U. S. Securities and Exchange Commission
Washington, D.C. 20549 (202) 272-2650

News Release

PRELIMINARY AND PARTIAL OBSERVATIONS ON PROGRAM TRADING AND INVESTOR CONFIDENCE

Text Prepared from Notes of An
Address to
the National Security Traders Association,
53rd Annual Convention

Boca Raton Hotel & Club
East Camino Real
Boca Raton, Florida

October 19, 1986

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Washington, D.C.

In response to numerous requests, the text of this address was prepared from notes used by Commissioner Grundfest in an address to the 53rd Annual Convention of the National Security Traders Association. Footnotes have been added to assist readers who may wish further background material. The views expressed herein are those of Commissioner Grundfest and do not necessarily represent those of the Commission, other Commissioners, or Commission staff.

PRELIMINARY AND PARTIAL OBSERVATIONS ON
PROGRAM TRADING AND INVESTOR CONFIDENCE

I suspect that few events in the past year have caused more widespread discussion and concern among securities traders than the market decline of September 11 and 12.

On September 11 the Dow dropped 86.61 points on volume of 237.5 million shares. On the 12th the Dow dropped 34.17 points on record volume of 240.5 million shares. On the futures markets, bond futures opened sharply lower before any equity trading in New York even began. The S&P 500 contract, which closed on the 10th at a premium of 0.44 quickly moved to a substantial discount and remained at a discount until September 19th; on September 11, the September S&P 500 closed at a discount of 1.29, and on the twelfth it closed at a discount of 1.59. Just as interesting is the fact that the December S&P 500 futures also traded at a discount to the market. At times, the December contract actually traded at a discount to the September contract. By all data I've seen, that relationship between September and December contracts was unprecedented, and remains unique.

This record volume and sharp price decline has been widely analyzed. It has been criticized and defended.[1] At the Commission, we have been at work for weeks dissecting the trading patterns observed on the 11th and 12th so that we can better understand the complex relationship between equities, futures, and options markets. But before sharing any observations about the causes and consequences of the events of the 11th and 12th, I would like to point out two pieces of good news that we can extract from that experience. These are bits of good news that we take for granted, but perhaps shouldn't.

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[1] See, e.g., Crudele, Talking Business, N.Y. Times, Oct. 21, 1986, at D2; Seligman, Don't Fret About Program Trading, Fortune, Oct. 13, 1986, at 87; Samuelson, Don't Make Computers Stock Market Scapegoats, Am. Banker, Oct. 8, 1986, at 4; Jonas & Farrel, Program Trading, Let the Little Guy In, Bus. Wk., Sept. 29, 1986, at 100; Pauly, Smart Money Plays It Safe, Newsweek, Sept. 29, 1986, at 42; Scherschel, Bewitched, Bothered and Bewildered, U.S. News & World Rep., Sept. 29, 1986, at 58; Lee, What's With the Casino Society?, Forbes, Sept. 22, 1986, at 150; Cohen & Greenberg, Putting Prices on Track, Chi. Tribune, Sept. 21, 1986, at 1; How Computers Bewitch the Stockmarkets, The Economist, Sept. 20, 1986, at 87; Programmed for Change?, Financial World, July 22, 1986, at 12; Sebastian, How Program Trading Works and Why It Causes Controversy in the Stock Market, Wall St. J., Jan. 10, 1986, at 19.

Silver Linings?

In two days, the New York Stock Exchange traded 478 million shares. Back in the 1960's and early 1970's a volume of only 16 million shares a day, just 6 percent of average daily volume on the 11th and 12th, would have shut down Wall Street for days as firms would have wrestled long into the night and weekend to deal with the paperwork and backroom problems.

Apparently, the system can handle hundreds of millions of shares a day, and it can handle more. Let's not take that for granted--it's a tremendous source of liquidity--and the industry deserves kudos for its ability to move those shares with clockwork precision and at lightning speeds.

Also, the capital adequacy problems in the face of such a market decline were relatively minor. It appears that the industry is resilient and deserves credit for its substantial capital commitments. We should at least take some comfort in the fact that September 11th and 12th tested our capital adequacy standards, and we passed.

So, even if it was a dark cloud that passed overhead on the 11th and 12th, it certainly had a silver lining.

Insurance Policies or Casino Chips?

Now, as for the events of the 11th and 12th, it's important to recognize that some critics have lambasted the futures and options markets as valueless casinos that whipsaw the equity markets for no good reason. In a nutshell, I think those criticisms are overstated and ill-informed. The futures and options market add substantially to liquidity of the equity markets and allow much greater efficiency in the allocation of risk among equity traders--though this is not to suggest that trading in derivative product markets raise no significant, complex, or interesting questions.

I've found that a few simple examples help explain to investors how futures and options markets can vastly increase trading flexibility and reduce the trading risk inherent in any position an investor might want to take. For example, suppose you expect that IBM will outperform the market as a whole over the coming months, but you have no strong belief as to whether the market will be up or down in the aggregate over that time period. The derivative product markets allow you to go long IBM equity and short index futures so that you can invest specifically on the basis of the expected IBM-market spread. Without the ability to put on that type of a hedge, an investor might decide that the risk-reward ratio of an IBM purchase simply isn't worthwhile because of general market risk. Therefore, in this very simple example, the presence of the derivative product markets, i.e., indexed equity futures and options, increases the demand for a company's shares and leads to a purchase that might otherwise not have occurred.

Similarly, if an investor thought IBM would underperform the market, he could sell IBM and hedge with a long futures or options position. But my point is not that index futures or options cause price to go up, down, or sideways. Instead, my point is that futures and options provide the opportunity to subdivide risk and reallocate it.

That alone vastly expands the flexibility and precision of our capital markets! No longer must you buy or sell IBM and hope simply that it goes up or down. Now it's possible to buy or sell IBM hedged by any number of indexes, or even options, on competitors in the same industry. Quite simply, even though the list of equities traded has grown modestly over the past five years, the list of trading strategies has exploded with the introduction of equity-linked futures and options products.

Silent Beneficiaries of Program Trading

Another often overlooked fact about index trading strategies is that they frequently benefit people who don't even realize they're in the market. One popular and highly controversial technique is called portfolio insurance, or dynamic hedging. This technique is designed to insure equity portfolios against losses that exceed trigger levels set by portfolio managers. Put quite simply, dynamic hedging involves the sale of futures contracts into a declining market. When viewed in conjunction with index-arbitrage strategies, dynamic hedging is tantamount to a portfolio sell off designed to transfer downside risk from risk-averse investors to investors willing to absorb the potential losses on the contra-side of these trades. In other words, portfolio insurance can be viewed as just a new form of profit taking. Sure, it may be bigger and faster, but at its core, it may be nothing new.

Recent data suggest that portfolios aggregating more than $40 billion are subject to these portfolio insurance techniques.[2] Many of these portfolios are owned by pension funds. Interestingly, where an uninsured portfolio might have dropped by about 6 percent since mid-September, a comparable insured portfolio would have dropped only 3 percent, according

[2] See Anders, Investors Rush for Portfolio Insurance, Wall St. J., Oct. 14, 1986, at 6.

to an investment bank that had a program in place for its client.[3] Applying these figures suggests portfolio insurance could have saved 3 percent of the equity value of a pension fund for retirees who don't even know that the futures or options markets exist.[4]

Volatility

Be that as it may, the popular concern is that all this sophisticated futures and options activity is somehow adding to the volatility of the market, and that it has contributed to the sharp decline of last September 11th and 12th.

As I've already mentioned, the Commission is carefully studying the trading patterns observed over those two days. As you can well understand, reconstructing market dynamics in three different markets on a minute-by-minute basis is not an easy task--but that is what we must do if we are intelligently to answer many of the questions posed by the September experience. Although our examination is not complete, I can make three observations that suggest it may be quite difficult to lay a majority of the blame for September's decline at the door of the futures and options markets.

First, it appears that the decline was at least in part set in motion by events in Europe that suggested interest rates would not be coming down, and could in fact turn up. This view of interest rates was contrary to market expectations that had been gradually building over many weeks as a result of Treasury Secretary Baker's actions, and for

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[3] Id.

[4] Program trading has also been used profitably by pension funds seeking to divest holdings in companies doing business with South Africa. According to news reports, New Jersey's employee pension fund recently sold $117 million in equity of companies doing business in South Africa. The sale was executed as part of a transaction in which the purchaser paid a fixed price for the block. The purchaser thereby assumed the risk that the price of the shares would decline either because of general market factors or because of price effects associated with moving such large positions. The purchaser in turn hedged that risk by a "program trade" that involved selling futures. In the absence of such a transaction, the New Jersey pension fund would have had to absorb more of the price risk associated with its disinvestment program. Thus, program trading can and does assist in the large-scale restructuring of portfolios for a variety of purposes--including social investing. See McMurray, Stock Index Prices Decrease Sharply As Trading Opens, Wall St. J., Oct. 21, 1986, at 54.

as a result of Treasury Secretary Baker's actions, and for other reasons. Bond prices tumbled and bond futures were down the limit in Chicago even before the New York Stock Exchange opened. The lower bond futures quite logically depressed equity futures. Then, again quite logically, those lower futures prices were conveyed to the floor of the New York Stock Exchange by program trades triggered by large futures discounts. In other words, it seems unlikely that futures and options markets caused the September decline in the sense of initiating the decline. They may have affected the rate of adjustment, but they did not in any meaningful sense instigate the "correction." It is possible they were the messengers that brought bad news, and not the bad news itself.

Second, when considering the effects of index futures and options trading, we should not rule out the possibility that the presence of index products, and the insurance that they make available, helped the market reach its Dow peak of 1919.[5] In other words, prices might not have climbed so high in the absence of a futures/options safety net against a subsequent decline.

If this analysis is accurate, then whatever responsibility one wants to place with futures activity for the market decline must, in all fairness, be offset by some credit for the market's rise. Thus, even if one believes futures speed up some market declines, one may have to concede that they may also help the market hit new highs.

Third, it is possible that, due to changes in interest rate expectations and other factors, the market would have declined by more than 100 points beginning on September 11, but that the decline would have been spread over a week in the absence of futures and options trading. Also, the decline could have affected different stocks, to different degrees, with different dates of change. But, even if this hypothesis turns out to be accurate, is it a criticism of the market? In general, doesn't our system reward and value rapid adjustment to new information? Hasn't there always been a legitimate premium to traders who are able to adjust most quickly and accurately? Or, have we now moved through the looking glass, and into a world where we complain that trading takes place too fast, and that the market's adjustment to new information is too rapid?

The Small Investor

That observation brings me to my last point. There are inevitable difficulties and problems that arise whenever

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[5]The Dow hit its peak of 1919.71 on September 4, 1986.

familiar patterns are unsettled by new technology; whether the technology is in the financial markets, the computer industry, the automobile industry--anywhere.

I frequently get letters from small investors who perceive problems in the market. As you can probably guess, my mailbag has grown fat in the month since September 11. I won't quote from the California gentleman who holds the Commission personally responsible for a massive manipulation that, he says, caused the market to crash that day. But most of the correspondence touch on some good points, and I would like to quote from one recent letter:

> First, let me explain briefly that I am a 57 year old retired Air Force Lt. Col., and that I have been in the stock market to some degree or another for about 40 years . . . while no doubt considered a small investor in the eyes of big business, my portfolio of solid type investment stocks represented $224,000 as of 31 Aug. 86--not small to my eyes since that represents the vast majority of my financial assets . . . .
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> I lost 42.7 percent of all my 1986 gains in five trading days in September. This "loss" of paper value just between 29 Aug. and 12 Sep. of $24,267 was 53.5% of the gains I had accumulated for the whole year . . . .

The writer goes on to quote some recent articles, including one mentioning,

> Robert Sobel, prof[essor] of business history at Hofstra, who says "For the most part, the machines are taking over portfolio management," and Gerald Ely, director of info systems division at MLPF&S [Merrill Lynch], speaking of options/hedging/arbitrage/wide swings, who says "With these swings, you can't begin to play in the market without electronics and a really solid understanding of the market behind it . . . ."

He closes by saying,

> The point I make is that whereas in the recent past I have influenced people/ friends to invest in the market and even made specific suggestions as to stocks I owned and/or favored. However, with the wild gyrations of the market for no apparent reason and too

> often unduly influenced and affected negatively by the computer-based sell-offs, I will no longer recommend the market to my friends. Further, I am seriously considering reducing my holdings and vulnerability to erratic behavior of the market and the whims of button pushers with their computers. I wouldn't be surprised to see similar feelings on a widespread basis . . . .
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> P.S. My reaction to "one day movements shouldn't hurt small investors" is that they generally are down days, and if down days don't hurt, then how do up days help, and if up days don't help, why be in the market?
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> #2 It often amazes me the excuses the analysts find to blame a bad day on the market on; such as interests rates or inflation, when there was no news of significance to change any basics. It seems to me that some positive action by the federal government to reduce the deficit significantly would help a great deal--or the trade imbalance.

I want to emphasize that I take such letters seriously and believe that they warrant close and careful attention in conjunction with the Commission's current study of the events of September 11th and 12th.

Based on this letter, and many others like it, I think it clear that, whether or not program trading helps or hurts the market in the aggregate, many small investors believe firmly that it hurts them. They also believe there is something unfair about this new computer-driven game. And here, I think it's important that we in Washington and on Wall Street listen to the small investor because, given the history of Wall Street, some of these complaints may have merit.

Is Program Trading Closed to the Small Investor?

Historically, the small investor has believed that Wall Street is largely a fair game, in part because he could execute pretty much the same strategies played by Wall Street's largest investment banks. If the prediction is to buy stocks that will benefit from disinflation, the little guy can buy the same stocks available to Salomon Brothers. If the prediction is to buy cyclicals, the little guy can pick from the same cyclicals available to Goldman Sachs. Sure, transaction costs may be higher, execution prices may differ, and diversification may not be as great, but the little guy has the same choices available to him on the equity market as are available to the world's largest equity investors.

But, in the world of program trading, that perception of equality--whether or not the actual equality is there--is gone. First, you can't participate in many of these programs unless you have access to substantial capital. Many index arbitrages require access to about $9 million per program, and most investors don't have that kind of change lying around. I know I don't.

Second, you have to have quick access to multiple trading floors, and the ability to trade with very low transactions costs. In other words, you have to be in two places at once, and at low cost. Again, the little guy can't do it, even if he wants to and knows how.

Third, you have to have computers sitting on-line monitoring current prices, interest rates, and dividend streams. Now, if you're familiar with these programs, you can run them on a home computer, if you subscribe to a real-time reporting system. I know I can run some of these programs out of my PC-AT at work, and to me it's not really much of a mystery.

But, to the little guy who traditionally follows P-E ratios, reads the <u>Wall Street Journal</u>, and subscribes to <u>Value Line</u>, the computer barrier often seems insurmountable. Fortran is as incomprehensible as Farsi, and the numbers that make sense are Datsun 280-Z and BMW 318i, not Intel 80386 or Motorola 68010.[6] In other words, the little guy may not know how to play in the program game.

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[6]My staff are embarrassed by my reference to the 280-Z and 318i and inform me that the appropriate up-to-date references are to the Nissan 300-ZX and BMW 325e. They have pleaded with me to edit the text lest it becomes apparent that I am trapped in the automotive dark ages and still drive a 10-year old Volkswagon Rabbit, as I do. Among other reasons, they are concerned that my obvious lack of sensitivity to recent developments on the showroom floor will reflect poorly on their status as upwardly mobile professionals who consume as conspicuously as possible on the constraints of a government salary. For this, I beg my staff's forgiveness. I can only defend my ill-chosen references by observing that it may be a far better thing I do by keeping up-to-date with current microprocessor developments than with the latest in fuel injection technology.

From one perspective, there's nothing wrong or surprising with that state of affairs. The little guy can't build disk drives in his garage, do neurosurgery in his kitchen, or call plays every Sunday for his favorite NFL team. He hasn't got efficient scale, expertise, or access to do any of those things. From that perspective, what's the big problem with the little guy being locked out of the program game?

But traditionally Wall Street has been different. Wall Street has been perceived as an open and fair game where all players can at least place the same bets, even if the odds aren't perfectly equal. No more.

How To Let Small Investors Participate

What to do? Clearly the answer is not to throttle progress and shut down program trading. Instead, we should look to ways to open up the process to smaller investors, so that they too can participate in the evolution of program trading techniques. In particular, I'm thinking of mutual funds and other low-ticket, mass market vehicles by which the small investor can legitimately buy some of the expertise that it takes to make program trading work.[7] Some of the products are already on their way to the market,[8] and I would hazard the prediction that, as access opens to the small investor, and as pensioners and others come to understand the benefits of futures and options markets, concern over program trading

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[7]While preparing this text I discovered that essentially the same idea is developed in Jonas & Farrell, Program Trading, Let the Little Guy In, Bus. Wk., Sept. 29, 1986, at 100.

For a discussion of mutual fund involvement in the index futures and options markets, *see* Hoene, "Panel on Institutional Accounts, Investment Companies, Financial Futures, and Related Options--the SEC Perspective," Address to the Commodities Law Institute, Sept. 25, 1986 (attached).

[8]For example, on the day this address was delivered, there appeared in the New York Times two full page advertisements for mutual funds that rely on various forms of program trading to increase their returns. *See* N.Y. Times, Oct. 19, 1986, at F6. (The funds are Dreyfus Strategic Income and Dreyfus Strategic Investing. During the address Commissioner Grundfest displayed the full page ads to the audience as an example of valuing market patterns.) Other fund promoters have or are likely to develop competing products.

may diminish. In its place, support for futures and options trading will build.

What the market needs to do is invite the small investor to the program trading table--with all its risk and its rewards. Until then, the game may seem unfair, and people will, quite understandably, complain long and complain loud.