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Fed Thoughts: Bond Marketageddon?

Vincent Reinhart | Chief Economist & Macro Strategist

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By the time Thursday's poorly received auction of seven-year Treasury notes rolled around, reporters had nearly exhausted their lexicon of descriptions for a sell-off. Rising yields apparently "wreaked havoc," "roiled markets," and "stoked panic," offering the possibility that another 1/8 percentage point added to the ten-year note's yield would unofficially put us into a Bond Marketageddon. One way to find safe harbor in this storm of words is to put events into historical perspective. In this note, we ask:

- What are the precedents to our current lot?
- Is the recent episode fast and furious relative to those comparators?
- Does the composition of the change shed light on the matter?

Identifying relevant precedents and parsing their components suggests that:

- Yields' direction of movement followed our forecast but the wheels turned much faster than expected.
- The observed speed, however, was on par with prior episodes.
- The rise in real yields has been a later-breaking development catching up to the historical norm.
- Anomalously, the Federal Reserve (Fed) has successfully anchored near-term expectations about policy.

None give us a reason to change our forecast, as we explain below.

Seven Case Studies

The ten-year nominal Treasury yield has risen about 7/8 of a percentage point since its mid-August low. As seen in the chart below, this is the seventh time in the modern era of Fed communications in which the ten-year constant maturity yield gained at least that much in thirty weeks or less.[1] The vertical lines mark the starting low point of those episodes and the window of observation is the subsequent climb in yields.

Episodes when the Ten-Year Nominal Yield Rose 7/8 of a Percentage Point within 30 Weeks

Since January 2003

Source: FRED, as of 2/26/21 and Mellon.

I trolled through the minutes of the Federal Open Market Committee (FOMC) to extract the associated event in the first column of the table below. Fuller excerpts from the Fed's real-time descriptions are in a table beginning on page six. A limitation of the exercise, of course, is that the FOMC's eight-times-a-year meeting schedule implies that the time window of the minutes does not always line up well with market moves.

Associated Event	Local Minimum	Completion of 7/8 Percentage Point Rise	Length (in weeks)
Disappointed expectations of easing	6/13/2003	7/25/2003	7
Tightening signalled at a "measured pace"	3/19/2004	5/14/2004	9
The beginning of the end of the crisis	12/26/2008	5/1/2009	19
Concerns about the end of the easing cycle	10/8/2010	12/17/2010	11
Taper tantrum	12/7/2012	6/28/2013	30
Elections matter	7/8/2016	11/18/2016	20
The beginning of the end of the crisis	8/7/2020	2/26/2021	30

Still, the narrative fits and three lessons emerge.

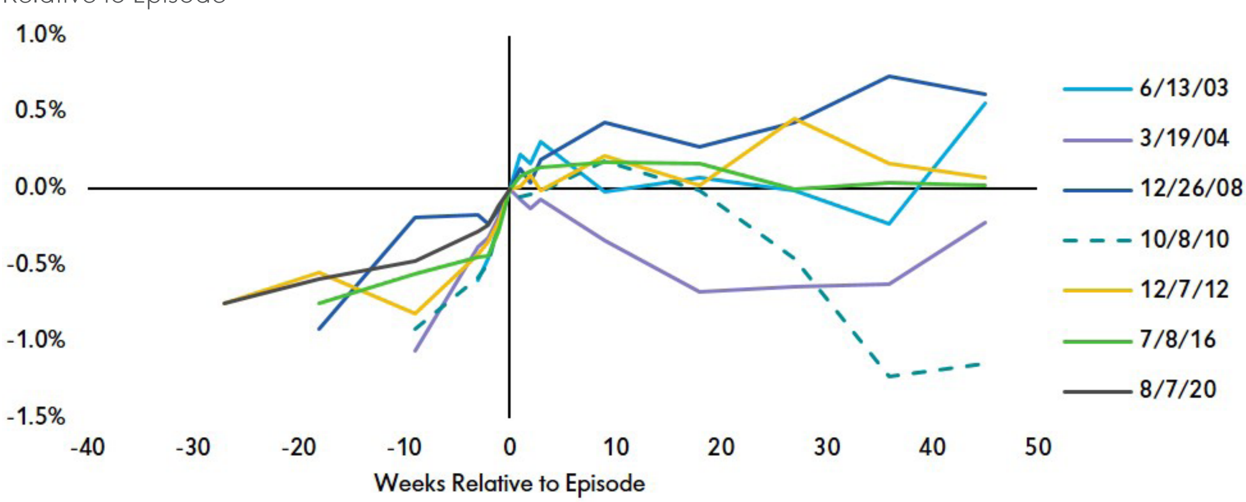
First, the bond market sells off on occasion, seven times to be precise, and with a similar magnitude as just witnessed.

Second, those sell-offs were often faster than what we are currently living through. As seen in the last column, three occasions transpired in less than half the time of the latest one.

The third is clearer if we center the data in the one-year window around the event, as in the chart below. The lines plot the at-least 7/8 percentage point rise in the ten-year yield culminating in week zero, and the legends indicate the starting date. The rate rises mostly extend past week zero, but not persistently so. Of course, the latter had to hold to satisfy the general downward trend in yields over the entire period.

Seven Case Studies of the Ten-Year Treasury Yield

Relative to Episode



Source: FRED, as of 2/26/21 and Mellon.

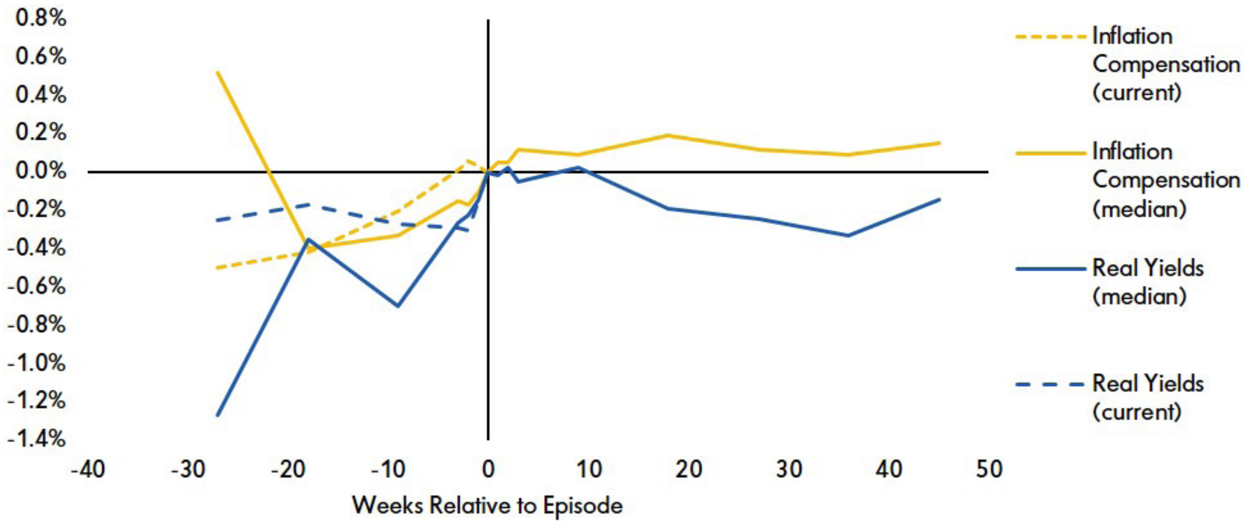
Two arithmetic identities help.

First, the nominal ten-year yield (i^{10}) can be split into its real (the yield on inflation-protected securities, r^{10}) and inflation compensation (ic^{10}) components, as in:

$$i^{10} = r^{10} + (i^{10} - r^{10}) = r^{10} + ic^{10}$$

The solid lines in the below chart show the median experience for real yields (in blue) and inflation compensation (in yellow). The dashed lines plot the two for just the latest episode, arriving only now at week zero. In the median experience, both components contribute to the rise, with inflation compensation typically rebounding from a prior fall. The rise in real yields has been late in the game and relatively small in the most recent episode.

Contribution of Real Yield and Inflation Compensation



Source: FRED, as of 2/26/21 and Mellon.

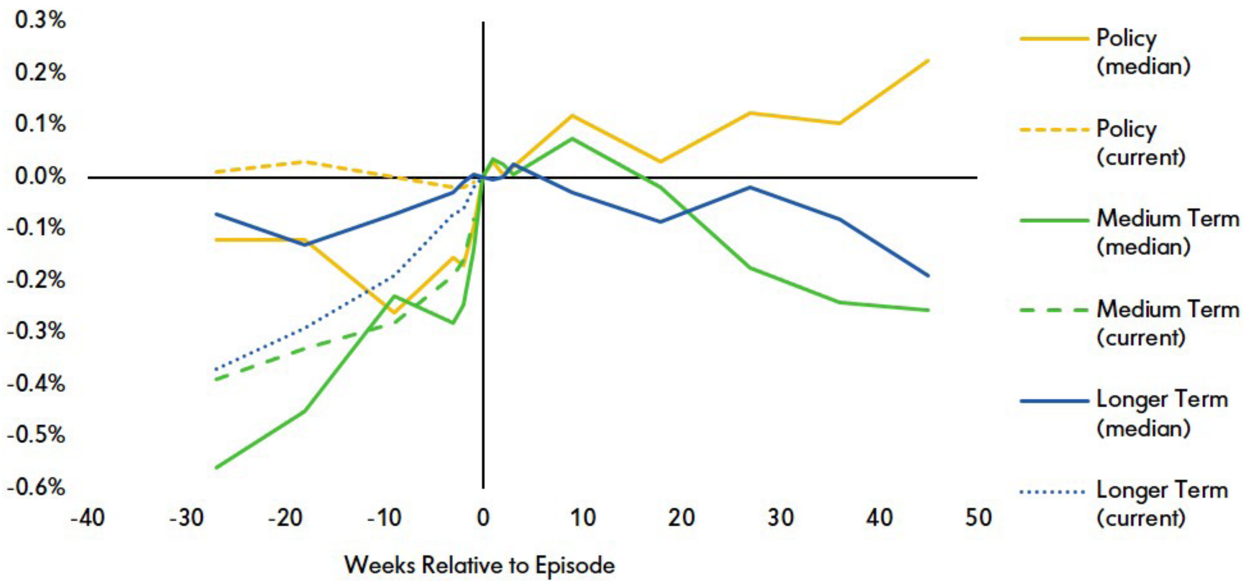
Another identity among points along the yield curve can be used to infer investors' expectations. The ten-year yield can be obtained by adding up segments of the term structure starting from some arbitrary level, here the two-year point, as in:

$$i^{10} = i^{2} + (i^{5} - i^{2}) + (i^{10} - i^{5})$$

A plausible story runs that the two-year yield is anchored (or not) by the credibility of the Fed's professed policy path. Yields from there to the five-year maturity relate to expectations about nominal economic activity over the medium term. The five-to-ten year portion conveys information about real yields and inflation compensation in the longer term.

The next chart follows the earlier convention in which solid lines depict the median experience and dashed ones the current episode. Here, the components are policy (in yellow), the medium-term outlook (green), and the longer-term outlook (blue). Typically, the ten-year nominal yield increases with the rising tide of all yields as market participants become increasingly confident that the Fed will unwind earlier accommodation. The reality of Fed tightening over time flattens yields relative to the rising two-year yield.

Time Profile of the Yield Revision



Source: FRED, as of 2/26/21 and Mellon.

In the latest episode, the Fed's anchor at the front end of the term structure has held, consistent with repeated assurances of continued accommodation from officialdom. The consequences of maintaining that accommodation, however, is reflected in nominal yield increases at medium- and longer-term horizons.

Concluding Comments & Policy Observations

Since 2003, the ten-year yield's path after a 7/8 percentage point increase carries further upward for a time. If repeated in 2021, we enter Bond Marketageddon territory in the media. Aside from the hype, I do not see this as much of a threat to our forecast of the Fed staying its currently accommodative course for the next year, nominal longer-term yields ending 2021 somewhat above that of the end of last year but not much above its current level, inflation moving a touch higher, and real GDP expanding well above its trend rate. Seeing parts of your forecast eventuate, even if much quicker than expected, is not necessarily a reason to change it, especially as the speed and composition of the ascent is not a notable outlier over the past 20 years and the momentum of all those historical episodes flagged.

Inflation compensation has rebounded from an exceptionally low level and real rates have risen as the economic outlook improved and politicians hurtled toward additional record-setting stimulus. The only remaining interest-sensitive part of demand is housing, which has been red-hot. The gain from the easing of COVID-mitigation efforts as the world gets closer to herd immunity and US fiscal impetus will more than fill any vacated space. And overshooting inflation compensation is the desire of Fed officials.

The one exception to the historical norm offers comfort. In this episode, Fed officials have anchored the front end of the yield curve, at least out to two years. They seem comfortable with this outcome, at least judging by their silence on the matter in numerous high-profile opportunities to say otherwise.

Will they remain sanguine? Probably so, provided that the rise in real yields is roughly collared by our economic forecast so as not to threaten their project of supporting a robust recovery. They would much more likely acquiesce to a rise in inflation compensation beyond 2 ½ percent (which we are still not there in our forecast, yet), as no red lines are drawn on how large and long an overshooting of inflation they will tolerate. If we are wrong and the real rate rises substantially further, their first line of defense will be the bully pulpit of protesting market pricing, with the next, reluctant step of underscoring those words with amped-up asset purchases. Otherwise, Fed Chair Powell is not thinking about digging deeper into the playbook. We do not think he has to.

Episodes when the Ten-Year Nominal Treasury Yield rose 7/8 of a Percentage Point within 30 Weeks

Associated Event	Local Minimum	Completion of 7/8 Percentage Point Rise	Length (in weeks)	Excerpts from the Real-Time FOMC Minutes
Disappointed expectations of easing	6/13/2003	7/25/2003	7	"Longer-term interest rates began to back up after the announcement of the Committee's decision, as market participants had placed substantial odds on a larger policy move and, perhaps, even the release of details on potential unconventional policy actions. Ten-year Treasury yields rose dramatically over the following weeks. The increase appeared to be based on a number of factors, including investors' interpretation of the Chairman's congressional testimony, the release of Committee members' relatively bullish economic projections, and incoming news regarding the economy and corporate earnings that was seen as signaling a more likely upturn in economic growth. In these circumstances, substantial further disinflation probably would not materialize, and the need for further reductions in the federal funds rate or unconventional policy measures would thus be obviated."
Tightening signalled at a "measured pace"	3/19/2004	5/14/2004	9	"...the replacement of the sentence in the announcement reporting that the Committee could be patient in removing policy accommodation with one indicating that policy accommodation can be removed at a pace that is likely to be measured had little net effect on money market futures rates on the day of the announcement. Over the balance of the intermeeting period, however, market participants marked up significantly the extent of expected policy tightening in response to data that indicated robust gains in employment and spending and somewhat elevated inflation, as well as to comments by Committee members providing reassurance that policy would be tightened as necessary to contain any incipient inflationary pressures. Revisions to policy expectations showed through to interest rates on nominal Treasury securities, which increased commensurately. Yields on inflation-indexed Treasury securities rose almost as much as those on their nominal counterparts, leaving inflation compensation only slightly higher, on net, by the end of the intermeeting period."

Associated Event	Local Minimum	Completion of 7/8 Percentage Point Rise	Length (in weeks)	Excerpts from the Real-Time FOMC Minutes
The beginning of the end of the crisis	12/26/2008	5/1/2009	19	"...a portion of the substantial declines in yields on nominal Treasury coupon securities that followed the FOMC announcement was subsequently unwound amid the improved economic outlook, an easing of concern about financial institutions, and perhaps some reversal of flight-to-quality flows. (April)The decision by the FOMC at its April 28-29 meeting to leave the target range for the federal funds rate unchanged and the accompanying statement indicating that the FOMC would maintain the size of the large-scale asset purchase program were largely anticipated, but yields on Treasury securities rose slightly, as a few investors apparently had seen some chance that the Committee would expand the purchase program." (June)
Concerns about the end of the easing cycle	10/8/2010	12/17/2010	11	"In the weeks following the November meeting, yields on nominal Treasury securities increased significantly, as investors reportedly revised down their estimates of the ultimate size of the FOMC's new asset-purchase program. Incoming economic data that were viewed, on balance, as favorable to the outlook and news of a tentative agreement between the Administration and some members of the Congress regarding a package of fiscal measures also reportedly contributed to the backup in yields. Market participants pointed to abrupt changes in investor positions, the effects of the approaching year-end on market liquidity, and hedging flows associated with investors' holdings of MBS as factors that may have amplified the rise in yields. Futures quotes suggested that the path for the federal funds rate expected by market participants rose over the intermeeting period."
Taper tantrum	12/7/2012	6/28/2013	30	"Nominal yields on Treasury securities rose sharply over the intermeeting period amid some better-than-expected U.S. economic data and Federal Reserve communications that were interpreted by market participants as signaling a possible earlier-than-expected reduction in the pace of purchases under the FOMC's flow-based asset purchase program."

Associated Event	Local Minimum	Completion of 7/8 Percentage Point Rise	Length (in weeks)	Excerpts from the Real-Time FOMC Minutes
Elections matter	7/8/2016	11/18/2016	20	"Nominal yields were pushed up by an increase in inflation compensation, which appeared attributable to a combination of factors, including the recent rise in oil prices and a decline in investors' concerns about the risk of very low inflation outcomes, as implied by quotes on inflation caps and floors. (November) Over the intermeeting period, incoming U.S. economic data and Federal Reserve communications reinforced market participants' expectations for an increase in the target range for the federal funds rate at the December meeting. Asset price movements as well as changes in the expected path for U.S. monetary policy beyond December appeared to be driven largely by expectations of more expansionary fiscal policy in the aftermath of U.S. elections. Nominal Treasury yields rose across the maturity spectrum, and measures of inflation compensation based on Treasury Inflation-Protected Securities continued to move up." (December)
The beginning of the end of the crisis	8/7/2020	2/26/2021	30	"Investor sentiment improved and risk asset prices moved higher over the intermeeting period on greater prospects for additional fiscal stimulus. Domestic and foreign equity prices increased notably, and spreads on corporate and municipal bonds narrowed. The nominal Treasury yield curve steepened, partly reflecting an increase in inflation compensation. Market-based financing conditions remained accommodative, while bank lending conditions continued to be tight."

Source: Federal Reserve Board via FRED, Minutes of the Federal Open Market Committee and Mellon calculations as in text.

Vincent Reinhart
Managing Director, Chief Economist & Macro Strategist

Vincent is Mellon's Chief Economist and Macro Strategist. In this role, he is responsible for developing views on the global economy and making relative value recommendations across global bond markets, currencies and sectors.

Previously, Vincent served as the Chief US Economist and a managing director at Morgan Stanley. For the prior four years, he was a resident scholar at the American Enterprise Institute (AEI). Vincent also worked in several roles at the Federal Reserve over 24 years, including Director of the Division of Monetary Affairs and Secretary and Economist of the Federal Open Market Committee (FOMC). His responsibilities at the Federal Reserve included directing research and analysis of monetary policy strategies and the conduct of policy through open market operations, discount window lending and reserve requirements. Prior to these roles, he was the principal liaison with the domestic desk at the Federal Reserve Bank of New York and was responsible for preparing a document outlining policy alternatives for each FOMC meeting. He was Deputy Director in the Division of International Finance and Associate Economist of the FOMC and spent five years at the Federal Reserve Bank of New York in both the domestic and international research departments.

His academic publications primarily concern the conduct of policy and issues related to the monetary transmission mechanism as well as an analysis of alternative auction techniques and Treasury debt management. After an undergraduate training at Fordham University, he received graduate degrees in economics at Columbia University.

Endnotes

[1.] Another reason to start in 2003 is that this allows the change in nominal yields to be parsed into its real and inflation compensation components. Weekly data smooth through some of the noise, but week-to-week changes can be substantial. That is why the starting points are not uniformly -7/8 percent. The selection criterion was the first time the yield was at least 7/8 percentage point below its level within the next 30 weeks.

Disclosure

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