# What Happened To Markets The Last 15 Times The Fed Tightened... 

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Ever since the release of the minutes from the Federal Reserve's most recent policy meeting - which surprised markets by striking a hawkish tone - one question has gripped investors perhaps more than any other: when will the Fed start tightening monetary policy, and what will happen when it does?

Deutsche Bank Chief U.S. Equity Strategist David Bianco says, "Don't fear interest rate normalization." That's the title of one of his recent research notes, which takes a deep dive into what happened to markets each of the 15 times the Fed has embarked on policy tightening since 1965.

Bianco writes, "DB economists and rate strategists forecast an unchanged Fed Funds rate until 2014. However, they forecast a $3.0 \%$ 10yr Treasury yield at 2013 end. When QE ends it will likely be akin to early-cycle Fed tightening and the uptick in long-term yields will represent a cyclical rise in rates, both of which are bullish."


Bloomberg, Business Insider

Story: Bianco writes, "The 1965 tightening followed many previous hikes that were largely a post-war renormalization of rates. But the curve inverted in Dec. 1965 and yet hikes continued through Nov. 1966 on low unemployment - hawkish policy. Stocks fell into a bear market in 1966 even without recession and then the Fed started easing in Dec. 1966 and the market rallied."

Beginning Fed funds rate: 4.10 percent

Peak Fed funds rate: 5.76 percent

Source: Deutsche Bank

## December 1965 - December 1966



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 0.9 percent

12-month change in S\&P 500 from start of tightening: - 12.2 percent

Change in 10-year Treasury yield over entire tightening: 0.54 percentage points

Source: Deutsche Bank

## August 1967 - September 1969



Bloomberg, Business Insider

Story: The Federal Reserve began lowering rates in December 1966 over fears that the long-running economic expansion in the U.S. was about to turn. It continued to cut rates through July of 1968, when the economy began heating up again. Stocks traded sideways through March 1968, when they staged a rally through the rest of the year before falling in 1969.

Beginning Fed funds rate: 3.79 percent

Peak Fed funds rate: 9.19 percent

Source: Deutsche Bank, Allan Meltzer

## August 1967 - September 1969



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: -1.2 percent

12-month change in S\&P 500 from start of tightening: 3.2 percent

Change in 10-year Treasury yield over entire tightening: 1.41 percentage points

Source: Deutsche Bank, Allan Meltzer

## April 1971 - September 1971



[^0]Story: Bianco writes, "The hikes that started in April 1971 came relatively soon after a recession when unemployment had not yet shown any sign of turning downward. These hikes were seen as choking off the recovery and the stock market corrected 4/71-11/71. Although CPI was above $4 \%$ when these hikes started, elevated unemployment had unit labor costs (ULC) trending down. While CPI inflation was still running a bit hot, these hikes could be seen as a policy error. In Sept. of 1971 the Fed started cutting rates again and the market rallied into year-end and up strongly all of 1972 even as rate hikes began again but from low levels."

Beginning Fed funds rate: 3.71 percent

Peak Fed funds rate: 5.56 percent

Source: Deutsche Bank
April 1971 - September 1971


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 3.6 percent

12-month change in S\&P 500 from start of tightening: 6.9 percent

Change in 10-year Treasury yield over entire tightening: 0.75 percentage points

Source: Deutsche Bank
March 1972 - October 1973


Bloomberg, Business Insider

Story: A combination of a weaker dollar following the collapse of the Bretton Woods international monetary system and President Nixon's wage and price controls caused sparked serious inflation. In 1972, though measures of inflation like CPI were muted due to the controls, markets forced interest rates higher. It wasn't until December 1972 that the Fed voluntarily contributed to the rise in the Fed funds rate. Stocks traded sideways until October 1972, when they staged a year-end rally before falling throughout 1973.

Beginning Fed funds rate: 3.29 percent

Peak Fed funds rate: 10.78 percent

Source: Deutsche Bank, Allan Meltzer

## March 1972



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 0.6 percent

12-month change in S\&P 500 from start of tightening: $\mathbf{4 . 8}$ percent

Change in 10-year Treasury yield over entire tightening: 1.02 percentage points

Source: Deutsche Bank
March 1974 - September 1974


Bloomberg, Business Insider

Story: In 1973, an oil crisis caused the price of crude to soar. By the beginning of 1974, the economy had entered recession and inflation was running hot. Inflation in the price of goods and services was finally outpacing the central bank's expansion of monetary aggregates, and the Fed funds rate soared. Stocks fell throughout 1974.

Beginning Fed funds rate: 8.97 percent

Peak Fed funds rate: 12.01 percent

Source: Deutsche Bank, Allan Meltzer

## March 1974 - September 1974



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: -2.3 percent

12-month change in S\&P 500 from start of tightening: -15.2 percent

Change in 10-year Treasury yield over entire tightening: 0.83 percentage points

Source: Deutsche Bank
February 1977 - May 1980


Bloomberg, Business Insider

Story: The tightening that began in February 1977 followed a long easing cycle dating back to September 1974. However, inflation was on the rise again, spurring the Fed to begin hiking rates. Stocks fell throughout 1977 before bottoming out early in the following year.

Beginning Fed funds rate: 4.61 percent

Peak Fed funds rate: 17.61 percent

Source: Deutsche Bank, Allan Meltzer
February 1977 - May 1980


Bloomberg, Business Insider

## 1-month change in S\&P 500 from start of tightening: -2.2 percent

12-month change in S\&P 500 from start of tightening: -12.5 percent

Change in 10-year Treasury yield over entire tightening: 3.92 percentage points

Source: Deutsche Bank

## August 1980 - July 1981



Bloomberg, Business Insider

Story: In the spring of 1980 - an election year - the Federal Reserve briefly interrupted a longrunning tightening cycle to experiment with a two-tiered system in which small banks would be privy to a Federal funds rate 3 percentage points lower than that for large banks. Following the presidential election, under the leadership of Paul Volcker, the Federal Reserve hiked interest rates in response to double-digit inflation in consumer prices, inducing a recession. This in turn caused oil prices to decline, further reducing inflationary pressures in the economy. Stocks rallied until December, when they began a long period of decline.

Beginning Fed funds rate: 9.03 percent

Peak Fed funds rate: 19.10 percent

Source: Deutsche Bank, Allan Meltzer

## August 1980 - July 1981



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 0.6 percent

12-month change in S\&P 500 from start of tightening: 7.6 percent

Change in 10-year Treasury yield over entire tightening: 2.37 percentage points
Source: Deutsche Bank

## January 1982 - March 1982



[^1]Story: The last half of 1981 featured a falling Fed funds rate. The first part of 1982 marked a stable period for the Fed funds rate - the first stable period in a long time. In January, though, the monetary base spiked, and the Fed funds rate briefly rose. Stocks spiked in January before falling into March.

Beginning Fed funds rate: 12.37 percent

Peak Fed funds rate: 14.78 percent

Source: Deutsche Bank
January 1982 - March 1982


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: -1.8 percent

12-month change in S\&P 500 from start of tightening: 14.8 percent

Change in 10-year Treasury yield over entire tightening: -0.16 percentage points

Source: Deutsche Bank

## March 1983 - September 1984



Bloomberg, Business Insider

Story: Bianco writes, "There was a correction in 1983 (marked 1 on chart) about seven months from the cycle's first hike (10/83-7/84) that occurred when CPI exceeded $4 \%$. At the time investors were still spooked by the high inflation of the 1970s and early 1980s and took concern that elevated CPI would again lead to broad based wage inflation or high ULCs. However, ULCs stayed benign through the mid 1980s and by late 1984 the Fed began easing again and 1985 was seen as a soft landing."

Beginning Fed funds rate: 8.50 percent

Peak Fed funds rate: 11.44 percent

Source: Deutsche Bank

## March 1983



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 3.3 percent

12-month change in S\&P 500 from start of tightening: 6.1 percent

Change in 10-year Treasury yield over entire tightening: 2.21 percentage points

Source: Deutsche Bank

## February 1987 - November 1987



Bloomberg, Business Insider

Story: In February 1987, the Fed decided that the recent expansion in monetary aggregates had to reverse in order to protect the dollar from weakening further. It sold $\$ 8.4$ billion of securities, withdrawing liquidity from the market and forcing the Fed funds rate up. The tightening lasted through October, when the market crashed, before the Fed reversed and began easing again.

Beginning Fed funds rate: 5.98 percent

Peak Fed funds rate: 7.31 percent

Source: Deutsche Bank
February 1987 - November 1987


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 3.7 percent

12-month change in S\&P 500 from start of tightening: - 6.2 percent

Change in 10-year Treasury yield over entire tightening: 2.27 percentage points

Source: Deutsche Bank

## April 1988 - April 1989



[^2]Story: John Carlson of the Cleveland Fed writes, "a series of funds rate increases was resumed in April 1988, but not in time to head off an abrupt jump in the trend of core inflation...From April 1988 to March 1989, the funds rate increased more than 300 b.p., while the 10 -year Treasury rose only 100 b.p. Breakpoint analysis suggests that the sudden increase in the core inflation trend was contained and that the index began drifting down somewhat later, in August 1990. Moreover, this episode was followed by a recession beginning in 1990, implying that the necessary corrective policy actions may have exacerbated a weakening economy."

Beginning Fed funds rate: 6.52 percent

Peak Fed funds rate: 9.75 percent

Source: Deutsche Bank, Cleveland Fed

## April 1988-April 1989



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 5.6 percent

12-month change in S\&P 500 from start of tightening: 13.9 percent

Change in 10-year Treasury yield over entire tightening: 0.64 percentage points

Source: Deutsche Bank
February 1994 - March 1995


Bloomberg, Business Insider

Story: John Carlson of the Cleveland Fed writes, "With evidence that inflation had been contained, long-term rates began to head down in the spring of 1989 and continued this trend until the fall of 1993. A subsequent rise in long rates that began in November of that year represented a potential inflation scare. The FOMC responded vigorously, raising the intended funds rate $300 \mathrm{~b} . \mathrm{p}$. between January 1994 and February 1995." Stocks traded sideways throughout most of 1994 before rallying in December and throughout 1995.

Beginning Fed funds rate: 3.00 percent

Peak Fed funds rate: 6.00 percent

Source: Deutsche Bank, Cleveland Fed
February 1994 - March 1995


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: -3.0 percent

12-month change in S\&P 500 from start of tightening: - 2.3 percent

Change in 10-year Treasury yield over entire tightening: 1.50 percentage points

Source: Deutsche Bank

## April 1997-May 1997



Bloomberg, Business Insider

Story: Bianco writes, "The S\&P dipped 9\% in April 1997 (marked 3) on a 25bp hike on the Fed's displeasure with exuberant equity valuations. However, the dip was brief and the bull market continued. There was a correction in Oct. 1997 (4) and a near bear market in late 1998 (5), but these were related to the Asia Financial Crisis and Russian default and still very demanding PEs."

Beginning Fed funds rate: 5.31 percent

Peak Fed funds rate: 5.50 percent

Source: Deutsche Bank

## April 1997 - May 1997



Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 5.8 percent

12-month change in S\&P 500 from start of tightening: 45.5 percent

Change in 10-year Treasury yield over entire tightening: - 0.18 percentage points

Source: Deutsche Bank
July 1999 - July 2000


Bloomberg, Business Insider

Story: Bianco writes, "The yield curve didn't invert until March of 2000, however 1999 was feared to be late in the cycle by many investors despite low inflation given that it was eight years since the last recession. The popular debate at the time was whether or not the business cycle had been tamed and elongated versus history. The PE of the S\&P 500 climbed to 20 and higher, which contributed to a correction in 7/99-10/99 (marked 6), but the market rebounded and rallied strongly into year-end as the economy displayed health with unemployment falling further and dipping under 4\% in early 2000. However, 2000 brought signs of excessive investment in technology and telecom. A demanding PE and a hard rolling over of profits on a business spending recession started a bear market exacerbated by $9 / 11 / 2001$."

Beginning Fed funds rate: 4.76 percent

Peak Fed funds rate: 6.50 percent

Source: Deutsche Bank


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: -3.2 percent

12-month change in S\&P 500 from start of tightening: 6.0 percent

Change in 10-year Treasury yield over entire tightening: 0.31 percentage points

Source: Deutsche Bank

## June 2004 - August 2006



[^3]Story: As concerns over a brewing housing bubble mounted, the Fed began to hike rates in June 2004 and continued hiking all the way through the end of Fed Chairman Alan Greenspan's term in July 2006. Following the June 2004 announcement, stocks sold off - but only until August, when they began a rally toward new all-time highs.

Beginning Fed funds rate: 1.00 percent

Peak Fed funds rate: 5.25 percent

Source: Deutsche Bank
June 2004 - August 2006


Bloomberg, Business Insider

1-month change in S\&P 500 from start of tightening: 1.8 percent

12-month change in S\&P 500 from start of tightening: 6.3 percent

Change in 10-year Treasury yield over entire tightening: 0.36 percentage points

Source: Deutsche Bank


[^0]:    Bloomberg, Business Insider

[^1]:    Bloomberg, Business Insider

[^2]:    Bloomberg, Business Insider

[^3]:    Bloomberg, Business Insider

