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Donald Bernhardt

Marshall Eckblad

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# Stock Market Crash of 1987

**October 1987**

The first contemporary global financial crisis unfolded on October 19, 1987, a day known as “Black Monday” when the Dow Jones Industrial Average dropped 22.6 percent.

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by Donald Bernhardt and [Marshall Eckblad](#), Federal Reserve Bank of Chicago

The first contemporary global financial crisis unfolded in the autumn of 1987 on a day known infamously as “Black Monday.”<sup>1</sup> A chain reaction of market distress sent global stock exchanges plummeting in a matter of hours. In the United States, the Dow Jones Industrial Average (DJIA) dropped 22.6 percent in a single trading session, a loss that remains the largest one-day stock

market decline in history.<sup>2</sup> At the time, it also marked the sharpest market downturn in the United States since the [Great Depression](#).

The Black Monday events served to underscore the concept of “globalization,” which was still quite new at the time, by demonstrating the unprecedented extent to which financial markets worldwide had become intertwined and technologically interconnected. Black Monday led to a number of noteworthy reforms, including exchanges developing provisions to pause trading temporarily in the event of rapid market sell-offs. In addition, the Federal Reserve’s response set a precedent for the central bank’s use of “liquidity” to stem financial crises.<sup>3</sup>

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## Events Leading Up to the Crash

Stock markets raced upward during the first half of 1987. By late August, the DJIA had gained 44 percent in a matter of seven months, stoking concerns of an asset bubble.<sup>4</sup> In mid-October, a storm cloud of news reports undermined investor confidence and led to additional volatility in markets. The federal government disclosed a larger-than-expected trade deficit and the dollar fell in value. The markets began to unravel, foreshadowing the record losses that would develop a week later. Beginning on October 14, a number of markets began incurring large daily losses. On October 16, the rolling sell-offs coincided with an event known as “triple witching,” which describes the circumstances when monthly expirations of options and futures contracts occurred on the same day. By the end of the trading day on October 16, which was a Friday, the DJIA had lost 4.6 percent.<sup>5</sup> The weekend trading break offered only a brief reprieve; Treasury Secretary James Baker on Saturday, October 17, publicly threatened to de-value the US dollar in order to narrow the nation’s widening trade deficit.

Even before US markets opened for trading on Monday morning, stock markets in and around Asia began plunging. Additional investors moved to liquidate positions, and the number of sell orders vastly outnumbered willing buyers near previous prices, creating a cascade in stock markets. In the most severe case, New Zealand’s stock market fell 60 percent. Traders reported racing each other to the pits to sell. In the United States, the DJIA crashed at the opening bell and eventually finished down 508 points, or 22.6 percent. “There is so much psychological togetherness that seems to have worked both on the up side and on the down side,” Andrew Grove, chief executive of technology company Intel Corp., said in an interview. “It’s a little like a theater where someone yells ‘Fire!’” (Glaberson 1987).

“It felt really scary,” said Thomas Thrall, a senior professional at the Federal Reserve Bank of Chicago, who was then a trader at the Chicago Mercantile Exchange. “People started to understand the interconnectedness of markets around the globe.” For the first time, investors could watch on live television as a financial crisis spread market to market – in much the same way viruses move through human populations and computer networks.

“You learn how interrelated we all are and how small we are,” said Donald Marron, chairman of Paine Webber, at the time a prominent investment firm. “Nowhere is that exemplified more than people staying up all night to watch the Japanese market

to get a feeling for what might happen in the next session of the New York market” (Cowen 1987).

## What Caused Black Monday

In the aftermath of the Black Monday events, regulators and economists identified a handful of likely causes: In the preceding years, international investors had become increasingly active in US markets, accounting for some of the rapid pre-crisis appreciation in stock prices.<sup>6</sup> In addition, a new product from US investment firms, known as “portfolio insurance,” had become very popular.<sup>7</sup> It included extensive use of options and derivatives and accelerated the crash’s pace as initial losses led to further rounds of selling.<sup>8,9</sup>

A number of structural flaws in the market exacerbated the Black Monday losses; in the years that followed, regulators would address these structural flaws with reforms. At the time of the crisis, stock, options, and futures markets used different timelines for the clearing and settlements of trades, creating the potential for negative trading account balances and, by extension, forced liquidations.<sup>10</sup> Additionally, securities exchanges had been powerless to intervene in the face of large-volume selling and rapid market declines.<sup>11</sup> After Black Monday, regulators overhauled trade-clearing protocols to bring uniformity to all prominent market products. They also developed new rules, known as circuit breakers, allowing exchanges to halt trading temporarily in instances of exceptionally large price declines.<sup>12</sup> For example, under current rules, the New York Stock Exchange will temporarily halt trading when the S&P 500 stock index declines 7 percent, 13 percent, and 20 percent in order to provide investors “the ability to make informed choices during periods of high market volatility.”<sup>13</sup> In the wake of the Black Monday episode, risk managers also recalibrated the way they valued options.<sup>14</sup>

## The Fed’s Response

In a statement on October 20, 1987, Fed Chairman [Alan Greenspan](#) said, “The Federal Reserve, consistent with its responsibilities as the Nation’s central bank, affirmed today its readiness to serve as a source of liquidity to support the economic and financial system” (Carlson 2006, 10). Behind the scenes, the Fed encouraged banks to continue to lend on their usual terms. [Ben Bernanke](#), writing in 1990, noted that “making these loans must have been a money-losing strategy from the point of view of the banks (and the Fed); otherwise, Fed persuasion would not have been needed.

But lending was a good strategy for the preservation of the system as a whole” (Bernanke 1990). According to Bernanke, the 10 largest New York banks nearly doubled their lending to securities firms during the week of October 19 even though discount window borrowings didn’t themselves increase (Garcia 1989).

Some experts argue the Fed’s response to Black Monday ushered in a new era of investor confidence in the central bank’s ability to calm severe market downturns. Unlike many prior financial crises, the sharp losses stemming from Black Monday were not followed by an economic recession or a banking crisis. Former Fed Vice Chairman [Donald Kohn](#) said, “Unlike previous financial crises, the 1987 stock market decline was not associated with a deposit run or any other problem in the banking sector” (Kohn 2006). On the other hand, some argue that the Fed’s response set a precedent that had the potential to exacerbate moral hazard (Cecchetti and Disyatat 2010).

Stock markets quickly recovered a majority of their Black Monday losses. In just two trading sessions, the DJIA gained back 288 points, or 57 percent, of the total Black Monday downturn. Less than two years later, US stock markets surpassed their pre-crash highs.

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## Endnotes

- <sup>1</sup> Black Monday is the name commonly given to October 19, 1987. The term should not be confused with other historical events bearing the same nickname.
- <sup>2</sup> The Dow Jones Industrial Average is a closely watched stock price index computed by Dow Jones & Co. Founded in 1882, the benchmark index consists of twenty transportation stocks, fifteen utility stocks, and thirty selected industrial stocks, as well as a composite average of all three.
- <sup>3</sup> The term liquidity refers to investors' ability to sell securities like stocks, bonds and future contracts in exchange for cash. Liquidity is a crucial characteristic of fully functioning markets.
- <sup>4</sup> The Congressional Budget Office defines asset bubbles as: "An economic development in which the price of a class of physical or financial assets (such as houses or securities) rises to a level that appears to be unsustainable and well above the assets' value as determined by economic fundamentals. Bubbles typically occur when investors purchase assets with the expectation of short-term gains because of rapidly rising prices. The increase in prices continues until investors' sentiment changes, in many cases resulting in a sharp decline in demand and in asset prices."
- <sup>5</sup> The 108.35-point decline on October 16 was, at the time, the largest one-day drop in the history of the DJIA, as measured in points.
- <sup>6</sup> Various news reports from the time refer to Commerce Department data showing rapid rise in foreign investment in the United States during the 1980s, before Black Monday.
- <sup>7</sup> Portfolio insurance is a hedging technique frequently used by institutional investors that employs futures and options to offset movements in prices.
- <sup>8</sup> A derivative is a security whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indexes.
- <sup>9</sup> Shiller (1988) found that: "An initial price decline starts a vicious circle by causing portfolio insurers to sell, causing further price declines, causing portfolio insurers to sell again, and so on."

<sup>10</sup> Stock trade transactions settled after three days, while options and futures market trades settled after one day. This cash settlement mismatch forced traders and investors to wait two days for stock trade proceeds to arrive in their accounts even though payments for options and futures trades were required after one day. The mismatched settlement protocols resulted in a virtual standstill in trading after the opening bell on October 20. The Fed's injection of liquidity later that morning encouraged stock trading to resume.

<sup>11</sup> Panicked selling is typically characterized by market conditions in which a critical mass of participants attempts to sell assets even as buyers are scarce or nonexistent. The lack of willing buyers means prices accelerate downward until willing buyers emerge, or until prices reach zero.

<sup>12</sup> According to the New York Stock Exchange's current website: "In response to the market breaks in October 1987 and October 1989, the New York Stock Exchange instituted circuit breakers to reduce volatility and promote investor confidence. By implementing a pause in trading, investors are given time to assimilate incoming information and the ability to make informed choices during periods of high market volatility."

<sup>13</sup> NYSE: <https://www.nyse.com/markets/nyse/trading-info>

<sup>14</sup> In the wake of the Crash of 1987, option volatility surfaces changed and the probabilities of fat tail (kurtosis)/skew distributions increased, leading to higher prices for out-the-money options. This anomaly implies limitations in the standard Black-Scholes option pricing.

## Bibliography

Bernanke, Ben. "Clearing and Settlement during the Crash." *Review of Financial Studies* 3, no. 1 (1990): 133-51.

Carlson, Mark, "A Brief History of the 1987 Stock Market Crash with a Discussion of the Federal Reserve Response," Finance and Economics Discussion Series No. 2007-13, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington, DC, November 2006.

Cecchetti, Stephen G., and Piti Disyatat. "Central Bank Tools and Liquidity Shortages." Federal Reserve Bank of New York *Economic Policy Review* 16, no. 1 (August 2010): 36-7.



Congressional Budget Office. "Glossary." Last updated January 2012, <http://www.cbo.gov/sites/default/files/cbofiles/attachments/glossary.pdf>.

Cowen, Alison Leigh. "Bitter Lessons Gleaned From the Fall." *New York Times*, October 22, 1987.

Garcia, Gillian, "The Lender of Last Resort in the Wake of the Crash," *American Economic Review* 79, no. 2 (May 1989): 151-55.

Glaberson, William. "The Market Plunge; Fall Stuns Corporate Leaders." *New York Times*, October 20, 1987.

Kohn, Donald L., "The Evolving Nature of the Financial System: Financial Crises and the Role of a Central Bank," Speech given at the Conference on New Directions for Understanding Systemic Risk, Federal Reserve Bank of New York and The National Academy of Science, New York, NY, May 18, 2006.

Murray, Alan. "Fed's New Chairman Wins a Lot of Praise On Handling the Crash." *Wall Street Journal*, November 25, 1987.

NYSE Euronext. "Circuit Breakers." Accessed November 19, 2013, <https://www.nyse.com/markets/nyse/trading-info>

Shiller, Robert. "Portfolio Insurance and Other Investor Fashions as Factors in the 1987 Stock Market Crash" *NBER Macroeconomics Annual* 3 (1988): 287-97.

Thrall, Thomas. Interviewed by the Federal Reserve Bank of Chicago.

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*Written as of November 22, 2013. See [disclaimer](#).*

