of differentials for various grades which are deliverable on the contract.

### Some Qualifications and Caveats

The concept of expected acceptable differentials should be applied only in those situations where cash market differentials are unstable and it is difficult to isolate one point or area and one quality that will guarantee sufficient deliverable supplies under all foreseeable market circumstances.

The application of such concept should not be permitted to maintain a particular location or quality as the par specification long past the time the cash market has passed it by. In other words, the par unit should normally be sufficient and expected acceptable differentials should not be utilized in such a way that they prop up an outmoded par point. Nor should the recognition of such differentials in any way condone market manipulation.

Neither should this method of setting the differential be used as an excuse for adding delivery points or qualities willy-nilly. Too many points or grades at artificial differentials can create a misconception to both speculators and hedges as to what the contract represents.

In all cases differentials should be set within the range of commonly observed cash market differentials, but in a manner which will not destroy the ordinary par product pricing of the contract. However, the more doubtful the sufficiency of the par product supplies, the greater urgency that the differential encourage delivery of non-par supplies.

Finally, it should be noted that when properly set such differentials encourage broader commercial participation in contracts and promote competition in the market.

## Summary

The important policy issue here involves the acceptance by the Commission of contract locational and quality differentials which may not correspond to the full range of commonly observed or expected values for commercial channels, but do fall within that range of values. In considering this issue, an acceptable estimate of expected commercial differences is appropriate when:

1. There is a possibility that under particular circumstances the supplies at the par point or of par quality may become temporarily insufficient and that under such circumstances there would be no other points or grades, with a stable cash market basis, that could be used to supplement the par point on a continuing basis.
2. It is desirable to broaden the commercial utility of the contract by placing an outer bound on the relationship between the futures price and the cash price at important non-primary markets.

In these cases, the estimated differentials should generally (1) assure that the futures contract will continue to reflect the par point and/or quality, (2) provide some measure of certainty with respect to the basis or the location and quality of actual deliveries, (3) provide the opportunity for non par deliveries to supplement par point and quality supplies when such deliveries are insufficient, and (4) permit a contract to be broadened to attract hedging interests with non-par locations or qualities by guaranteeing that fluctuations in their basis are bound by the differentials specified in the contract. This latter point is important because it can add new commercial appeal without appreciably alienating that which already exists.

## Recommendation

The Commission should adopt a policy requiring, to the extent possible, that locational and quality differentials contained in futures contracts reflect normal commercial price differences as represented by cash price differences while recognizing that in certain instances it may be necessary to set such differentials at a level which simply falls within

[CFTC staff memorandum on price differentials (3/22/77)]

the range of values which are commonly observed or expected to occur in the future. The staff should be instructed that in reviewing such differentials they are to consider the objectives of maintaining the widest possible usefulness of the contract to commercial interests for pricing and hedging and minimizing the susceptibility of the contract to price manipulation and market congestion.