

BY JOHN MULLIN

The Fed, the Stock Market, and the “Greenspan Put”

Does the Fed ease monetary policy after large stock market declines? Should it?

Market commentators noticed a pattern during Alan Greenspan’s tenure as Fed chair from 1987 to 2006. The Fed, it appeared to some, had developed a policy of bailing out stock investors by injecting liquidity into the economy amid large stock market declines. This perceived tendency came to be called the “Greenspan put.”

By most accounts, the notion of a Greenspan put had its genesis in the Fed’s reaction to the stock market crash of Monday, Oct. 19, 1987.

Concerned that the unprecedented market decline might provoke credit and liquidity problems in the broader financial markets, the Fed had opened its liquidity spigots and subsequently cut its short-term interest rate target.

The “put” notion grew in 1998, when the Fed cut rates out of concern about the deteriorating state of global credit markets.

By 2001, the idea of a Greenspan put had become widespread. In January of that year, following a Fed rate cut, the *Financial Times* stated, “It’s official: there is a Greenspan put option. Yesterday’s half a percentage point interest rate cut by the U.S. Federal Reserve may not have been designed explicitly to bail out the stock market. But that is exactly what it is in danger of doing.”

The phenomenon became known as a “put” because it was seen by some observers as offering downside protection to equity investors — somewhat akin to an equity put option, which gives an investor the right to sell a stock (or basket of stocks) at a pre-specified price, thereby limiting the investor’s loss in the event of a major

market decline. Of course, no one took the “put” part of the “Greenspan put” phrase too literally. There was never any expectation that the Fed would offer investors the precise and bankable protection afforded by an equity put option. The idea was fuzzier: that the Fed could be counted on to provide some sort of liquidity backstop in the event of a major stock market decline.

The consensus view among economists and policymakers, then and now, is that there really is no such thing as a Greenspan put or Fed put — at least not as a policy designed to bail out stock market investors. According to this view, Fed liquidity injections to deal with liquidity crises or weakening economic activity may sometimes have the effect of buoying stock prices. However, as one economist put it, “it is a fundamental misreading of monetary policy to believe that the stock market per se is an objective of policy.” Still, to the extent that market participants believe in the “put,” it can shape market expectations and make things more complicated for policymakers.

WHENCE THE GREENSPAN PUT?

The emergence of the Greenspan put as a widespread notion about Fed behavior owed much to two factors: The first was an abiding desire among Fed policymakers to avoid repeating the perceived mistakes of the Great Depression; the second was a salutary, yet perplexing, new development that came to be dubbed “Goldilocks.”

During the Fed’s early years, prior to the Great Depression, many policymakers and academics were inclined to



Alan Greenspan served as Fed chair from 1987-2006.

conflate macroeconomic stabilization policies with policies designed to bail out individual firms — the type of bailouts that can create moral hazard problems by shielding investors from the consequences of their bad decisions, thereby encouraging them to take excessive risks. It was this concern that informed Treasury Secretary Andrew Mellon in the early 1930s when he gave his infamous policy advice to President Herbert Hoover: “Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate.”

Some economic historians, including former Fed Chair Ben Bernanke, have pushed back against the idea that the stock market crash of 1929 was one of the primary causes of the Great Depression. Still, there is

IMAGE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

little doubt that the market's massive decline between 1929 and 1932 signaled and contributed to deepening economic distress. The Fed's failure to heed deflationary signs — particularly shrinking monetary aggregates — later came to be recognized as a major policy mistake, thanks in large part to the historical analysis of Milton Friedman and Anna Schwartz as well as later research by Bernanke.

Based on the lessons learned, the Fed developed a much more activist stance in the post-World War II period and became increasingly inclined to extend credit during crises. The Fed did some of the groundwork for expanding its lender of last resort function in the late 1960s, well before Alan Greenspan's tenure as Fed chair. And it was not long before the Fed began to act on it. In 1970, after the default of the Penn Central railroad, the Fed provided liquidity to support the commercial paper market. In 1974, the Fed made a \$1.7 billion loan to Franklin National Bank to provide support for financial markets, even though policymakers recognized that the bank was likely to fail.

Upon taking his post in August 1987, Greenspan was soon confronted with an unprecedented crisis. From today's perspective, looking at a long-term price chart of the major U.S. stock indexes, it is hard to even identify Black Monday, the stock market crash of October 1987. It looks like a minor dip. Yet it was a scary event for market participants at the time. The Dow Jones Industrial Average declined by 23 percent — a record single-day loss that still holds. The stock rout — which had been exacerbated by automated sell orders associated with portfolio insurance — spread across global stock markets and raised fear among policymakers that it could have adverse effects on credit markets.

On the day following the crash, Greenspan issued a statement affirming the Fed's "readiness to serve as

a source of liquidity to support the economic and financial system." Behind the scenes, the Fed made credit available to banks and encouraged them to continue lending to securities firms on regular terms. The Fed intervened to cut short-term interest rates, a move that reversed the trajectory of increasing rates that Greenspan's Fed had initiated scarcely two months before. Stock markets subsequently

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stabilized, and the Fed reversed course and began increasing rates by the middle of 1988.

The October 1987 intervention became the first part of the Greenspan put lore. Yet to some analysts, the Fed's actions on that occasion hardly amounted to a put option. "I don't see his statement as so much a put option," says S&P Global economist Ken Matheny. "It was more of a reminder to the public that the Fed was prepared to act as a liquidity-provider of last resort." Nevertheless, it may have felt like a put option to many equity investors when the major stock indexes reached new highs two years later.

ENTER GOLDBLOCKS

A second episode that figured prominently in Greenspan put lore was the Fed's intervention following the September 1998 collapse of hedge fund Long-Term Capital Management (LTCM). That incident was intimately tied to distress in emerging markets — namely the Asian financial crisis, which began in 1997, and the Russian devaluation/default in August 1998. Not only did the Fed cut rates, it also encouraged private lenders to provide emergency funding to LTCM to avoid what may have been a disruptive unwinding of its portfolio positions. The

Clinton administration and Congress supplemented these measures by agreeing to inject fresh capital into the International Monetary Fund to help stabilize conditions in emerging markets.

The 1998 episode — like that of 1987 — was frightening to market participants. It felt like the onset of a full-blown credit crisis. Consequently, there was a lot of agreement about the wisdom of the Fed's choice to cut rates. One criticism, however, was that the Fed did not reverse the rate cuts quickly enough after global markets had stabilized.

Indeed, it was not until the middle of 1999, amid a booming stock market, that the Fed reversed course and began to increase short-term interest rates. Former Fed Gov. Frederick Mishkin later stated that the Fed's rate cuts following the LTCM episode were "a brilliant stroke" but that he was concerned about the impression the Fed had created by waiting so long to reverse course. Speaking at a later FOMC meeting, he said, "I don't know about a Greenspan put, but there was some element of that — and it is very hard to dissipate that impression."

Not too long thereafter, however, Greenspan turned noticeably hawkish — a policy shift that is sometimes neglected in discussions about Fed policy in the late 1990s. Testifying before Congress in February 2000, he expressed his belief that the U.S. economy suffered from excess aggregate demand, and he identified booming stock prices as a primary culprit. On prior occasions in the late 1990s, Greenspan had mused about stock market overvaluation, using the term "irrational exuberance." Now, it seemed, he was doing something to counter the situation. The Fed ended up increasing its short-term interest rate target by 1.75 percentage points between June 1999 and May 2000.

A third episode in the lore took place when the Fed cut short-term interest rates amid declining equity prices in

January 2001. (This was the episode that prompted the *Financial Times* to declare that there's "a Greenspan put option.") At the time, it looked to some like the Fed was blinking.

"That episode appeared a little troubling," says Matheny. "To some people, it looked like the Fed was getting the 'willies' and bringing out the Fed put again. In retrospect, though, you need to give Greenspan some credit because we did have a recession in 2001, although it's open to debate whether it would have amounted to an official recession if it were not for 9/11." It turned out that the January 2001 rate cut offered little protection for equity investors. The S&P kept on falling and did not find a bottom until late 2002.

To understand the Fed's behavior during the late 1990s, it is crucial to recognize that the U.S. economy appeared to be operating in a sweet spot. The economy avoided recession, and core CPI inflation declined quite steadily on a year-over-year basis. This situation — neither too hot nor too cold — came to be known as Goldilocks. Many observers attributed the subdued inflation to increased productivity. Whatever the cause, inflation remained subdued and that gave the Fed additional scope to intervene and supply liquidity to the market.

"I know that the Fed was definitely worried about inflation at the time," says Anna Cieslak of Duke University, who has analyzed the Fed's internal deliberations during the period. "Had inflation materialized, they may have taken a more hawkish stance. But, in this period, inflation kept on coming in lower than expected."

LOOKING FOR PATTERNS

By 2007, as the U.S. economy began to show increasing signs of weakness, the idea of a Greenspan put appeared to be casting a shadow over Federal Open Market Committee (FOMC) deliberations. The transcript of the August

2007 meeting shows that no fewer than five FOMC members mentioned the put explicitly. There was some indication that the notion was making committee members more reluctant to ease policy. Mindful of discussions about the put in the financial press, Richard Fisher, then president of the Dallas Fed, said, "I want to make sure that we do not take any action or say anything

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that might give rise to an expectation that such is to occur. Therefore... I am in favor of keeping the rate where it is." Despite some reluctance, the Fed soon started cutting short-term interest rates.

Shortly thereafter, William Poole, then president of the St. Louis Fed, addressed the conundrum facing Fed policymakers, arguing that they should not let apprehension about a Greenspan put get in their way. He allowed that "there is an element of truth to the argument that Fed policy can limit downside risk in the stock market. The same Fed policy that succeeds in stabilizing the price level and the real economy should tend to stabilize financial markets as well." But Poole had little concern that such a policy would create a moral hazard problem by shielding businessmen and financial market participants from the consequences of their bad decisions. He concluded, "It makes no sense to let the economy suffer from continuing declines in stock prices for the purpose of 'teaching stock market speculators a lesson.'"

Poole also presented evidence that was inconsistent with the notion that the Fed had, up to that point, systematically eased policy following large stock market declines. He presented data on Fed reactions to stock market declines of 10 percent or

more during 1950-2006. There were 21 such episodes. In roughly half of the cases, the Fed held rates steady or increased them. In the other half, the Fed lowered rates around the time of the market peak, although it was often the case that the rate declines began before the market's peak. This evidence seemed to run against the notion that the Fed had automatically responded to equity market declines by cutting interest rates.

A more recent study, co-authored by Cieslak and Annette Vissing-Jorgensen of the Fed Board of Governors, suggests that the Fed changed its behavior in the mid-1990s. "The statistical fact is that,

since the mid-1990s, the Fed has tended to lower rates by an average of about 1.2 percentage points in the year after a 10 percent stock market decline," says Cieslak. "This pattern emerges in the post-1994 period — it's not really there in the data before that." Moreover, they found that Fed interest rate changes following stock moves have been asymmetric — that is, the Fed's rate hikes following stock market increases have tended to be muted in comparison to its rate cuts following market declines.

Examining the language of FOMC minutes and transcripts, Cieslak and Vissing-Jorgensen found that the Fed pays significant attention to stock market developments. In addition, they found that "discussions of stock market conditions by the FOMC attendees are most frequently cast in the context of consumption, with the consumption-wealth effect highlighted as one of the main channels through which the stock market affects the economy."

Their findings are consistent with the view that stock market declines affect monetary policy by reducing policymakers' growth expectations. Since the mid-1990s, negative stock market movements between FOMC meetings have been strong predictors of subsequent downgrades to the Fed's

GDP growth forecasts. Comparing the Fed's forecast revisions to those of private sector forecasters, the researchers found "little evidence for the Fed overreacting to the stock market."

Not all researchers are so sanguine. In a 2017 paper, Sandeep Dahiya and Bardia Kamrad of Georgetown University, Valerio Poti of University College Dublin, and Akhtar Siddique of the Office of the Comptroller of the Currency found evidence of a Fed put in the prices of traded equity options. They expressed concern about the moral hazard problems associated with this "implicit down-side guarantee."

MODELING POLICY RESPONSES TO MARKET DECLINES

Economists have devoted much effort to building economic models that help them better understand the relationship between stock prices and optimal monetary policy. In an influential paper published in 1999, Ben Bernanke of the Brookings Institution and Mark Gertler of New York University examined optimal monetary policy in a model economy in which random stock market movements influence aggregate demand. They concluded, "Given a strong commitment to stabilizing expected inflation, it is neither necessary nor desirable for monetary policy to respond to changes in asset prices, except to the extent that they help to forecast inflationary or deflationary

pressures." In their model, the optimal approach for policymakers is to gather information about the economy from stock prices without attempting to target them. Thus, a large market decline may provoke a loosening of policy — not because the central bank wants to support stock prices *per se*, but because the stock decline signals weakening economic activity.

Economists have also explored the potential pitfalls for policymakers of reacting to stock market swings. A common concern is that, by cutting rates in reaction to large stock market declines, policymakers may engender expectations that they will do so again in the future under similar circumstances. This, the argument goes, encourages excessive borrowing and leverage. Studies that address this issue are part of a broad economics literature devoted to exploring the potential moral hazard problems associated with countercyclical policies — a literature that goes well beyond the Fed's reactions to stock swings to analyze a host of policies, including deposit insurance and the prudential regulation of banks' capital adequacy.

In a 2018 article, "Moral Hazard Misconceptions: The Case of the Greenspan Put," Gideon Bornstein of the Wharton School and Guido Lorenzoni of the University of Chicago's Booth School of Business presented a model that bucks the notion that central banks promote excessive risk-taking by easing

monetary policy during crises. In their framework, a more actively interventionist monetary policy decreases the need for regulation to rein in excessive risk-taking by banks.

The traditional notion, according to the researchers, is that monetary policy and bank regulatory policy are complementary. "The view is that the two things go together," says Bornstein. "If you want to have a more active monetary policy, you better have more regulation." The paper's model, however, demonstrates that countercyclical monetary policy can, by smoothing the economic cycle, reduce economic distortions that encourage overborrowing. In this way, according to Bornstein, it is possible for a more active monetary policy to actually reduce the load that needs to be carried by prudential regulation.

And what about the notion of a Greenspan put, which arose out of the real-world exercise of such monetary policy activism? As always, it depends on who you ask. To some skeptics, it amounted to free insurance for aggressive risk-taking. Former Fed vice chair Alan Blinder, on the other hand, expressed little sympathy for this view in a 2005 paper, stating, "If the critics are complaining that the Greenspan Fed's success in stabilizing inflation and economic activity reduced the perceived level of macroeconomic risk, we are totally unsympathetic — for that is precisely what a central bank is supposed to do." **EF**

READINGS

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