

It is an economic condition in which the yields, or returns, on shorter-duration bonds surpass the yields on longer-duration bonds.

Over the last few weeks some analysts have become concerned that an overly aggressive Federal Reserve could invert the yield curve, which would be one of the very few market indicators that can predict recessions without sending out false positives.

#### What makes inverted yield curves so rare?

A normal yield curve denotes a lower yield on short-term bills than on long-term bonds, which means investors anticipate a lower return on money invested in bonds for a shorter length of time. Conversely, a higher yield allows lenders greater returns on long-term bond investments.

#### What does an inverted yield curve signify?

It is a sign of low investor confidence in the present economy. Investors prefer to put their money into a 10-year U.S. Treasury note, even though it may yield lower returns for them. Known as the "no free lunch on Wall Street" doctrine, this is illogical, given the higher returns investors expect on longer-term investments. For investment in a short-term Treasury bill would force investors to reinvest the money tied up in it into another bill, because they anticipate that a short-term bill's value would drop within the coming year if they think a recession is on the horizon, given the Fed's tendency to push down Fed Funds rates in an economic slowdown to motivate more money-lending, hence some fiscal recovery.

An inverted yield curve has accurately foretold the last seven recessions since the late 1960s. The yield curve last inverted in 2000 and 2006 prior to each of the recessions that followed those years.





## YIELD CURVE CONTINUED

#### What causes the yield curve to invert?

The more U.S. Treasury bonds investors put their money in, the lower the yield on each bond: the more in demand they are, the lower the yield they need to lure investment. This lowers the demand for short-term Treasury bills, which means they must yield higher returns to be investment-attractive. Therefore, in time short-term bill returns surpasses long-term bond ones, thus inverting the yield curve.

In periods of normal economic growth, a 30-year bond's return averages three points above that of a three-month bill. Nevertheless, investors who sense economic slowdown over the following two years followed by a rebound in a 10-to-20-year span would rather put their money into bonds and keep it there until the recovery, as a sounder fiscal option to immediate reinvestment at far lower rates.

#### In what years did the inverted yield curve predict recession?

In recent memory, the U.S. Treasury yield curve inverted before the recessions of 2000, 1991, and 1981. The yield curve also predicted the 2008 financial crisis two years earlier.

The initial inversion took place on December 22, 2005, partially because the Fed had been increasing Fed Funds rates since June 2004—to 4.25% by December—out of fear of an asset bubble burst in the housing market. That action increased the two-year Treasury bill's yield to 4.40%, but the seven-year Treasury note's yield rose to a mere 4.39%. This signified investors' willingness to receive a lower return on a seven-year investment than on a two-year one, which was that initial inversion.

By December 30, the discrepancy was worse. Although the two-year Treasury bill yielded 4.41%, the seven-year note's yield had declined to 4.36%, and the 10-year Treasury note yield had gone down to 4.39%, under the two-year bill's yield.

The following January 31, Fed Fed Funds rates had gone up again, prompting the two-year bill yield to increase to 4.54%, above the seven-year yield of 4.49%. However, the Fed continued to increase rates, which reached 5.25% that June. (For details, see Fed Funds Rate History in Appendix #1.)

On July 17, 2006, the inversion grew more intense when the 10-year note yielded 5.07%, below the three-month bill's 5.11%—a sign that investors believed the Fed was on the wrong path.

Date	Fed Funds	3-Mo	2-Yr	7-Yr	10-Yr
Dec. 22, 2005	4.25	3.98	4.40	4.39	4.44
Dec. 30, 2005	4.25	4.09	4.41	4.36	4.39
Jan. 31, 2006	4.50	4.47	4.54	4.49	4.53
Jul. 17, 2006	5.25	5.11	5.12	5.04	5.07

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## YIELD CURVE CONTINUED

Unfortunately, the Fed ignored the warning, believing that low long-term yields would provide enough liquidity in the economy to prevent a recession. They were wrong. Yet I wouldn't blame them—it was a perfect 100-year storm.

The yield curve stayed inverted until June 2007, then continually rose and fell between an inverted yield curve and a flat one over the following summer. By September 2007, the Fed woke up to reality and lowered the Fed Funds rate to 4.75%—a significant drop, at half a point—to send an aggressive signal to the markets. The Fed then reduced the rate ten times until it was near 0% by the close of 2008. This ended the inverted yield curve, but too late for it to make a difference, for it was on the cusp of the worst recession since the Great Depression.

In the end, the rate decreased nine more times, ending at .25% and remaining that way for seven years, until December 2015, when the Fed raised rates 25 bps (.25%). Since then we have had three more .25% rate increases—December 2016, March 2017 and June 2017—a long and difficult road to recovery.

### CONCLUSION

The Fed has tightened monetary policy since lessening its \$80-billion-per-month quantitative easing (QE) program beginning in December 2013. It has subsequently raised rates four times and is now most likely ready for a fifth rate hike in December of 2017.

But, as always, if the Fed fails to read the correct economic indicators and moves too fast, this could have serious consequences for investors. The Fed maintains it is "data driven" and is now fixated on the low unemployment rate and its hopeful effect on inflation. While gross domestic product (GDP) has seen some improvement since the Trump presidency began the "cross the T's, dot the I's" part of the recovery, this is normalized inflation, which signals increased demand. We've yet to see that.

Some argue that the yield curve won't invert if economic growth stalls, because the Fed will then truncate its rate-hike path, resulting in an inverted yield curve. We agree.

This is but one of the many fundamental, empirical data points we monitor at WT Wealth Management. Economic data points are the foundation of the US economy, therefore a report card on America's fiscal health. Some data points look forward, others rearward—one of hundreds of reasons to work with a seasoned investment team that can read, analyze and interpret these data points to your benefit.





# **APPENDIX #1**

## Federal Funds Target Rate History --- From 1990 to the Present

Change Date	Rate (%)					
January 1, 1990	8.25	March 25, 1997	5.50	March 22, 2005	2.75	
July 13, 1990	8.00	September 29, 1998	5.25	May 3, 2005	3.00	
October 29, 1990	7.75	October 15, 1998	5.00	June 30, 2005	3.25	
November 14, 1990	7.50	November 17, 1998	4.75	August 9, 2005	3.50	
December 7, 1990	7.25	June 30, 1999	5.00	September 20, 2005	3.75	
December 19, 1990	7.00	August 24, 1999	5.25	November 1, 2005	4.00	
January 8, 1991	6.75	November 16, 1999	5.50	December 13, 2005	4.25	
February 1, 1991	6.25	February 2, 2000	5.75	January 31, 2006	4.50	
March 8, 1991	6.00	March 21, 2000	6.00	March 28, 2006	4.75	
April 30, 1991	5.75	May 16, 2000	6.50	May 10, 2006	5.00	
August 6, 1991	5.50	January 3, 2001	6.00	June 29, 2006	5.25	
September 13, 1991	5.25	January 31, 2001	5.50	September 18, 2007	4.75	
October 10, 1991	5.00	March 20, 2001	5.00	October 31, 2007	4.50	
November 6, 1991	4.75	April 18, 2001	4.50	December 11, 2007	4.25	
December 11, 1991	4.50	May 15, 2001	4.00	January 22, 2008	3.50	
December 20, 1991	4.00	June 27, 2001	3.75	January 30, 2008	3.00	
April 9, 1992	3.75	August 21, 2001	3.50	March 18, 2008	2.25	
July 2, 1992	3.25	September 17, 2001	3.00	April 30, 2008	2.00	
September 4, 1992	3.00	October 2, 2001	2.50	October 8, 2008	1.50	
February 4, 1994	3.25	November 6, 2001	2.00	October 29, 2008	1.00	
March 22, 1994	3.50	December 11, 2001	1.75	December 16, 2008	0 - 0.25	
April 18, 1994	3.75	November 6, 2002	1.25	Date of Rate Change	Rate (%)	
May 17, 1994	4.25	June 25, 2003	1.00	December 16, 2015	0.25 - 0.5	
August 16, 1994	4.75	June 30, 2004	1.25	December 14, 2016	0.5 - 0.75	
November 15, 1994	5.50	August 10, 2004	1.50	March 15, 2017	0.75 - 1.00	
February 1, 1995	6.00	September 21, 2004	1.75	June 14, 2017	1.00 - 1.25	
July 6, 1995	5.75	November 10, 2004	2.00	July 26, 2017	1.00 - 1.25	
December 19, 1995	5.50	December 14, 2004	2.25	September 20, 2017	1.00 - 1	1.25
January 31, 1996	5.25	February 2, 2005	2.50	November 1, 2017	1.00 - 1.25	

(The Current Target Range for the Fed Funds Rate)

Most economists expect a increase of the Fed Fund Rate to 1.25%-1.5%. The next FOMC meeting and decision on short-term Fed Funds rates will be December 13, 2017.





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