NEWS RELEASE

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Washington--The Commodity Futures Trading Commission released today the final staff report on stock index futures and related stock market activity during October 1987. The report analyzes the detailed data concerning the futures trading activities of major broker/dealers and institutional investors, along with certain pertinent aspects of their trading in the stock market. A detailed statistical analysis of futures and stock market price relationships was also conducted. In addition, this final report examines the performance and floor activities of futures exchange members in handling and executing customer orders, market making and trading practices in general. Finally, the report includes staff recommendations to augment or improve several aspects of futures market regulation.

In completing the economic analysis concerning October market events, the CFTC staff 1) analysed special survey data which described the acutal trading activities of major participants in the futures and their related stock market activities, and 2) analysed price relationships between the S&P 500 futures contract and stock prices from October 14 - 26. CFTC staff found no evidence to support the frequently cited argument that the combined trading strategies of index arbitrage and portfolio insurance selling caused the market break on October 19 or that these stategies combined to cause a downward spiral or cascade in stock prices.

The bull market in stocks that started several years ago began to trend down in late August and the downward trend was accentuated in early October. Recently, the Dow Jones Average and the S&P 500 values have hovered around levels establised in late October or early November. These facts combined with the review of trading activities support the belief that the massive wave of selling that engulfed both the stock and futures markets on OCtober 19 was precipitated by an unprecedented changed in investors' perceptions and was not initiated by technical trading strategies which interacted with each other and the stock market.

A more detailed summary of the entire final report follows.

Summary of FINAL REPORT ON STOCK INDEX FUTURES AND CASH MARKET ACTIVITY DURING OCTOBER 1987

CASCADE THEORY

The final report addresses the assertion that stock index futures trading, specifically portfolio insurance combined with stock market/futures market arbitrage activities, caused a downward spiral in stock prices. This spiral is commonly referred to as the "cascade" effect. This "cascade" scenario is most frequently recounted as follows: stock prices begin to decline as a result of fundamentally negative economic news; portfolio hedgers then put pressure on futures prices as they use the relatively liquid, low transaction-cost futures markets to increase their short futures hedges in light of declining stock prices; stock index futures begin trading at a significant discount to the stocks in the underlying index; arbitrageurs enter the markets, buying the (relatively) underpriced futures and selling the (relatively) overpriced replicating basket of stocks; stock prices then decline further; more short hedging takes place in the futures market; and that begets more arbitrage selling in the stock market, etc.

Careful analysis of special survey data collected jointly by the CFTC and the SEC for the period October 14 through 23 indicates that the actual trading patterns which occurred in mid-October do not correspond with the trading assumptions which would have to occur to support the cascade theory.

The CFTC analysis also examined intra-day trading activity, specifically arbitrage and portfolio insurance strategies, on October 16, 19, 20 and 22 and found no support for the assertion that futures prices led stock market prices in a downward spiral. The intra-day analysis indicates that, during the periods when the reported futures prices were at an extreme discount to stock prices (e.g., the mornings of October 19 and 22), a significant portion of those discounts occurred when a substantial number of the stocks included in the S&P 500 index were not actively trading. Thus, the index was distorted by including the last-reported "stale" prices of these stocks.

LEVELS OF ARBITRAGE AND PORTFOLIO HEDGING ACTIVITY

On October 16 and 19 the largest arbitrage trades accounted for about 11 and 6 percent (nearly 38 million shares) of NYSE volume for those days, respectively. These levels were lower than index arbitrage sell programs on October 14, when arbitrage accounted for more than 13 percent of total NYSE stock sales.

Portfolio hedge sales in the Chicago Mercantile Exchange's (CME) S&P 500 futures market were at their highest levels on October 16, 19 and 20. Daily gross sales ranged from nearly

15,000 to nearly 34,000 S&P 500 futures contracts, amounting to between 10 to 30 percent of total daily volume in the S&P 500 futures market.

Since index arbitrage was only significant from October 14 through 19, and portfolio hedge selling was substantial only on October 16 through 20, a significant downward price pressure caused by the two trading strategies most likely would have occurred on October 16 and 19. The analysis of the survey data on an intraday basis, however, does not support the contention that the two trading strategies combined to cause the large fall in stock prices experienced on those days.

Furthermore, on October 19, for each half-hour interval after 10:00 a.m., stock sales associated with other program selling not involving futures markets was of a greater magnitude than stock sales related to index arbitrage.

Portfolio hedging sales of futures contracts continued through the day on the 19th. However, portfolio selling was not particularly heavy during periods when stock market prices fell the most, nor particularly light during these periods when stock prices were recovering. This comparative statistical analysis does not support the contention that portfolio hedge selling and arbitrage trading combined to cause a downward spiral in stock prices.

SIGNIFICANCE OF TRADING ACTIVITY AFTER OCTOBER 20

After October 20, stock prices continued to be volatile although there was no significant index arbitrage or significant hedge selling of futures. For example, on October 22, when the Dow fell 78 points on volume of nearly 400 million shares, reported index arbitrage stock sales were less than 3 million shares. Similarly, on October 26, when the Dow fell 157 points on volume of over 200 million shares, no index arbitrage trades were reported.

At the market close on October 26, the Dow was only 55 points higher than at the close on October 19. Stock prices after October 19 did not recover to the price levels of October 16, much less to the levels of October 1. The fact that stock prices did not recover even without index arbitrage activity reinforces the conclusion that futures-related program trading was not the principal cause of the collapse of stock prices. Instead, the wave of selling that engulfed both the stock and index futures markets, particularly on October 19, appears to have been precipitated by a massive change in investors' perceptions.

TRADING AND OPERATIONAL PERFORMANCE OF S&P 500 INDEX FUTURES CONTRACT

The operational systems of the CME and its member firms functioned well, despite high volume and price volatility in that market. While larger than usual numbers of outtrades occurred on October 16 and 19, they were largely resolved before trading began the next day because of special trade checking sessions. When 23 CME member firms were surveyed, the CFTC staff found their order routing and trade execution systems functioned well and required no substantial modification during this period.

TYPES OF PARTICIPANTS IN THE CME S&P 500 INDEX FUTURES MARKET

CME audit trail data document that all major trading groups that generally trade in the S&P 500 market continued to trade on October 19 and 20. CME members trading for their own accounts absorbed customer sell orders, including during those times when the market fell the most. Furthermore, the number of "primary" brokers executing customer trades in the S&P 500 futures market increased on October 19 and 20 from the number trading on October 16. Therefore, experienced brokers remained available to execute customer orders.

RECOMMENDATIONS

Based on the evaluations and assessments in this final report and the earlier reports issued by the Commission's staff since October 19, the staff has made certain recommendations to augment or improve several aspects of futures market regulation. Some of the recommendations are:

1. Current **market surveillance systems** for stock index futures markets transmit to the Commission, each day for each market, data detailing total market activity, aggregate positions and trading for each clearing member, and the positions of individual traders in excess of specified reporting levels. These data are provided by exchanges, futures commission merchants, clearing members and foreign brokers and are available for analysis on the next day. While the staff believes current futures market surveillance systems for stock index futures are sound, **improved data collection capabilities in timed stock market transactions is necessary to implement a comprehensive data system spanning stock and stock index futures transactions and to expedite subsequent analysis of these markets.**

2. The staff reported that **coordination between regulatory agencies and exchanges** was generally excellent during October 1987. However, the staff also recommended better sharing of accurate, timely information and coordinated responses between securities and futures exchanges to situations, such as delayed openings and trading halts of New York Stock Exchange stocks. Additional coordination among exchanges regarding emergency closings also should be improved.

3. **Settlement banks should have additional access to financial and position data** regarding their customer clearing member firms to facilitate bank credit determinations and to verify the availability of funds to satisfy variation margin obligations.

4. Futures exchanges should **consider the addition of a percentage "cushion" to margin levels** to ensure greater protection against unexpected price spikes. Margin systems should be reviewed to assure they adequately address increased risks created by futures positions concentrated in one market.

5. **Aggregated intermarket market position data should be shared among regulators and self-regulators for financial surveillance** of firms' positions in related markets.

6. **Frontrunning** generally has been defined as trading while in possession of nonpublic information concerning "block" securities or securities options orders that affect or could affect the market price of the instrument purchased or sold. The question of frontrunning has recently been raised in regard to intermarket activity between securities and futures markets. Both securities and futures exchanges have rules that can be applied to such activity.

The CFTC staff **suggests that standards be established to identify potential intermarket frontrunning trading patterns and a mechanism be established to effectively communicate market surveillance data** to all exchanges related to possible front-running activities. The CFTC staff has identified the Intermarket Surveillance Group, a group created in 1981 to coordinate industrywide exchange of information and responses to regulatory issues within the securities industry to assure the integrity of options and equities trading, as an appropriate forum to facilitate communication of intermarket surveillance data needed to monitor such activities. CFTC staff also is considering the possibility of regulatory action on frontrunning.

The analysis in this report was based on large trader data transmitted each day to the Commission for each futures market, on a cooperative survey of major broker/dealers and sponsors of institutional hedging programs conducted with the Securities and Exchange Commission, and on data obtained through the Chicago Mercantile Exchange's computerized audit trail system, which allows the identification of trades by individual customers within one minute time intervals.

Copies of this final report and the other reports issued by the Commission staff since October 19 are available from the Office of Communication and Education Services, (202) 254-8630. The other reports previously issued are: **An Interim Report on Stock Index Futures and Cash Market Activities during October 1987, Follow-up Report on the Financial Oversight of Stock Index Futures Markets during October 1987**, and **Analysis of Trading in the Chicago Board of Trade Major Market Index on October 20, 1987.**