



# U.S. COMMODITY FUTURES TRADING COMMISSION

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## DIVISION OF ECONOMIC ANALYSIS

August 28, 1998

### MEMORANDUM

**To:** The Commission

**From:** The Division of Economic Analysis *SM*

**Subject:** Cantor Financial Futures Exchange (CFFE) Applications for Designation as a Contract Market in the U.S. Treasury Bond, U.S. Ten-Year Treasury Note, U.S. Five-Year Treasury Note, and U.S. Two-Year Treasury Note Futures Contracts.

**Conclusion:** That the terms and conditions of the proposed futures contracts meet the economic requirements of Commission Guideline No. 1 and the speculative position limit provisions of Commission Regulation 1.61.

**Concurring:** Division of Trading and Markets *AJ*  
Office of the General Counsel *AW*

**Consulted:** Division of Enforcement *PK*  
Office of the Executive Director *D. K. ...*

### Processing Information

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### Requests for Comment

Federal Register Publication	Comments Received	Letters to Government Agencies
63 Fed. Reg. 9507 02/25/1998 63 Fed. Reg. 35912 07/01/98	Addressed in T&M memorandum.	<u>Department of the Treasury</u> <u>Board of Governors of the Federal Reserve System</u> No written comment received or staff objections expressed regarding Guideline No. 1 requirements.

### Introduction

The Cantor Financial Futures Exchange (CFFE), a joint venture of Cantor Fitzgerald LP (a large primary dealer and inter-dealer broker in U.S. Treasury securities) and the New York

Board of Trade (NYBOT),<sup>1</sup> has applied for designation as a contract market in the U.S. Treasury Bond, U.S. Ten-Year Treasury Note, U.S. Five-Year Treasury Note, and U.S. Two-Year Treasury Note Futures Contracts.<sup>2</sup> The subject proposal is CFFE's first contract market designation application. The terms and conditions of the proposed contracts, as discussed below, are substantially identical to those of the existing futures contracts in those Treasury securities that are actively traded at the Chicago Board of Trade (CBOT).<sup>3</sup> The only substantive differences are: 1) the CFFE does not propose to impose daily price limits; 2) the proposed minimum ticks for the CFFE Treasury note contracts are smaller than those specified for the CBOT contracts; and 3) the proposed CFFE trading provisions impose certain restrictions on "small orders" (*i.e.*, orders involving fewer than 10 contracts), as discussed below.

The CFFE plans to list the proposed contracts for trading on a trading platform that is similar to the system that a subsidiary of Cantor Fitzgerald, LP uses in its cash market U.S. Treasury securities primary dealer operation. Under this proposed trading system, market participants will place bids and offers via telephone with Terminal Operators (TOs) who then will enter the orders into CFFE's computer system.

The Division of Trading and Markets (T&M) is preparing a separate memorandum regarding the approval of specific CFFE rules and containing a recommendation regarding designation of the CFFE as a contract market in the proposed futures contracts. The T&M memorandum contains additional details regarding the proposed trading platform, and it includes a discussion of comments received in connection with the CFFE's applications.

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<sup>1</sup> The NYBOT is the result of the recent merger of the New York Cotton Exchange and the Coffee, Sugar, and Cocoa Exchange.

<sup>2</sup> The CFFE did not apply for contract market designation in options on those futures contracts.

<sup>3</sup> The CBOT was designated as a futures contract market in long-term U.S. Treasury bonds on August 2, 1977, in long-term (10-year) U.S. Treasury notes on September 23, 1981, in medium-term (5-year) U.S. Treasury bonds on June 19, 1979, and in short-term (2-year) U.S. Treasury bonds on September 30, 1981.

## Analysis

- Terms and Conditions of Proposed Futures Contracts

Futures Term	Exchange/Proposal	Comment/Analysis
<p><i>Deliverable Commodities</i></p>	<ul style="list-style-type: none"> <li>• <b>U.S. Treasury Bond:</b> A U.S. Treasury Bond with an original principal of \$100,000, a semi-annual coupon, and a time remaining to maturity of at least 15 years (given Treasury issuance patterns, the maturity window is 15 to 30 years). Time to maturity is calculated in years and complete quarter-years as of first day of contract month (e.g., a 15 year, 5 month bond will be considered 15 1/4 years).</li> <li>• <b>U.S. Ten-Year Treasury Note:</b> A U.S. Treasury Note with an original principal of \$100,000, a semi-annual coupon, an original maturity of at most 10 years 3 months, and a time remaining to maturity of at least 6½ years and no more than 10 years. Time to maturity is calculated in years and complete quarter-years as of first day of contract month.</li> <li>• <b>U.S. Five-Year Treasury Note:</b> A U.S. Treasury Note with an original principal of \$100,000, a semi-annual coupon, an original maturity of at most 5 years 3 months, and a time remaining to maturity of at least 4 years 3 months. Time to maturity is calculated in years and complete months as of first day of contract month.</li> <li>• <b>U.S. Two-Year Treasury Note:</b> A U.S. Treasury Note with an original principal of \$200,000, a semi-annual coupon, an original maturity of at most 5 years 3 months, and a time remaining to maturity of at least 1 years 9 months and no more than 2 years. Time to maturity is calculated in years and complete months as of first day of contract month.</li> </ul>	<p>Acceptable for hedging U.S. Treasury securities in the specified maturities. Maturity windows should result in adequate deliverable supplies, as discussed below.</p>

<i>Futures Term</i>	<i>Exchange Proposal</i>	<i>Comment/Analysis</i>
<i>Delivery Terms &amp; Procedures</i>	<ul style="list-style-type: none"> <li>Physical delivery through book-entry wire transfer.</li> <li>Conversion factor is used to price deliverable securities with a coupon rate other than 8% and to adjust for the actual term to maturity (calculated as described above) of the delivered security.</li> <li>Accrued interest added to the invoice price paid by the long to the short.</li> </ul>	Acceptable. Use of book entry wire transfer is consistent with cash market practice and it has worked satisfactorily for futures deliveries on CBOT. Procedures for calculating the invoice price, including the 8% conversion factors, are identical to those specified for the corresponding CBOT U.S. Treasury bond and note futures contracts and are appropriate for proposed futures contracts.
<i>Trading Months</i>	March quarterly cycle months.	No seasonality in issuance or cash-market trading. Thus, any months are acceptable from an economic standpoint.
<i>Delivery Period</i>	Any business day during the contract month for bonds, 10-year notes, and 5-year notes. Delivery period extends to third business day following last trading day for 2-year notes. <sup>4</sup>	Acceptable. Same as CBOT Treasury instrument futures contracts.
<i>Contract Size</i>	<p>\$100,000 original principal for bond, 10-year note and 5-year note contracts. \$200,000 original principal for 2-year note contract.</p> <p>First best bid or offer (that is, the first bid or offer at a new and better price) must be for 10 contracts or more. Smaller orders may join existing bids and offers or may be transacted in the market crossing session.</p>	Acceptable. Smaller than most Treasury instrument cash market transactions (which generally are in increments of \$1,000,000 face value) but not an impediment to delivery given that delivery is through book entry transfer. Minimum size for first best bid or offer (10 contracts) is consistent with cash market transaction sizes. Procedures for effecting trades of fewer than 10 contracts are also acceptable, as discussed further below.
<i>Trading Hours</i>	7:30 am to 5:30 p.m. Eastern time.	Any hours are acceptable.
<i>Last Trading Day</i>	Last trading day for bonds, 10-year notes, and 5-year notes is the eighth last business day of the contract month. Last trading day for 2-year notes is either the last business day of contract month or 2 business days prior to issuance of 2-year notes auctioned in the current month, whichever is earlier. Trading terminates at 1:00 p.m. on the last trading day for all contracts.	Acceptable. Same as specified for CBOT Treasury instrument futures contracts.

<sup>4</sup> Two-year Treasury notes typically are issued on the last day of the calendar month in which they were auctioned. If that day is a weekend or holiday, then two-year Treasury notes are issued on the first business day of the following calendar month. Thus, the proposed delivery period for the two-year Treasury note contract could extend into the following calendar month.

<b>Futures Term</b>	<b>Exchange Proposal</b>	<b>Comment/Analysis</b>
<i>Pricing Basis and Minimum Tick</i>	<p>In points and 32nds of 100 points with the following minimum ticks for outright transactions:</p> <ul style="list-style-type: none"> <li>• <b>U.S. Treasury Bond:</b> 1/32 point (\$31.25 per contract).</li> <li>• <b>U.S. Ten-Year Treasury Note:</b> ½ of 1/32 point (\$15.625 per contract).</li> <li>• <b>U.S. Five-Year Treasury Note:</b> ¼ of 1/32 point (\$7.8125 per contract).</li> <li>• <b>U.S. Two-Year Treasury Note:</b> ¼ of 1/32 point (\$15.625 per contract).</li> </ul> <p>Inter-month spread transactions can be executed at ½ of the above ticks in each contract. Inter-commodity spread transactions can be executed at lowest available minimum tick for outright transactions.</p>	<p>Acceptable. Pricing convention is the same as used in the cash market. Minimum tick for U.S. Treasury bond contract is not inconsistent with cash market practice and is the same as the minimum tick specified for the CBOT Treasury bond. The minimum ticks for the note contracts are consistent with the cash market minimum ticks and are half as large as those for the corresponding CBOT Treasury instrument futures contracts.</p> <p>Proposed spread transaction provisions are the same as those adopted for other contracts.</p>
<i>Daily Price Limit</i>	None.	Acceptable. Consistent with Guideline No. 1 and cash market practice since there are no price limits in the cash market.
<i>Position Accountability and Speculative Position Limit Provisions</i>	<ul style="list-style-type: none"> <li>• <b>U.S. Treasury Bond:</b> Category 3 position accountability with a trigger at 10,000 contracts.</li> <li>• <b>U.S. Ten-Year Treasury Note:</b> Category 3 position accountability with a trigger at 7,500 contracts.</li> <li>• <b>U.S. Five-Year Treasury Note:</b> Category 3 position accountability with a trigger at 7,500 contracts.</li> <li>• <b>U.S. Two-Year Treasury Note:</b> Speculative position limit of 5,000 contracts in all months combined and 5,000 contracts in the spot month.</li> </ul>	<ul style="list-style-type: none"> <li>• Position accountability is acceptable for these three contracts given liquidity of underlying markets. Trigger levels are identical to those on the CBOT and are also acceptable for the CFFE contracts. Category 3 position accountability is more conservative than the CBOT for the Treasury bond contract (the CBOT has Category 2) and the same as the CBOT for the 5-year and 10-year Treasury note contracts. Category 3 is acceptable for these CFFE contracts.</li> <li>• Two-year note speculative position limits are identical to those on the CBOT and are acceptable for the CFFE contract.</li> </ul>
<i>Reportable Level</i>	<ul style="list-style-type: none"> <li>• <b>U.S. Treasury Bond:</b> 500 contracts.</li> <li>• <b>U.S. Ten-Year Treasury Note:</b> 500 contracts.</li> <li>• <b>U.S. Five-Year Treasury Note:</b> 300 contracts.</li> <li>• <b>U.S. Two-Year Treasury Note:</b> 200 contracts.</li> </ul>	Acceptable. Same as levels specified in Commission Regulation 15.03.

• **Deliverable Supply for the Proposed Futures Contracts**

Deliverable supplies are adequate for each of the proposed contracts. As noted, the delivery windows and, thus, the economically deliverable supply, for each of the proposed

contracts are identical to those of the CBOT's corresponding U.S. Treasury bond and note futures contracts. The cash market for US Treasury instruments has exhibited the highest degree of breadth and liquidity and is characterized by tight bid-ask spreads. There are very large supplies of Treasury bonds and notes in the relevant deliverable maturities available for purchase or sale. The CBOT contracts are highly liquid and provide for very large economically deliverable supplies. There have been no problems related to the adequacy of deliverable supplies in the CBOT contracts.

The Division notes that, due to expected budget surpluses for fiscal year 1998 and subsequent years, the funding needs of the Treasury have declined recently, and they are expected to continue to decline in the future. In light of this, the Treasury has adopted changes which affect the pattern of issuance of five-year notes and the economically deliverable supplies of both five-year notes and two-year notes.

With respect to the five-year note contracts, the Treasury recently reduced the frequency of five-year note auctions to a quarterly basis<sup>5</sup> from a monthly basis while increasing the size of such auctions. The first quarterly five-year note auction was for \$16 billion, as compared to an average size of about \$11 billion for recent monthly auctions. This change in the Treasury's auction schedule will affect the economically deliverable supply of the five-year note futures contracts both at the CFFE and at the CBOT. Since the Treasury has increased the size of each five-year note issuance and since the most recently issued five-year note comprises a disproportionate part of the economically deliverable supply, the effect of the reduction in auction frequency on the economically deliverable supply of the five-year Treasury note futures contracts should be modest. Accordingly, the Division believes that deliverable supplies and the CFFE's proposed position accountability provisions (as well as the CBOT's existing substantially identical provisions) remain appropriate for the five-year note futures contract. However, the Division will continue to monitor Treasury practices and their impact on economically deliverable supplies, including the appropriateness of the position accountability provisions, for the five-year note contracts.

With respect to the two-year note contracts, the Treasury's recent changes did not affect directly the two-year note auction schedule. However, the Treasury recently discontinued the issuance of three-year Treasury notes. The Division notes that three-year Treasury notes issued one year prior to the delivery month (as well as five-year Treasury notes issued three years earlier) are deliverable against the two-year Treasury note contract if they fall within that contract's delivery window (that is, if they have a time remaining to maturity of at least 1 years 9 months and no more than 2 years). Thus, the economically deliverable supply of the two-year note contracts both at the CFFE and at the CBOT will be affected by the recent changes in the auction schedule beginning with the September 1999 contract month.<sup>6</sup> Since two-year notes will continue to be issued on a monthly basis, and since old three-year and five-year notes comprise a relatively small part of economically deliverable supplies for the two-year note futures contracts, the Division believes that deliverable supplies will remain adequate and that

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<sup>5</sup> Prior to 1991, the Treasury issued five-year notes on a quarterly basis.

<sup>6</sup> September 1999 will be the first contract month against which no Treasury notes with an original maturity of three years will be deliverable. The final issuance of three-year notes occurred in May 1998.

the proposed speculative position limit provisions (as well as the CBOT's existing substantially identical provisions) remain appropriate. As noted above, the Division will continue to monitor Treasury actions and economically deliverable supplies including the appropriateness of the speculative position limit provisions for the two-year note contracts.

- **Minimum Size for First Best Bid or Offer**

As noted, the contract size in each proposed CFFE contract is identical to that of the corresponding contract at the CBOT; that is, \$200,000 original face amount for the two-year note contract and \$100,000 original face amount for each of the other subject contracts. However, there are restrictions on persons wishing to place an order for fewer than 10 contracts ("small traders"). As discussed in detail in the T&M memorandum, orders for 9 contracts or fewer cannot be the *first* best bid or offer (that is, the first bid or offer at a new and better price); such orders can only join the existing best bid or offer. Further, a small trader generally cannot be an "aggressor," that is, a small trader cannot hit an existing bid or take an existing offer.<sup>7</sup> Thus, in effect, a small trader generally cannot place a market order (except in the crossing session, as discussed in the next section).

The Division believes that these proposed rules related to orders of small traders are not inconsistent with Guideline No. 1. Guideline No. 1 states that the contract size should be consistent with prevailing cash market practices. The Division notes that the typical cash market transaction size for U.S. Treasury instruments is at least \$1 million face amount—which exceeds the CFFE contract sizes (\$1 million is generally the equivalent of 10 CFFE contracts).<sup>8</sup> Thus, a contract size of \$1 million (under which small traders would be unable to use the contracts) would be acceptable under Guideline No. 1, since it would more closely reflect customary cash market practices.

In addition, the Division believes that the proposed provisions related to the execution of small trades do not raise other regulatory concerns from an economic standpoint. In this regard, if there is sufficient liquidity in the proposed contracts so that there exist bids and offers at prices reflective of the cash market, small traders should be able to execute transactions at market prices. If there is so little liquidity that there are no bids or offers posted for a small trader to join, a small trader may not be able to execute a transaction on the CFFE, even absent the restrictions on small traders. T&M further discusses the procedural aspects of these proposed provisions in its memorandum.

- **Market Crossing Session Price**

Proposed CFFE rules provide for market crossing sessions that will be held at four specified times during the trading day.<sup>9</sup> While the market crossing session was designed as an

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<sup>7</sup> A "small trader" can be an aggressor only if there are fewer than 10 contracts available on the other side of the market.

<sup>8</sup> A futures contract size smaller than typical cash market transaction sizes is acceptable under Guideline No. 1 if (as is the case with the subject contracts) there are no impediments to delivery of the amount specified in the futures contract and the hedging utility of the contract is not adversely affected.

<sup>9</sup> The CFFE has represented that crossing sessions will be scheduled at 8:15 a.m., 10:30 a.m., 2:55 p.m., and 5:15 p.m. each day.

alternative means of executing orders of small traders (orders of fewer than 10 contracts), any market participant can place buy and sell orders of any size (including orders for fewer than 10 contracts) with a request for a fill at the crossing session price. Such orders can be placed until one second before the crossing session is scheduled to occur. Buy and sell orders will then be matched at a specified price.<sup>10</sup> That price will be a randomly chosen transaction price on the CFFE's regular trading session from the three-minute period immediately following the scheduled time for the crossing session. The first step the CFFE will take to ascertain the price will be to divide that three-minute period into six 30-second periods. The CFFE will then randomly choose one of those 30-second periods and randomly choose a transaction price from that 30-second period. All transactions in the crossing session will be executed at that price. If there are no transactions in the regular CFFE session during that three-minute period, the crossing session will be canceled.

The CFFE's proposed crossing session price determination procedure is acceptable. The procedure should result in a price that is highly reflective of market conditions at the time of the crossing session. However, for any particular market crossing session, in the event of very rapid price movements or extreme volatility, the CFFE proposal could result in a price that is away from the market (for example, the crossing session price could be the highest or lowest price during the three-minute period) and thus it may be only roughly reflective of market conditions at the time of the crossing session.

The Division believes that the presence of the market crossing session and the attendant price used to fill orders do not raise regulatory concerns from an economic standpoint.<sup>11</sup> The market crossing session is a supplemental session, the procedures for executing trades and establishing the price during the session are set forth in the exchange rules, and no market participant (including small traders) is required to use it. Moreover, the Division believes that the market crossing session would not be readily susceptible to manipulation given the random nature of the procedure for determining the market crossing session price. Thus, there should be no systematic bias in the market crossing session price and any deviations from the actual market price should be the result of price changes due to market forces. Finally, there is no way for market participants to predict in advance whether the crossing session price will be a market-reflective price or whether it will be above or below the actual market price.

## Conclusions

The Division of Economic Analysis has completed its economic analysis of the CFFE's proposed U.S. Treasury Bond, U.S. Ten-Year Treasury Note, U.S. Five-Year Treasury Note, and U.S. Two-Year Treasury Note futures contracts. The Division believes that the terms and conditions of the proposed futures contracts meet the requirements of the Commodity Exchange Act (Act), the Commission's Guideline No. 1, and Commission Regulation 1.61 concerning speculative position limits. Also, the Division, based on its analysis, is of the opinion that the proposed futures contracts reasonably can be expected to be used for hedging on

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<sup>10</sup> Orders will be filled on a time priority basis. Thus, orders that were placed first will be filled first. Additional orders will be filled at the crossing session price in the order in which they were received until either buy orders or sell orders are exhausted.

<sup>11</sup> The T&M memorandum contains an analysis of the proposed market crossing session.

more than an occasional basis. Finally, the Division is of the opinion that the terms and conditions of the proposed futures contracts do not appear to make those contracts readily susceptible to price manipulation or other distortion and are otherwise consistent with Section 5(7) of the Act which requires that designation of a contract market not be contrary to the public interest.

As noted, T&M also has analyzed the CFFE's applications and is preparing a separate memorandum to the Commission regarding the approval of specific rules and containing a recommendation regarding designation of the CFFE as a contract market in the U.S. Treasury Bond, U.S. Ten-Year Treasury Note, U.S. Five-Year Treasury Note, and U.S. Two-Year Treasury Note futures contracts.