PROGRAM TRADING

THE NEW AGE OF INVESTING

THE ROLE OF THE INDIVIDUAL INVESTOR IN TODAY'S CHANGING STOCK MARKET

JEFFREY D. MILLER
WITH
MARA MILLER AND
PETER J. BRENNAN

A J. K. LASSER BOOK

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For Robert

INTRODUCTION

The crash of October 1987 caught most investors completely by surprise. In its aftermath, there was a public perception that program trading and the new market instruments were to blame. Program trading still looms large in the public's consciousness of the events precipitating the crash. The pressures on the regulators and the markets have brought proposals for many restrictions on program trading, a few of which have been put in place (such as restricted use of the Designated Order Turnaround, or DOT, system under certain circumstances). Some brokerage firms have announced that they will no longer engage in index arbitrage (which, of course, uses program trading) for their own accounts, although they will continue to do so for their clients.

One company, the Advest Group of Hartford, Connecticut, a multioffice brokerage firm, took out a full-page advertisement in *The Wall Street Journal* on January 28, 1988. Headlined "Stop Program Trading," the ad urged readers to write to the heads of the SEC, of the NYSE and of the appropriate committees of the House and Senate. It also urged readers to ask their present brokers if they engaged in this practice and, if so, to exercise the "pocketbook vote" and move their business elsewhere, presumably to Advest.

None of the many studies produced before, during, or after the market crash have called for an outright ban on program trading. There appears to be a recognition that it is impossible to put the genie back in the bottle, even if that were desirable. In London, a study of the International Stock Exchange's performance during the crash concluded that the participants in the British stock market should increase their use of arbitrage and hedging techniques to prevent a repeat of the October crash. The British report found that an absence of arbitrage activity allowed a large discount to the cash index to develop, driving down the market. In Dublin, the Irish Futures and Options Exchange (IFOX) opened for business in 1988, undeterred by the crash, showing that even small capital markets appreciate the value of these instruments. In Japan, if the trading in futures on bonds in the largest futures market in the world is any indication, the 1988 introduction of stock futures will have enormous consequences for their market.

Program trading is but another tool in the investors' kit. It is the child of the modern age of high-speed communications and computerized stock trading, and it will not go away. Like any mechanism, it can be abused as well as used, and its potential for abuse must be addressed. We hope, in this book, to encourage further understanding of program trading and all the other modern forces (instruments, strategies, new actors, *et al.*) that have contributed to a transformation of the stock market. And we hope to show today's individual investor that, by understanding these forces, one can be in the right position at the right time to profit from the market's moves.

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Chapter One

VOLATILITY AND THE CRASH

There is no such thing as liquidity of investment for the community as a whole.
John Maynard Keynes

Before the 'Crash of '87'

When RMS *Titanic* foundered on a cold April night in 1912, survivors heard the doomed band on the sloping deck play a hymn. According to one of the ship's radio operators, it was not "Nearer My God to Thee," but rather "Autumn."

Investors might well take that theme as their own, for it is not April but October that is the cruelest month. "There is something in October that sets the gypsy blood astir," a poet wrote, and might have added, "and sets the bears to roaring."

October of 1929 marked the beginning of the Great Depression, heralded by a 24 percent decline in the Dow Jones Industrial Average over two days, October 28 and 29. In October 1987 began—what? We don't yet know.

Table One

COMMON STOCKS: TOTAL RETURNS

1926	11.6%	1984	6.3%
1927	37.5%	1985	32.1%
1928	43.6%	1986	18.5%
1929	(8.4%)	1987	5.2%
1930	(24.9%)	1988	16.8%
1931	(43.3%)	1989	?
1932	(8.2%)	1990	?

SOURCE: SBBI (Stocks, Bonds, Bills and Inflation) 1988 Yearbook (Chicago: Ibbotson Associates, 1988) p. 150.

Such literary-historical thoughts may have crossed the collective mind of the financial markets early on the morning of Monday, October 19, 1987. People had been drawing parallels, however flawed, between summer 1929 and summer 1987. As Table One shows, the years leading up to 1929 had been good ones, with substantial returns on common stock investment. The same could be said for the years leading up to 1987.

But as the traders in the stock, futures and options markets around the country prepared for their day on October 19, 1987, more immediate and pressing concerns occupied their minds.

A Week of Apprehension

In retrospect, the previous week had been a tumultuous period, one of the most dramatic in the modern history of the financial markets. The markets closed on Friday, October 15, in a "waterfall," as one broker put it, 108 points down. That followed a week of record double-digit declines that stripped some 300 points from the average. From its high of 2,722 on August 25, the market had slid with increasing acceleration nearly 500 points, almost 20 percent off its peak.

More ominously, markets abroad in London, Tokyo, and Hong Kong, whose boom had paralleled that of the U.S. markets, had declined before the New York markets even opened on October 19. Overseas markets had observed the decline in New York the week before and especially the slide on Friday, which occurred after the overseas markets had closed. As New York opened on Monday, it was already late Monday evening in the Far East, and London's Monday trading was five hours along. Tokyo, which had closed down 2.3 percent on Monday, Tokyo time, would not reopen for hours. Hong Kong, having closed down 11.3 percent on this same day, the 19th, would later decide to remain closed and would not reopen that week. The shutdown did not relieve the pressure, though it did allow time to arrange a bailout of the futures market. When Hong Kong reopened, the Hang Seng Index (Hong Kong's version of the Dow Jones) fell 25 percent in the first thirty minutes of trading. The closing of the exchange did not help stem the stock market decline, and Hong Kong ended as far down as U.S. markets.

New York, as usual, was the world pacesetter. As New York's markets plunged from Friday the 16th onwards, markets around the world followed, the wave of collapse following the sun westward and backwashing to still-open markets in Europe. (London would finish Monday down 10.1%, the latter part of that day's drop in response to New York's falling market.) For the first time, events graphically demonstrated to both the professional and individual investor that the notion of a Global Market was a reality.

U.S. stocks that trade around the world on foreign exchanges were already feeling the selling pressure that was building in the U.S. One fund, the Fidelity Group, was trying to "get ahead of the expected selling on the NYSE by selling in London." Fidelity sold just under $90 million of stocks in London and was trying to meet its commitments to shareholders who had redeemed shares on the previous Friday at what the shareholders had expected would be Friday's closing price.

Worse, hanging over the market's opening was an enormous quantity of sell orders representing billions of dollars that had accumulated over the weekend of October 17–18. This awaited New York and Chicago traders as they braced for Monday's opening bell. The bulk of this overhang only became apparent toward the end of the preceding week; and, being difficult to precisely measure, it was all the more frightening.

Clearly, Monday, October 19, 1987, was to be no ordinary trading day. On that day, the Dow Jones Industrial Average suffered its worst one-day loss ever, plunging by 508 points. The percentage drop, 22.6 percent, was nearly twice that of the worst day prior to this date—Black Monday, October 28, 1929.

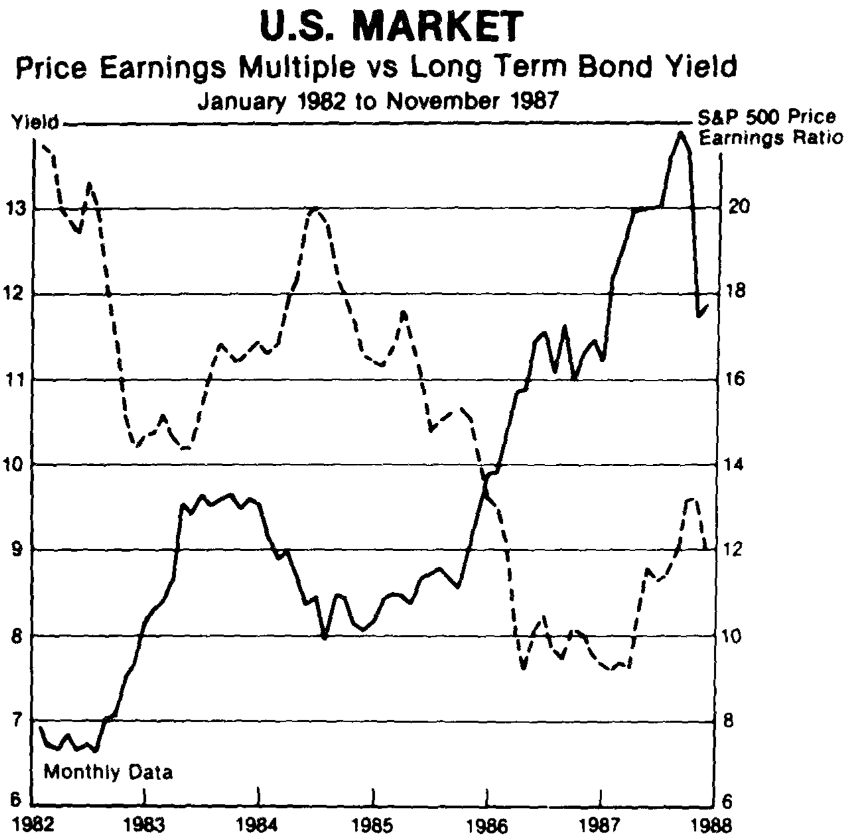
On October 19, 1987, trading volume on the New York Stock Exchange topped an incredible 600 million shares—1.5 million shares per minute of trading throughout the day. Unlike earlier wild swings of the Dow Jones Index, in which the percentage variation was negligible, the Dow's decline was disastrous by any standard. A 100-point-plus bounce the next day (the market's greatest single-day gain ever) on ever greater volume momentarily diverted attention from a financial system seemingly on the edge of chaos and total collapse.

Analysts, investors, and just about everyone else went looking for explanations—something that might account for the dramatic fall. More than a few went hunting up villains. One likely suspect was program trading, a technique that had come to symbolize all that was new in the securities markets.

Program trading encompasses a variety of techniques, but, simply stated, it may be defined as buying and selling groups of stocks rather than individual stocks. What is significant to note for our introductory purpose is the impact program trading can have on the total market movement because of the shares that make up the particular program. Program trading had been taking the heat for market volatility for several years. In the aftermath of October 19, when explanations were sought for the sudden point drop in the Dow, program trading became a convenient target.

A correction in the heretofore soaring bull market of 1987 had been long expected. Many observers felt that equities (on the average) had risen to such a point that they were out of sync with any reasonable criterion of value. As Figure One shows, price earnings ratios had risen dramatically from the early 1980s. In the long bull market that began in 1982, the Dow Jones Index had climbed past 1000, then past 2000 for the first time ever. Volume of trading had kept pace, growing to a level of 200 million shares a day.

During its rise, the market fluctuated, as it always has and always will. While one-day 100-point moves had not yet occurred, twenty- and thirty-point shifts were not unusual. People continued to track the absolute level of the Dow Jones, but it took a while for them



SOURCE: "Report of The Presidential Task Force on Market Mechanisms," January, 1988.

Figure One

to realize that a twenty-point move when the index is at 2000 is not as significant as the same move when the index is at 800. The crash of 1929, after all, involved a two-day decline totalling only 69 points in the Dow Jones Index.