LPL RESEARCH

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GRADING THE FED'S QE PROGRAM: WEEK 3

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KEY TAKEAWAYS

We give the Fed partial credit on equity and bond market impact.

The U.S. equity market performed exceptionally well during all three QE rounds, with the broad stock market increasing by 164%, as measured by the Russell 3000. The Fed partially helped lower bond yields (and boost bond returns) during its QE program.

This week's *Weekly Economic Commentary* is the third in a series looking back at the Federal Reserve's (Fed) quantitative easing (QE) programs and evaluating how well they achieved their goals. Why grade the Fed now? We have just passed the six-month mark from the last purchase of QE3, which began in September 2012 and ended in October 2014. Also this time of year, colleges, universities, and high schools pass out report cards and hand out diplomas. In the week ahead (June 1–5, 2015), we'll hear from all four major central banks that have enacted QE:

- **The European Central Bank** (ECB), which meets on Wednesday, June 3, 2015
- **The Bank of England** (BOE), which meets on Thursday, June 4, 2015
- **The Bank of Japan** (BOJ), as the governor of the BOJ delivers a key policy speech on Wednesday, June 3, 2015
- **The Fed itself**, with the release of its Beige Book—a qualitative assessment of economic, business and banking conditions in each of the 12 regional Fed districts—on Wednesday, June 3, 2015, ahead of the next Federal Open Market Committee (FOMC) meeting on June 16–17, 2015

Having already graded the Fed on financial stress and its dual mandate, we'll grade the Fed's QE program on how it impacted financial markets, one of the Fed's key transmission mechanisms to achieve its dual mandate. This week we are looking at domestic stock and bond market performance, and will grade the Fed on the other asset classes in a future commentary.

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We'll compare the performance of U.S. equities (as measured by the Russell 3000 Index) and U.S. bond market (as measured by the Barclay's Aggregate Bond Index) before, during, and notably, six months after the end of QE3. We will also review the period before, during, and after the Fed's first two forays into QE: QE1 (November 2008 through March 2010) and QE2 (November 2010 through June 2011).

OUR SCORECARD: FINANCIAL MARKETS

As we assess the Fed, we point out that Operation Twist came between QE2 and QE3, making it much more difficult to grade either program on its own merits. Operation Twist was aimed at putting downward pressure on long-term Treasury yields without the Fed buying any additional net Treasures. It sold existing holdings of short-term Treasuries (less than a 3-year maturity) and bought longer-term Treasuries (6–30 years in maturity).

The Fed cannot control any of the financial markets listed above directly of course, and can only use its policy tools to foster a policy environment that will lead to low and stable inflation and maximum employment. For most of its history, the Fed used some combination of the money supply, reserve requirements (money the Fed requires banks to hold against their deposits), and interest rates to nudge the economy toward the goals of the Fed's dual mandate. However, in December 2008—in the aftermath of the collapse of Lehman Brothers and the near freeze-up of the global credit markets—the Fed cut its fed funds rate to zero and began pursuing bond purchases, or QE, to achieve its goals.

One asset not listed above is cash, and the nation's savers were severely impacted by the Fed's decision to take rates to zero in late 2008 and keep them there to this day. Prior to the onset of the Great Recession in late 2007, a five-year certificate of deposit paid around 5% per year. Today, that same five-year CD pays just under 1.5%. Although the Fed didn't directly target individual savers, one of the aims of QE was to encourage investors—mainly large institutional investors—to take risks, and by keeping the rate on cash near zero, motivated these investors to move further out the risk spectrum.

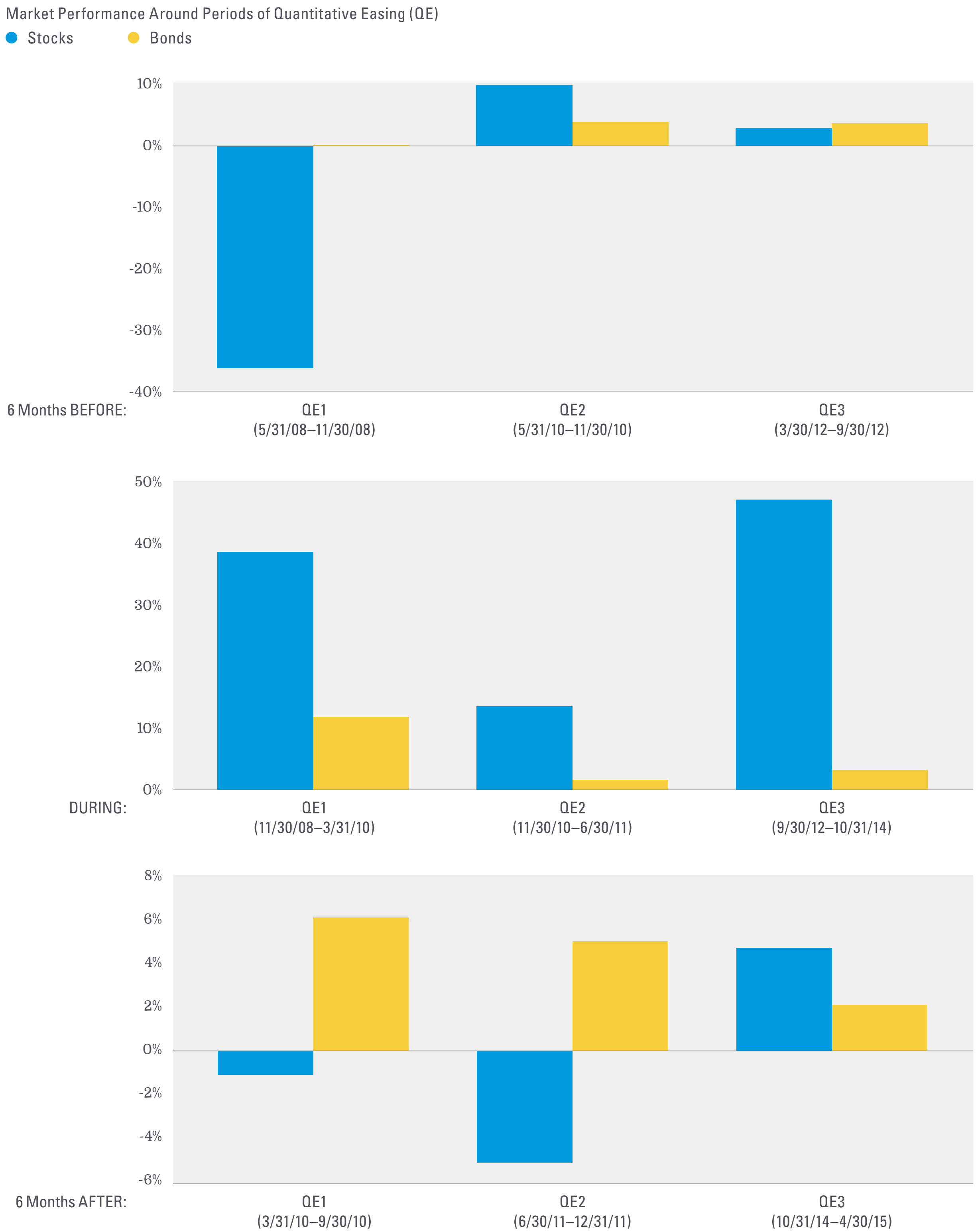
By encouraging "risk taking" the Fed was hoping that lower rates on Treasury yields and high-yield bonds would encourage businesses (small and large) to refinance existing debt at lower rates and use the savings to reinvest in their businesses via hiring, capital spending, etc. The Fed also hoped that lower rates would help the housing market get back on its feet by allowing existing homeowners to refinance at lower rates and use the savings to pay down debt, save more, and spend more, and to entice prospective homeowners into the market by making owning a home more affordable.

PARTIAL CREDIT ON EQUITY AND BOND MARKET IMPACT

During all three rounds of QE—from November 2008 through the end of October 2014—the U.S. equity market performed exceptionally well, with the broad stock market, as measured by the Russell 3000, increasing by 164%, or an annualized rate of gain of nearly 18%, well above the long-term (1979–2007) average gain of 13% [Figure 1]. In general, equity markets like lower interest rates over higher rates, economic growth over recession, and certainty over uncertainty. The Fed's QE program provided lower rates, which in turn fostered better economic growth and provided some certainty in an uncertain world. The U.S. equity market rose in each of the three rounds of QE, and in each case the gains were an improvement versus the six months prior to QE. This improvement was especially notable in QE1, when stocks fell more than 36% in the six months leading up to the start of QE1 in November 2008, and then posted a 39% gain during QE1 itself.

Equity market performance turned negative in the six months following the end of QE1 and QE2 ended; however, in the six months after the end of QE3 (October 2014 through April 2015) equities prices eked out a small gain. The external environment (European debt crisis, the U.S. debt ceiling debacle, etc.) had a major influence on equities at the end of QE1 and QE2. The Greek debt crisis has heated up again over the past six months; however, the overall stability of the Eurozone—and the health of the U.S. economy itself—was much better at the end of QE3 than it was at the end of QE1 or QE2. (For more on Greece, see this week's *Weekly Market Commentary*, "The Greek Drama.") Although many factors played a role in driving equity prices higher during QE1, QE2, and QE3, we'll give the Fed partial credit for the rise in equity prices.

1 THE FED'S QE PROGRAM WAS LARGELY SUCCESSFUL IN DRIVING STOCK AND BOND PRICES HIGHER



Source: LPL Research, Bloomberg; Federal Reserve Board 06/01/15

Stocks measured by Russell 3000 Index and bonds by Barclays Aggregate Index.

Past performance is not indicative of future results. Indexes are unmanaged and cannot be invested into directly.

SUPPORTING ASSIGNMENTS

One of the main goals of QE from the Fed's perspective was to lower rates, which, in turn, would foster a more favorable environment for borrowing by households and consumers—leading to a rebound in economic activity. To evaluate this goal, we look at total returns for the Barclay's Aggregate Bond Index, which benefits from falling yields.

Of the three QE programs, QE1 had the biggest impact on yields and bond returns: during QE1, yields fell sharply, leading to an 11.8% total return for the Barclays Aggregate. Bond total returns were also positive during both QE2 and QE3. But unlike the equity market, where performance was better during QE than during the six prior months for all three rounds, bond performance only improved in QE1, as bond total returns in QE2 and QE3 were lower than in the six months prior to the start of QE [Figure 1].

Notably, bond yields generally moved lower—and total returns higher—in the six months after QE ended, and in two of three cases the performance was worse. The exception was in the six months after QE2, when the 5.0% total return on bonds was an improvement over the 1.6% gain seen during QE2. Recall that the latter half of 2011 saw the U.S. debt ceiling and debt downgrade debacle as well as a sharp escalation in the European debt crisis, which pushed investors into the relative safety of U.S. Treasuries, driving bond yields lower. During the entire QE program (November 2008 to October 2014) the 10-year Treasury yield fell from 2.75% to as low as 1.5% in mid-2012, before ending QE3 at 2.50%.

Would yields have been higher without QE, or perhaps lower? Were the factors that pushed yields lower during QE caused by QE, or would they have occurred anyway? Given that Fed policy does not occur in a vacuum, it is difficult to say with any certainty what impact the Fed had, let alone what would have happened had the Fed not done QE at all. In addition, we must consider what the Fed said—for example, promising in mid-2011 to keep rates low until at least the middle of 2013—in addition to the actions they took (QE, Operation Twist) as we consider the Fed's grade. On balance, as with the Fed's influence on equities, we will give the Fed partial credit for helping to lower bond yields (and boost bond returns) during its QE program. ■

IMPORTANT DISCLOSURES

The opinions voiced in this material are for general information only and are not intended to provide or be construed as providing specific investment advice or recommendations for your clients. Any economic forecasts set forth in the presentation may not develop as predicted and there can be no guarantee that strategies promoted will be successful.

All performance referenced is historical and is no guarantee of future results.

All indexes are unmanaged and cannot be invested into directly.

Investing in stock includes numerous specific risks including: the fluctuation of dividend, loss of principal and potential illiquidity of the investment in a falling market.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond and bond mutual fund values and yields will decline as interest rates rise and bonds are subject to availability and change in price.

DEFINITIONS

Quantitative easing (QE) refers to the Federal Reserve's (Fed) current and/or past programs whereby the Fed purchases a set amount of Treasury and/or mortgage-backed securities each month from banks. This inserts more money in the economy (known as easing), which is intended to encourage economic growth.

The Beige Book is a commonly used name for the Federal Reserve's (Fed) report called the Summary of Commentary on Current Economic Conditions by Federal Reserve District. It is published just before the Federal Open Market Committee (FOMC) meeting on interest rates and is used to inform the members on changes in the economy since the last meeting.

The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market.

The Barclays U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS (agency and non-agency).

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