

CHAIRMAN RUDER'S RESPONSES TO
PREHEARING QUESTIONS FROM CHAIRMAN MARKEY

Q.1: The CFTC's "Final Report on Stock Index Futures and Cash Market Activity During October 1987" made the following statement concerning the quality of trading data information:

At present, it is the deficiency in the rapid and accurate identification of timed stock transactions, by beneficial ownership, that is the principal weakness in implementing a comprehensive data system spanning stock and stock index futures transactions.

- a) Do you believe that such enhanced data collection is necessary? If so, what trading information should be required, how should it be handled, and what regulatory or legislative changes are necessary to implement such changes?
- b) What progress or obstacles have been encountered in the on-going discussions between the exchanges and regulatory bodies concerning this issue?

It is my understanding that neither securities nor futures audit trail systems directly provide the identity of customers. In addition, it should be noted that while the index futures audit trails track only a few contracts, the NYSE audit trail tracks over 1,500 securities. The SEC inspections staff routinely evaluates the effectiveness of securities SRO surveillance, investigatory and enforcement programs. These evaluations include the quality of the surveillance systems' audit trail data. Overall, the Commission's inspection program has found that the SROs are diligently continuing to improve the quality of their audit trail data to enhance the effectiveness of the SRO surveillance systems. These audit trail and surveillance systems have been effective in detecting trading violations. Indeed, from 1984 to the present, the stock and options exchanges have completed 503 disciplinary actions involving trading violations.¹ I am aware of no figures cited in any studies as to the number or type of trading violations detected and prosecuted by the futures exchanges.

The reports by the Presidential Task Force on Market Mechanisms ("Brady Task Force"), the CFTC, and the SEC staff all note the usefulness in trading reconstructions of the "clearing house" and "large trader" information systems that have been created in both the index futures and options markets. These systems were developed in the derivative markets largely to monitor for credit risk and compliance with position limits for individual and "aggregated" accounts.

¹ These figures do not include an additional 481 actions for position limit violations for index and equity options. Trading violations encompass, among other things: frontrunning; stock, option, or stock/option manipulation; stock or options marking; wash or prearranged trades; fictitious trades; and short sale violations.

Because there are no comparable position limits in equities, specialized monitoring systems have not developed in the stock markets.² The SEC staff report, however, concurs with the Brady Task Force report that comparable systems should be developed for the stock market.³ Furthermore, as stated in my February 3rd testimony before the Senate Committee on Banking, Housing, and Urban Affairs (“February 3rd Testimony”), the Commission recommends that such systems be developed for the stock market.

In this regard, the different backgrounds of futures and securities “recordkeeping” are important. Traditionally, the futures markets, particularly their affiliated clearing houses, have sought information on day-to-day position changes in clearing member and customer accounts. These systems allow them to identify rapidly net position changes. Recently, the futures markets have undertaken to identify the sequence of trading on their floors. In contrast, the securities markets have focused on the ability to reconstruct the sequence of trading on their floors, rather than member firm or customer position changes. Thus, on a transaction-by-transaction basis, the securities markets have developed excellent audit trail capabilities. Nevertheless, the October experience demonstrates the need to be able to identify rapidly significant position changes in stock holdings. The Commission staff is preparing possible legislative initiatives that would be necessary to impose such a reporting requirement directly on non-broker-dealers.

Q.2: The CFTC’s final report makes the following conclusion:

. . . [F]utures-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.

On the same point, the Brady Commission report concludes:

The precipitous market decline of mid-October was “triggered” by specific events: an unexpectedly high merchandise trade deficit which pushed interest rates to new high levels, and proposed tax legislation which led to the collapse of the stocks of a number of takeover candidates. This initial decline ignited mechanical, price-insensitive selling by a number of institutions employing portfolio insurance strategies and a small number of mutual fund groups reacting to redemptions. . . . Selling pressure in the futures market was transmitted to the stock market by the mechanism of index arbitrage.

² Moreover, because of the vastly wider holdings of securities as opposed to futures contracts, there traditionally have been greater concerns over confidentiality and the potential of shifting stock trading activity overseas. In this connection, it should be noted that Chairman Greenspan has raised privacy concerns about such a system of reporting customer position information.

³ See SEC staff Market Break Report, at 3-27.

The SEC's "Recommendations Regarding the October 1987 Market Break," states:

The staff analysis of trading suggests that the initial decline that immediately preceded the October 19 market break was triggered by changes in investor perceptions regarding investment fundamentals and economic conditions. Although these changes acted as the "trigger," institutional stock selling was the largest single direct factor responsible for the initial opening decline on October 19. Thereafter, panic selling in a broad range of stocks, caused by a variety of factors, coupled with an absence of buyers (except at distressed levels), was primarily responsible for the free-fall decline that characterized the final hour of trading on the NYSE on October 19.

Rapid, large stock and futures sales by institutions, while not the "sole cause" of the market break, were a significant factor in accelerating and exacerbating the declines. Comment on the significant differences between the conclusions drawn by the CFTC, SEC and the Brady Commission regarding the market crash and why you believe any one view is correct or incorrect.

All three sets of findings cited from the reports by the CFTC, Brady Task Force, and the SEC staff agree that futures-related trading did not "cause" or "trigger" the October market break. In addition, all three reports agree that changed investor perceptions regarding investment fundamentals did act as the "trigger" for the market break. The Brady Task Force and SEC staff reports (but not the CFTC report) made the following additional observations: (1) institutional selling in the securities and index futures markets played a significant role in the market declines; and (2) certain futures-related trading strategies (e.g., arbitrage and portfolio insurance) were a factor in transmitting selling pressure to the stock markets and exacerbating the declines. I believe that the detailed analyses of trading in Chapter Four and Study III of the Brady Task Force report and Chapter Two and Appendixes A-D of the SEC staff report support these last two observations.

Q.3: In terms of the findings and methodology of the reports on the market crash presented by the CFTC and the Brady Commission, identify the five most significant areas where you believe such reports are inadequate or incorrect and why. If you do not identify any areas of disagreement, the Subcommittee will assume that you are substantially in agreement with the findings and methodology of such reports.

The staffs of the SEC and the CFTC collected the program-by-program trading data used in both reports from the major index trading firms by joint data requests. This same trading information was provided by the SEC to the Brady Task Force for its analysis. Thus, the methodologies of the data collection should be consistent for the three reports. It was the analyses of these data that differed.

The CFTC's analysis compared the daily aggregate volume of index arbitrage trading to the daily aggregate of NYSE volume. This comparison, in the CFTC's view, supported the conclusion that a small portion of NYSE volume consisted of arbitrage-related trading. The Brady Task Force and the SEC staffs, on the other hand, made comparisons of trading volume

from all types of index-related trading strategies (including index arbitrage, index substitution, portfolio insurance,⁴ and other program strategies) with NYSE volume for brief intervals (30-minute and 10-minute intervals).⁵ These analyses showed that index-related trading constituted much larger percentages of trading volume during certain key periods of the day. For example, from 1:00 p.m. to 2:00 p.m. on October 19, when the weak mid-day market rally was dramatically reversed, index-related selling constituted around 40% of NYSE volume in S&P 500 stocks -- and over 60% during three separate 10-minute intervals. These analyses, focusing on the market impact of highly concentrated program trading at critical time periods, convinced both the Brady Task Force and the Commission staff that the level of index-related trading was significant.⁶

Five additional areas where the CFTC report and the Commission differ are:

⁴ It must be emphasized that portfolio insurance is an index-related strategy. While the concept of quickly adjusting an institutional portfolio in response to stock price movements is analogous to stop loss orders and could be effected directly in the stock market, all of the portfolio insurance brokers and pension plan users interviewed by the SEC staff indicated that their strategies relied almost exclusively on planned futures liquidations. Because of perceived and real futures discounts on October 19 and 20, however, a significant portion of these liquidations was shifted directly to the stock market.

The SEC staff report also noted that a significant portion of program orders that was not for arbitrage or portfolio insurance (orders characterized in the staff report as for “other strategies”) also was futures related. For example, on October 19 and 20, short sales of approximately 5.6 million shares were used by one firm to hedge customer futures and options positions.

⁵ In addition, the SEC analysis consistently compared program selling with both total NYSE volume and NYSE volume in stocks in the Stanford & Poor’s (“S&P”) 500 stock index (in which the vast majority of program orders are concentrated). The Brady Task Force analysis concentrated on comparisons with total NYSE volume only.

⁶ Two minor points of difference among the reports should be noted to account for slight discrepancies in compilations of figures on program trading. First, the SEC staff compilations used an assumption of a 5-minute execution time for program orders -- this appeared to be more reasonable than assuming that the order entry times provided by firms were identical to order execution times. Neither the CFTC nor Brady Task Force reports utilized such an assumption. Thus, for example, a 9:58 order entry program would have been placed by the SEC staff, but not the CFTC or Brady Task Force staffs, in the 10:00 - 10:30 interval. Second, because of definitional problems in the strategies encompassed by “portfolio insurance,” the various staffs may have differed on whether particular programs should be included in this category. These points are discussed in detail in Chapter One of the SEC staff report.

(1) The CFTC recommended a review of margin systems only to assure that increased risks created by undiversified or concentrated positions are adequately addressed. The Commission recommended temporary margin increases for stock index futures with an exception for futures floor traders. Similarly, the Brady Task Force recommended that margins be made consistent across marketplaces.

(2) The CFTC believes that predetermined circuit breaker mechanisms (e.g., price limits) may ameliorate market volatility but believes that further study is necessary to determine whether the same mechanisms should be utilized in all markets. The Commission indicated that all-day stock price limits are inconsistent with a continuous auction market concept, and that the effects of imposing coordinated market openings and closings merited further evaluation before recommendations could be made. The Brady Task Force also endorsed coordinated circuit breakers.

(3) The CFTC believes that the current regulatory structure is adequate, and only endorsed the notion of a coordinating group composed of the CFTC, the SEC, and the Federal Reserve Board. In the February 3rd Testimony, a majority of the Commission recommended that the Commission be given final regulatory authority for equity-related products, particularly with respect to critical “intermarket” decisions such as coordinated trading halts and antimanipulative and frontrunning rules, and that its present authority to review proposed index futures contracts be expanded to include review of both new and existing contracts. The Brady Task Force also called for a revised regulatory structure, although one that differed from the Commission’s recommendation.

(4) The CFTC expressed no view on block trading procedures. In the February 3rd Testimony, the Commission suggested that the creation of block trading procedures, similar to those used in the stock markets, might allow the futures markets to accommodate futures blocks in a more liquid and orderly way.

(5) The CFTC supported information sharing, but did not address cross-margining in its report. The Brady Task Force supported unified clearing and credit mechanisms, including cross-margining. In the February 3rd Testimony, the Commission recommended a more coordinated, but not unified, credit, clearing, and settlement system across markets.

- Q.4: a) Do you believe that the reduction of index arbitrage on October 19 and 20 exacerbated or diminished the market declines on those days?
- b) As a general proposition, does index arbitrage (and the concomitant narrowing of the spread between futures and cash) dampen or accelerate volatility in the equity market?
- c) Are the NYSE’s restrictions on the use of the DOT system for index arbitrage during volatile trading days likely to cause more or less market volatility?

I recognize that, under normal conditions, the linkage of the markets through arbitrage promotes pricing efficiencies, and I am aware of the Brady Task Force concern that the reduction

of index arbitrage on October 19 and 20 decreased buying interest in the futures markets and exacerbated the futures price discounts. Similarly, I appreciate the concern that the “billboard” effect of futures price discounts may have encouraged additional stock selling. At the same time, it should be noted that arbitrage triggered by futures price discounts involves substantial additional stock selling. Moreover, although futures prices on the afternoon of October 19 and mid-day on October 20 were the equivalent of the Dow Jones Industrial Average (“DJIA”) moving to near 1400, the DJIA never approached that level, hitting a low of 1708.70 on the 20th. In light of these conflicting factors, I simply am not able to conclude whether additional arbitrage on October 19 and 20 would have increased or reduced stock market volatility.

The NYSE’s proposed rule change, currently under consideration by the Commission, would prohibit NYSE member firms’ use of DOT for executing customer and proprietary index arbitrage program trades if the DJIA moves up or down by 50 or more points from the previous day’s close. The effect of this proposed rule change, if approved, would preclude a continued flow of index arbitrage-related selling (or buying) from entering the stock market on an automated basis during times of stress. Although index arbitrage transactions could be effected through the use of floor brokers to execute stock purchases or sales, the speed and certainty of automatic execution through DOT would no longer be available, thereby making the arbitrage more risky and costly. Because this proposal is currently before the Commission, it would be inappropriate to comment on the merits of this matter at the present time.

Q.5 Do you believe that the current actions by the exchanges to implement price limits and raise initial margin requirements are advisable or not? Explain your answer.

Since October, the Chicago Mercantile Exchange (“CME”), the Chicago Board of Trade (“CBT”), and the Kansas City Board of Trade have established price limits for their respective stock index futures contracts. Once these limits are reached, the futures markets will cease trading. In recognition of the fact that stock index futures and options and stock markets form a unified market, a coordinated circuit breaker strategy across both the stock and futures markets would be more useful.

Since October, the securities exchanges have increased initial and maintenance margin requirements for stock index options, and the CME and the CBT have increased initial and maintenance margin requirements for their Standard & Poor’s 500 and Major Market Index futures contracts, respectively. I support these actions by the securities exchanges and the futures markets to raise initial margin requirements. The Commission has recommended that stock index futures margin requirements for non-floor traders should be increased, at least temporarily, to a level comparable to the lowest levels available in the stock market for market professionals, which are 20 to 25%. This temporary increase is warranted by concerns over the impact on the securities markets of current levels of leverage available through the purchase of stock index futures. The Commission’s staff report suggests that this leverage may need to be moderated, at least on a temporary basis, in order to ameliorate the liquidity demands placed on all markets as a result of the increased velocity and concentration of institutional trading resulting from index-related trading strategies.

Q.6a What role do you ascribe to margins with regard to the market crash?

Because margin requirements for stock index futures are lower than those for stocks, a market participant can achieve significantly higher leverage indirectly through the use of these products than through a direct investment in stocks. While the extent to which high futures market leverage contributed to the market break is uncertain, both the Brady Task Force and the Commission staff reports suggested that low derivative product margins increase stock market volatility. First, the leverage and low cost of index futures led certain institutions to engage in index-related trading strategies that resulted in a substantial increase and concentration of trading activity. This has accelerated and exacerbated price swings, especially during the October market break. Second, under normal market conditions, low margins contribute to unrealistic illusions about the amount of liquidity in the futures market. During the market break, this liquidity disappeared, so that institutions effected their selling activities in the stock market. Such sales added to the violent downward pressure on prices in both the equity and futures markets.

Q.6b Is there a significant difference between the role of margins on the stock market as opposed to the futures market?

The Brady Task Force discussed the two fundamental characteristics of margin requirements at pages 64 and 65 of its report. First, margins serve as a performance bond to ensure the ability of market participants to meet their financial obligations. Second, because margins represent collateral, they control the effective economic leverage achievable by an investment in any financial instrument. On the first point -- the performance bond aspect of margin requirements -- the concept of margins on futures differs significantly from that of margins on stock investments. The daily process of marking-to-market the value of investments, in which futures losers must advance margin to pay futures winners, differs fundamentally from the stock market practice of requiring investors to advance margin payments based on a lending formula. All margin requirements, however, have the second aspect in common: all margins are collateral and control the leverage possible in the investment in any financial instrument.

Q.6c We often hear that the futures market is a “professional market” and that margins serve a different purpose in the futures market than in the stock market. How do you distinguish between the functions of margins in the futures and stock markets? Explain why it is appropriate to permit futures margins to remain lower than stock margins, given the impact the various market studies found that the futures market has on the stock market.

As described in the answer to question 6b, margins in the futures market differ from margins in the stock market because of the daily process of marking-to-market in the futures market. All margins, however, represent collateral and control the effective economic leverage achievable by an investment in any financial instrument. Because margins on futures are lower than those on stocks, market participants can achieve much greater leverage indirectly through futures than through a direct investment in stocks. As stated in the February 3rd Testimony, the Commission suggests that futures margins for non-floor traders should be raised temporarily to levels comparable to those available in the stock market for specialists and market makers, which are 20 to 25%, in order to reduce futures market leverage.

Q.6d What would be the effect of higher futures margins on the futures markets? If futures margins were raised to a level equal to stock margins applicable to professionals, would activity in the futures market decrease? What was the impact on activity in the futures markets of the exchanges' post-crash increase in futures margins? Does the futures market provide a useful hedge to institutional investors only so long as futures margins remain at their current level?

Raising futures margin is intended to reduce the velocity of institutional trading that has arisen, in part, from low stock index futures margin. Increased margins will require institutions to increase the amount of their assets maintained in cash equivalents. Higher margin requirements also would lessen the speculative trading that had contributed to unrealistic illusions about the amount of liquidity in the futures market. Higher margins will increase the cost of futures trading. The Commission recommends that, while margins are temporarily increased, an analysis should be made of whether the benefits of reduced liquidity demand outweigh the increased cost of trading. In addition, because selling by futures floor traders ("futures locals") does not appear to have been a significant factor in the market break, the Commission does not recommend that initial margin increases apply to futures locals. Because lower margin requirements for market makers enhance market liquidity, the margins for futures locals should continue to be based upon levels designed by the futures exchanges to protect the clearing agencies from default. Finally, because the temporary initial margin increase the Commission suggests is addressed primarily to reducing the level of speculative activity, increased margins should not have any impact on the usefulness of futures as a hedge to institutional investors.

In regard to the question concerning the impact on activity in the futures markets of the exchanges' post-crash increase in futures margin, I believe that the Commodity Futures Trading Commission would be better able to provide you with information on that issue.