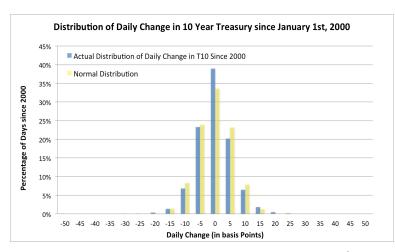
Tuesday Comments

Tuesday May 10, 2016

Movements in the 10-Year Treasury: What's Normal, and What Isn't (Part I)

Normal distributions of data are abundant in nature and, by extension, can be observed in the financial markets. Below is a graph of the distribution of daily movements in the published 10-Year Treasury Yield since 2000.



The distribution of data fits a normal distribution quite nicely. The 10 Year is often used to gauge the pulse of the market following big news, but what constitutes a large move?

While the mean daily change since 2000 is -0.1 bps, a more useful metric is the mean absolute daily change, which is 4.4 bps. 95.7% of inter-day changes were less than 10 bps. 4.4 bps over 10 years is 44 bps, which may seem like a big change for one

day, but lots can happen in 10 years, thus, lots of fluctuation. Of 4264 observed data points, there were 13 days on which the 10-Year treasury rate changed by more than 23 bps (mean plus 4 standard deviations): 6 major down days and 7 major up days. Below is a table of those days, and the headlines, for your consideration:

Date of Change	<u>Rate</u>	<u>Change</u>	Financial Headline of the Day
Thurs, November 15, 2001	4.79%	0.25%	White House releases "Statement on Needed Economic Stimulus Bill"
Tues, October 15, 2002	4.07%	0.24%	Dow Surges 4.8 % After Blue Chips Improve Profits
Thurs, January 2, 2003	4.07%	0.24%	December Index of Manufacturing Activity Figures Beat Expectations
Fri, April 2, 2004	4.15%	0.24%	Job Growth Soars: Gain of 308k jobs; Unemployment Down to 5.7%
Mon, September 15, 2008	3.47%	-0.27%	Lehman Brothers File for Bankruptcy
Fri, September 19, 2008	3.78%	0.24%	Paulson Financial Rescue Plan Unveiled; AIG Buyout
Mon, September 29, 2008	3.61%	-0.24%	House Rejects \$700B Bailout Plan; DOW falls 777 points
Tues, September 30, 2008	3.85%	0.24%	DOW Up 485 Points Following Record Drop on Monday
Thurs, November 20, 2008	3.10%	-0.28%	DOW Hits 6 year Low; Citigroup Insolvent
Tues, November 25, 2008	3.11%	-0.24%	US Government Announces Plan to Cover 90% of Citigroup's Losses
Tues, February 17, 2009	2.64%	-0.25%	Obama signs the American Recovery and Reinvestment Act of 2009
Weds, March 18, 2009	2.51%	-0.51%	FOMC Releases Statement Addressing Economic Stagnancy
Monday, June 1, 2009	3.71%	0.24%	GM Files for Bankruptcy