October Crash Was Market-Generated

What caused Black Monday on the stock market? According to NBER Research Associate Robert Shiller, the most important factor for both individual and institutional investors was the 200-point drop in the Dow on the morning of October 19. Investors were reacting to price movements themselves rather than to any specific news stories.

Shiller sent questionnaires to investors on October 19 and shortly thereafter, when the Dow Jones industrial average had plummeted 508 points or nearly 23 percent. The answers he received from nearly 1000 individual and institutional investors indicated that no news story or rumor appearing on October 19 or the preceding weekend was responsible for their behavior that day. While some analysts blamed the crash on the October 14 news that the House Ways and Means Committee agreed on tax changes that would make corporate takeovers less attractive, Shiller found that only three respondents mentioned this. Neither bad trade deficit figures nor a poor producer price figure caused them to sell.

The short-run sell signal of a popular investment letter (Prechter), the increase in the prime rate by Chemical Bank on October 15, the suggestion by Treasury Secretary James A. Baker III that the dollar should fall further, the U.S. attack on an Iranian offshore oil platform, and too much debt (federal budget, international, or personal) also were not responsible for the massive sell-off, according to Shiller's survey.

Rather, Shiller reports, in Investor Behavior in the October 1987 Stock Market Crash: Survey Evidence (NBER Working Paper No. 2446), that the timing of the crash was related to internal dynamics of investor thinking, investors' reactions to plunging stock prices, and investors' reactions to each other. Before the crash, both buyers and sellers generally thought that the market was overvalued relative to fundamental values. People did not seem to realize how many investors thought that the market was overpriced, Shiller reports. In any case, investors continued to buy stocks.

According to Shiller's survey, there was a great deal of investor talk and anxiety preceding October 19. They were seeking the advice and market predictions of brokers and friends. Investors were checking prices frequently. Individuals, on average, checked prices 3.2 times on that Monday. Institutional investors checked the prices of stocks 35 times that day.

"Investors had expectations before the 1987 crash that something like a 1929 crash was a possibility, and comparisons with 1929 were an integral part of the phenomenon," writes Shiller. The crash cannot be understood without reference to those expectations.

Almost everyone in Shiller's sample heard of the market crash that Monday. In fact, his average individual investor got the news by 1:56 p.m.

Shiller learned that many investors manifested symptoms of real anxiety—difficulty concentrating, sweaty palms, tightness in the chest, or irritability. They were afraid for their financial welfare.

"Many investors thought they could time the market," notes Shiller. "Technical analysis played an
important role in their predictions, and thus in the
decline in demand on October 19. They also often
wrote 'gut feeling' as their forecasting method, and
often seemed to say that they were guessing about
the psychology of other investors.' They were try-
ing to guess when other investors would sell. The
view of many investors, that market psychology is
the reason for market movements, is consistent with
their holding stocks when they also thought them
overpriced.

"On Black Monday, investors were reacting to
price movements themselves rather than to
any specific news stories."

Many investors believed that the huge magnitude
of the price drops on October 14–16 implied that
prices would rebound after the weekend, on Mon-
day. Many other investors worried about a 1929-
style crash. The latter group obviously outnumbered
proponents of the "rebound theory."

Shiller concludes that portfolio insurance was
only a small part of predetermined stop-loss behav-
ior. Only 5.5 percent of institutional investors re-
sponding to the questionnaire said that they follow
an explicit portfolio insurance scheme: selling index
futures contracts continually as stock prices de-
cline to hedge against further losses. But 10 percent
of the institutional and individual investors respond-
ing to the survey had a policy of limiting losses. And
among those who sold on Black Monday, close to 40
percent of individual investors and 20 percent of
institutional investors had stop-loss policies. DF

workers who are unionized has grown from about 11
percent in the 1960s to over one-third today. Because
the private sector employs five out of every six work-
ers, the percentage of the labor force that is unionized
has plummeted from 36 percent in 1956 to 18 percent
in 1986. One in three union workers is now a govern-
ment employee.

In Contraction and Expansion: The Divergence of
Private Sector and Public Sector Unionism in the
United States (NBER Working Paper No. 2399), Rich-
ard Freeman argues that private sector unionism
has declined mainly because management oppo-
sition to union organization has increased. Public
sector unionism has expanded, he believes, mainly
because of the passage of comprehensive collective
bargaining laws.

Freeman disposes of two standard explanations
for the decline in unions. One is that increased em-
ployment in occupations (white collar), demograph-
ic groups (females and college graduates), industries
(services), and regions (the South) that are tradi-
tionally nonunion explains the decline in unionism.
Such "structural" explanations come up against a
very inconvenient fact, Freeman notes: unionization
has not declined nearly as much in other countries
(notably Canada) that have had the same change in
the structure of employment.

"The percentage of the labor force that is union-
ized has plummeted from 36 percent in 1956
to 18 percent in 1986. One in three union work-
ers is now a government employee."

Nor can changes in public opinion account for the
decline, because it simply has not changed much.
Public approval of unions, as measured by surveys,
was the same in 1985 as in 1973. Furthermore, in both
1977 and 1984, one-third of nonunion workers said
that they wanted unions at their workplaces. Yet
unionism declined sharply over this whole period.

Freeman finds that about half of the decline in
unionization can be accounted for by increases in
unfair labor practices. One indicator of antiunion
activity by private management, notes Freeman, is
the number of charges of "unfair" labor practices
(the term used by the National Labor Relations Board)
bring against management by unions. Such prac-
tices typically occur when a union is trying to orga-
nize. The annual number has roughly quadrupled
since 1960. This increase cannot be attributed simply
to a higher proclivity of unions for complaining to the
NLRB; the proportion of such charges upheld in
court has been roughly constant.

But why has management become more opposed
to unions? Freeman argues that the stakes are higher

Why Is Private Unionism
Shrinking While Public
Unionism Grows?

Unionism in the United States has changed dra-
astically in the last 20 years. In the private sector, it
has withered: the proportion of nonagricultural wage
and salary workers who are in unions has fallen from
one-third of the labor force to only 14 percent—a
level comparable to that of the Great Depression.
On the other hand, the proportion of public sector
now. In the 1970s the premium paid to union workers rose and unionism became more costly for employers. Also, increased competition from expanded international trade, deregulation, and nonunion firms is making unionism expensive.

In the public sector, on the other hand, there has been virtually no management opposition to unions. This void has made laws requiring collective bargaining easier to pass and has made union organizing easier. One reason for this lack of opposition is that a large percentage of public sector workers vote: they can punish recalcitrant politicians (or employers). Also, public sector employers who illegally oppose unions are likely to be removed from office. Finally, unions and their employers are often allies in lobbying for increased government spending. Government managers may welcome unions for their help in obtaining larger budgets.

In interpreting his findings, Freeman makes two caveats. First, unfair labor practices may substitute for lawful activity by management against unions: if so, Freeman's estimates understate the full impact of management's fight against unions. Second, lawful antionion activity may complement unfair activity: in this case, Freeman's measures overstate the impact of unfair practices but may accurately measure the impact of management opposition, lawful and otherwise. DRH

One of their leading hypotheses states that the rise in energy prices rendered obsolete much of the U.S. capital stock. That obsolescence reduced the effective capital per worker, thus reducing the rate of growth of worker productivity. But NBER Research Associate Charles Hulten, James Robertson, and Frank Wykoff refute this hypothesis in Energy, Obsolescence, and the Productivity Slowdown (NBER Working Paper No. 2404).

Hulten, Robertson, and Wykoff reason that if increases in energy prices really make older, energy-inefficient capital obsolete, then prospective buyers of used capital should only be willing to buy this capital for less money. The reason is that the expected future stream of income from such capital would be lower. But the authors find that no general decline in the prices of used capital occurred when energy prices rose.

“No general decline in the prices of used capital occurred when energy prices rose.”

They examine price data for five types of heavy-duty construction equipment (D9 tractors, D6 tractors, motor graders, rubber tire loaders, and backhoes) and four types of used machine tools (turret lathes, milling machines, presses, and grinders). These particular assets were selected partly because good data are available on them and partly because they represent one group of energy-intensive assets (construction equipment) and one group of energy-intensive assets (machine tools) used widely in manufacturing.

Correcting for other factors, such as inflation, the authors find an upward shift in the prices of four out of five types of construction equipment. The prices of the fifth type—backhoes—declined, but not significantly. On the other hand, the prices of three out of four types of machine tools declined significantly. The fourth—milling machines—increased, but not statistically significantly.

Thus, there was no general decline in prices of used capital after 1973. If increased energy prices had been a major cause of capital obsolescence, then the decline in prices of the more energy-intensive assets—construction equipment—should have been more pronounced than the decline in prices for the less energy-intensive assets—machine tools. Instead, prices for construction equipment increased while prices for machine tools declined. This casts doubt on the notion that increases in energy prices were a major culprit in the decline in U.S. manufacturing productivity in the 1970s. DRH
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This book should appeal to a wide audience and is must reading for anyone interested in corporate finance and recent trends in business.

Auerbach is a professor of economics at the University of Pennsylvania and an NBER research associate.

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Bodie is a professor of finance at Boston University. Shoven is a professor of economics at Stanford University, and Wise is a professor of political economy at Harvard’s Kennedy School of Government. All three are research associates of the National Bureau of Economic Research.

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