

How Markets Learned To Ignore QE Nuance

Every three year-old understands the concept: What goes up must come down. Once people reach adulthood and assume positions of power, this apparently simple notion apparently becomes more difficult to comprehend, whether it involves beginning wars we cannot win and will not end or whether it involves pushing short-term interest rates toward zero per cent and following that stunt with quantitative easing. However, while commencing monetary stimulus is easy, ending it is very difficult.

Good Guys, Bad Guys

Some financial market movements can occur relatively symmetrically as no one is told to wear either a black hat or a white hat during the process. For example, if the price of corn goes up, we note the gains in a world without subsidies go to the farmers and the losses to the livestock feeders or ethanol distillers and get on with our lives. If, however, stock prices go down, the deadweight welfare loss for investors greatly outweighs the opportunity gains for new investors to buy stocks more cheaply. The same phenomenon applies to housing prices, as we all saw in excruciating detail during the financial crisis and its aftermath.

Another asymmetry involves interest rates. As economies tend to have many more borrowers than lenders and as higher borrowing costs can put those borrowers out of business while lower interest income is not as lethal to lenders, policymakers tend to regard lower interest rates as good and higher interest rates as bad. Moreover, the largest single debtor is the federal government; the convenience of having the Federal Reserve turn into the largest buyer of Treasury securities as it has been since 2009 cannot be overestimated.

Lower interest rates thus become embedded in the system; the lower cost of debt service for mortgagors, corporations and the public sector at all levels encourages higher overall levels of debt. In addition, as monetary stimulus can push short-term interest rates down far more effectively than it can long-term interest rates, borrowers have an incentive to shorten the maturity of their debt structures and assume greater rollover risk. The reductio ad absurdum of rollover risk was seen in gory detail back in 2008 when investment banks dependent on overnight repurchase rates discovered just how quickly they could be put out of business.

Market Responses

All of these distortions have affected futures markets as well. Once short-term interest rates are pushed to artificially low levels, once long-term rates are distorted as they have been since August 2011 by Operation Twist and once stock prices are pushed higher by a Federal Reserve trying to create a wealth effect from QE2 in November 2010 onwards, traders have a vested interest in guessing the next move. FOMC officials themselves contribute to the guessing game by airing their disagreements in public and by changing the criteria for slowing, stopping, resuming and accelerating money-printing.

But if markets are rational they should gravitate toward some measure of policy permanence and ignore the short-term communications noise coming from all sides of the equation. As we will see below, the stock market started to get to this point with the anticipation of QE3 starting in June 2012. It took the Treasury market longer to figure out they were being toyed with; the bond market did not start ignoring the noise until the tapering of QE began in December 2013.

Some Simple Tests

One of the hard parts about dissecting the QE and zero interest rate policy (ZIRP) era is it has been going on in one form or another since November 2008 when the newly elected Obama administration let it be known it would not allow further major financial failures on its watch. As a result, a large number of potential sample periods are available. Let's shorten the time period and reduce the number of division to these:

Period 0: April 4 – June 1, 2012

Period 1: June 4, 2012 – May 21, 2013

Period 2: May 22 – September 17, 2013

Period 3: September 18 – December 17, 2013

Period 4: December 18, 2013 – February 27, 2014

Period 0, to be used for statistical purposes only, was a period when it appeared no further expansion of QE or yield-curve twisting was in order. Period 1 corresponds to the period when a bad employment report led the market to start pricing in QE3; it subsumes not only the initiation of QE3 in September 2012 but its expansion in December

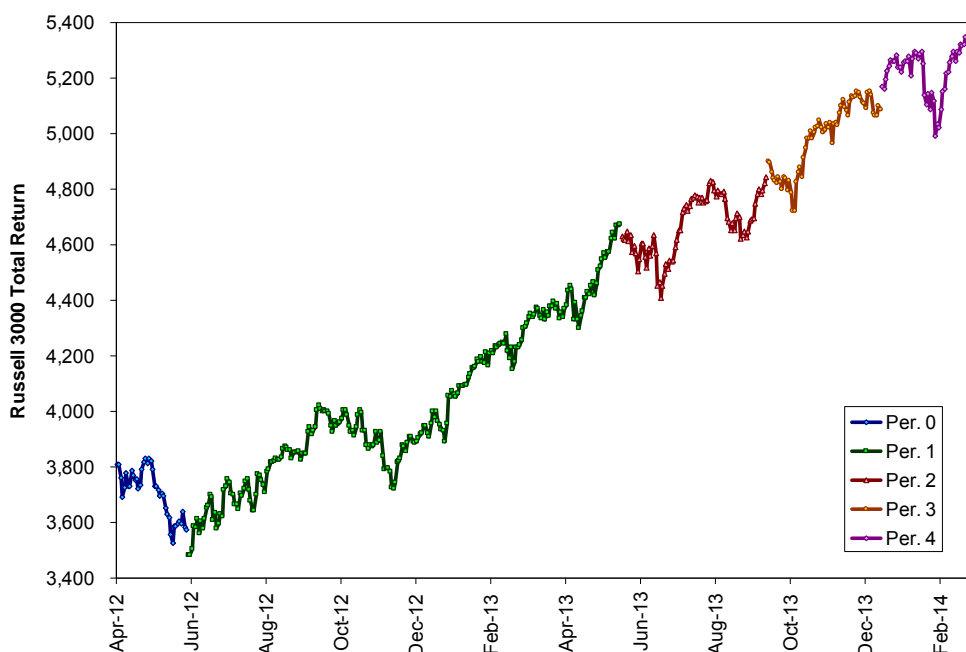
2012 and the initiation of “Abenomics” in Japan in November 2012. Period 2 was the period in which the markets first started to anticipate tapering of QE; it ended when the FOMC postponed tapering at its September 2013 meeting. Period 3 was the interregnum until tapering actually began in December 2013, Period 4.

If QE policy was a significant factor in market returns, each period’s returns should differ markedly from those of its predecessor. Conversely, if the market started to ignore the various ups and downs of monetary policy, the probability of a period differing from its predecessor will be lower. Let’s run these tests for the total returns on the Russell 3000 index, for 7-10 year Treasury bonds and for the total returns on both investment-grade and high-yield corporate bonds.

U.S. Stocks

The total return on the U.S. stock market can be measured with the Russell 3000 index. The total return stream across the five different periods does not change visibly from one period to the next, but as appearances can be deceiving, let’s run the numbers.

U.S. Stock Market Returns Across Selected QE Regimes



The results here show the stock market learned to ignore the Federal Reserve quickly. The probability each period differed from its predecessor declined consistently from one period to the next. Moreover, the average return for the post-December 2013 tapering period was higher than those of its two preceding periods and at an average daily return of 0.104% was almost as high as the QE3 period. If the stock market is but a slave to QE, it does a very good job of hiding it.

Russell 3000 Returns During QE Era Subperiods

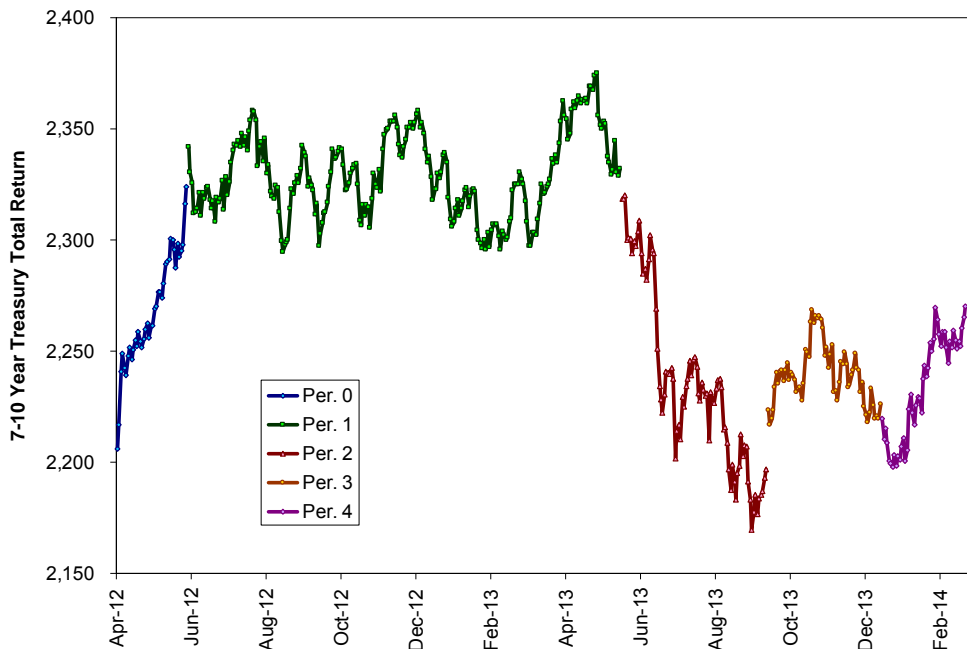
| Startdate | Enddate | Mean | Std. Dev. | Per _{t0} ≠ Per _{t-1} |
|-----------|-----------|---------|-----------|--|
| 4-Apr-12 | 1-Jun-12 | -0.187% | 0.911% | |
| 4-Jun-12 | 21-May-13 | 0.110% | 0.809% | 94.2% |
| 22-May-13 | 17-Sep-13 | 0.043% | 0.760% | 50.2% |
| 18-Sep-13 | 17-Dec-13 | 0.077% | 0.672% | 21.9% |
| 18-Dec-13 | 27-Feb-14 | 0.104% | 0.811% | 15.3% |

7-10 Year Treasuries

You have to hand it to the Federal Reserve; they are the only entity capable of conjuring hundreds of billions of dollars out of thin air, buying something without a profit-and-loss statement and watching its price decline. Treasuries had a poor year in 2009 after QE1 and they had a poor year in 2013 even as QE3 was pumping \$85

billion per month created ex nihilo into a combination of Treasuries and mortgage-backed securities. How did the total return stream of these bonds, the segment most closely akin to the ten-year Treasury note futures, fare across market regimes?

U.S. 7-10 Year Treasury Returns Across Selected QE Regimes



The Treasury market took the bait more than once; please note how the first three probabilities of difference are over 80 per cent. It was not until tapering actually began in December 2013 that the market figured out monthly purchases of \$75 or \$65 billion per month were very stimulative.

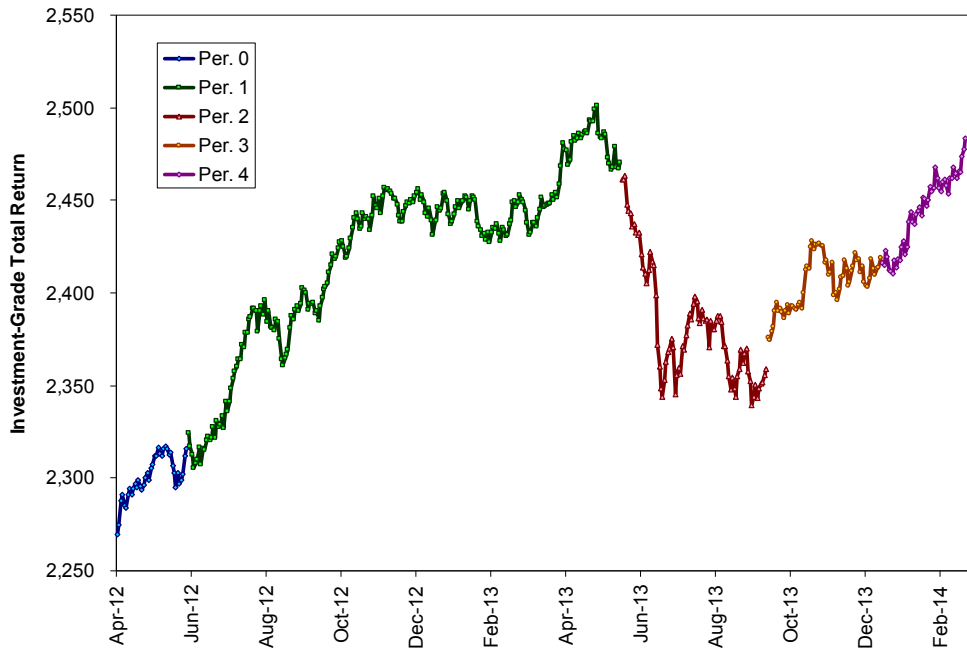
7-10 Year UST Returns During QE Era Subperiods

| Startdate | Enddate | Mean | Std. Dev. | Per _{t0} ≠ Per _{t-1} |
|-----------|-----------|---------|-----------|--|
| 4-Apr-12 | 1-Jun-12 | 0.139% | 0.297% | |
| 4-Jun-12 | 21-May-13 | 0.001% | 0.295% | 99.1% |
| 22-May-13 | 17-Sep-13 | -0.073% | 0.451% | 83.5% |
| 18-Sep-13 | 17-Dec-13 | 0.021% | 0.335% | 84.9% |
| 18-Dec-13 | 27-Feb-14 | 0.041% | 0.314% | 25.5% |

Corporate Bonds

It took a while for corporate bond investors to figure it out, too. Investment-grade corporate bonds, the workhorses of pension plans, insurance portfolios and the backbone of commonly traded ETFs, took it on the chin during 2013 once the whiff of tapering entered the room. Once tapering began, these bonds forgot all about how concerned they were supposed to be with the whole affair.

Investment-Grade Corporate Bond Returns Across Selected QE Regimes

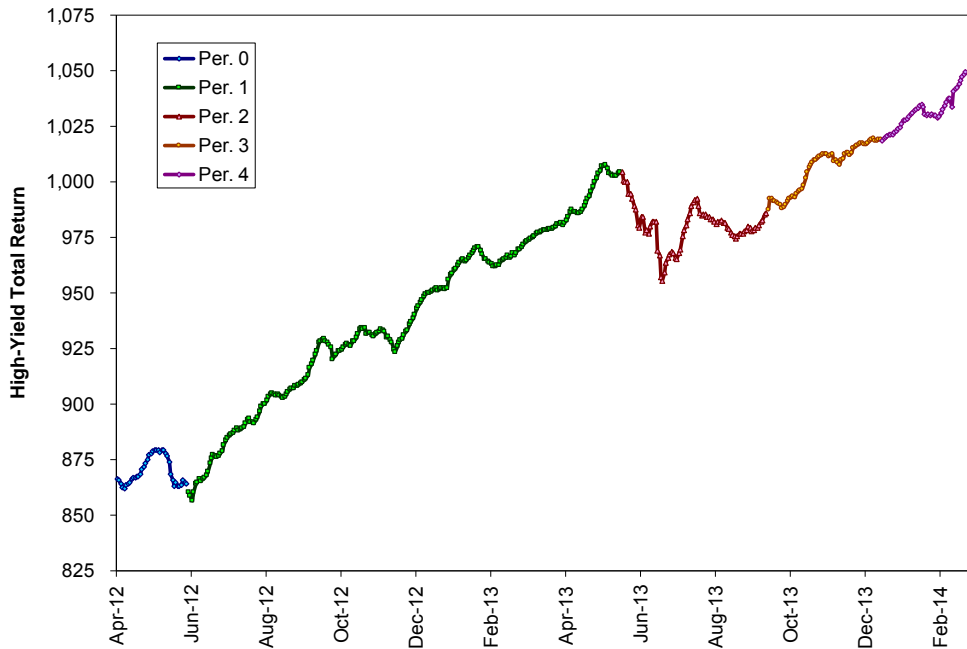


Investment-Grade Returns During QE Era Subperiods

| Startdate | Enddate | Probability | | Per _{t0} ≠ Per _{t-1} |
|-----------|-----------|-------------|-----------|--|
| | | Mean | Std. Dev. | |
| 4-Apr-12 | 1-Jun-12 | 0.054% | 0.200% | |
| 4-Jun-12 | 21-May-13 | 0.027% | 0.210% | 57.7% |
| 22-May-13 | 17-Sep-13 | -0.056% | 0.345% | 95.7% |
| 18-Sep-13 | 17-Dec-13 | 0.039% | 0.238% | 94.9% |
| 18-Dec-13 | 27-Feb-14 | 0.054% | 0.211% | 28.0% |

The situation was similar for high-yield bonds. These bonds have been the favorite of yield hogs during the ZIRP era. However, they managed to sell off during mid-2013 under the anticipation of QE tapering only to recover smartly once tapering began.

High-Yield Corporate Bond Returns Across Selected QE Regimes



High-Yield Returns During QE Era Subperiods

| Startdate | Enddate | Mean | Std. Dev. | Per _{t0} ≠ Per _{t-1} |
|-----------|-----------|---------|-----------|--|
| 4-Apr-12 | 1-Jun-12 | -0.008% | 0.187% | |
| 4-Jun-12 | 21-May-13 | 0.062% | 0.136% | 97.1% |
| 22-May-13 | 17-Sep-13 | -0.023% | 0.292% | 98.7% |
| 18-Sep-13 | 17-Dec-13 | 0.052% | 0.116% | 96.2% |
| 18-Dec-13 | 27-Feb-14 | 0.062% | 0.138% | 31.6% |

The Only Thing We Have To Fear

An old Wall Street adage, the only kind, about investor behavior in bull markets, “You either have to wear ‘em out or scare ‘em out.” It turns out the talk of QE tapering in mid-2013 was the scare tactic. Interestingly, it did not work as much on the supposedly riskier equity market as it did on the more sedate and lower loss-potential bond markets. Within the bond markets, the buy-and-hold investment-grade and the plaything high-yield markets acted very similarly to the Treasury market.

The stock market planned ahead and realized the Federal Reserve was not going to end monetary stimulus and risk the one demonstrable success from ZIRP and QE, higher asset valuations. Each change in communications policy fell on increasingly deaf ears, as well it should have. It would seem all traders should add one more piece of equipment to their technological setup: A good pair of earplugs. The best thing for you to do with all of the official drum-beating is ignore what has been alleged to be the most important environmental variable of all, monetary policy. The Federal Reserve’s increased transparency means we are doing a better job of seeing through them.