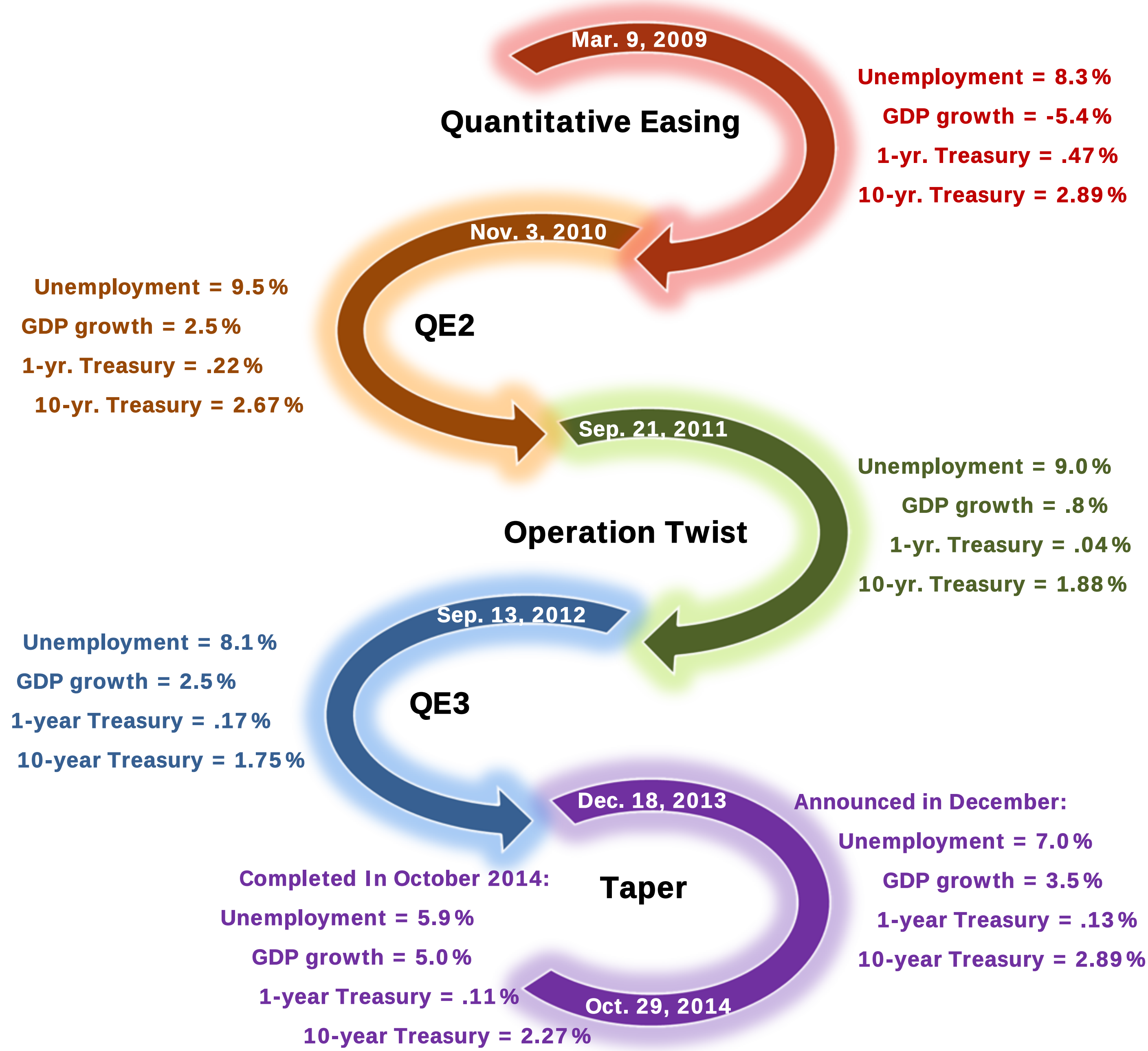
Joint Economic Committee
Republicans
Senator Dan Coats, Chairman-designate
Representative Kevin Brady, Vice Chairman-designate
COURTESY OF SENATOR DAN COATS

The Federal Reserve's Extraordinary Monetary Policies

During the past five years, the Federal Reserve undertook its own "stimulus" known as Quantitative Easing and yield curve "Twist"; the five programs shown below meant to lower interest rates, incentivizing employment as well as consumer and business spending. QE ended in late 2014. ***Will the post-QE economy suffer from stimulus withdrawal? This chart book shows how the Fed used economic variables to target its actions and identifies symptoms of withdrawal.***



The Federal government initiated large and controversial stimulus programs to support recovery from the "Great Recession." So did the Federal Reserve Banks (The Fed).

- In the wake of the financial crisis of 2008, the U.S. economy tumbled into a multi-year recession followed by a slow-growth recovery that has continued into 2015. **GDP plunged 7.7 percent** during the last quarter of 2008, followed by an unemployment rate climb to 10 percent in 2009.
- In November 2008, the Fed responded by announcing plans to purchase Treasury debt and mortgages, reassuring investors that the financial markets would operate smoothly and interest rates would remain low. Since March 2009, the Fed has undertaken specific "stimulus" programs intended to **push interest rates down**, and thereby encourage private spending.
- During 2009 and 2010, federal agencies spent most of the $800 billion American Recovery and Reinvestment Act (ARRA) funds. Meanwhile, the Fed directed its 2009 action toward long-term rates, mortgage liquidity and delinquencies. Most ARRA dollars were committed by the end of 2010, but the economy's growth remained sluggish with high unemployment.
- After 2010, the Fed took the lead in applying stimulus tools.

Fed Interest Rate Pressure Influences Investor and Consumer Behavior

The Fed can influence the economy through the shape of the "yield curve," which charts the relationship between short and long-term interest rates. Investors require a higher interest rate when money is lent for a longer period of time. Low rates make debt cheaper for borrowers. By taking action to keep long-term interest rates low, the Fed pushed down all rates along the curve

- Cuts in long-term rates **make mortgages "cheaper,"** due to the lower monthly interest payment and it gives homeowners a chance to refinance their mortgages, thereby spending less of their budgets on housing. The Fed aimed to revive the devastated real estate market by encouraging potential homebuyers to purchase while rates remained low.
- Reduced short-term and intermediate rates give **businesses incentive to invest and expand** by taking advantage of low capital costs.
- Depressed interest rates that pushed investors into equity markets eventually **led the stock markets to historic highs**, yielding new wealth for U.S. households, particularly by building up retirement account balances and boosting consumer confidence.

This Chart Book tracks Treasury interest rate yield curves with each extraordinary measure announcement:

- March 9, 2009: The first **Quantitative Easing (QE)**, in which the Federal Reserve purchased $500 billion of Treasury and federal agency debt, plus $1.25 trillion of mortgage-backed securities.
- November 3, 2010: The second Quantitative Easing, known as "**QE2**," in which the Federal Reserve purchased $600 billion in Treasury securities.
- September 21, 2011: **Operation Twist**, in which the Federal Reserve swapped short-term Treasury holdings for an equal amount of longer term holdings, with the intent of keeping longer-maturity interest rates low; over the next 15 months, $667 billion of Treasury securities were purchased/sold during this "Maturity Extension Program."
- September 13, 2012: In **QE3**, the Federal Reserve purchased $40 billion of mortgage-backed securities monthly. This program was expanded in December 2012 to include $45 billion of monthly Treasury purchases.
- December 18, 2013: "**Taper**" begins, reducing the Federal Reserve's mortgage and Treasury purchases, and is completed in October 2014.

Use of such unprecedented actions has led to unexpected outcomes. As the Fed's "extraordinary measures" evolved and progressed, "easing" targeted broader key economic data (GDP growth, unemployment, delinquencies). Its continued purchases of mortgages kept these rates stable, and greatly expanded purchases of Treasury short-term notes and long-term bills sent all Treasury rates lower.

Aggressive purchases now leave the Fed with a market footprint that requires a transparent exit strategy – which is not yet formulated:

- By October 2014, the Fed's Treasury holdings total $2.46 trillion – three times the pre-QE amount.
- Five years of extraordinary measures have left the Fed as the largest holder of marketable Treasury debt, approximately the combined total owned by China and Japan in December 2013, as reported by CRS.
- Only the Social Security Old Age and Disability Trust Funds, with a total of $2.7 trillion invested in non-marketable T-notes, holds more Treasury debt. Two agencies – Social Security and the Federal Reserve – own nearly a third of Total Public Debt Outstanding.

Looking Ahead: Balancing Short-term Gains, Long-Term Stability

Ruchir Sharma in The Wall Street Journal, July 29, 2014: *"There is a fundamental shift in the challenge facing central bankers, everywhere. Top Fed officials including former Chairman Ben Bernanke have argued that rising asset prices are less a risk than a plus, because the rising value of houses, stocks and bonds makes families feel wealthier, so they spend more and boost the economy. But monetary policy should encourage investments that will strengthen the economy and create jobs in the long term—not conjure an illusory 'wealth effect' that is for now lifting mainly the wealthy."*

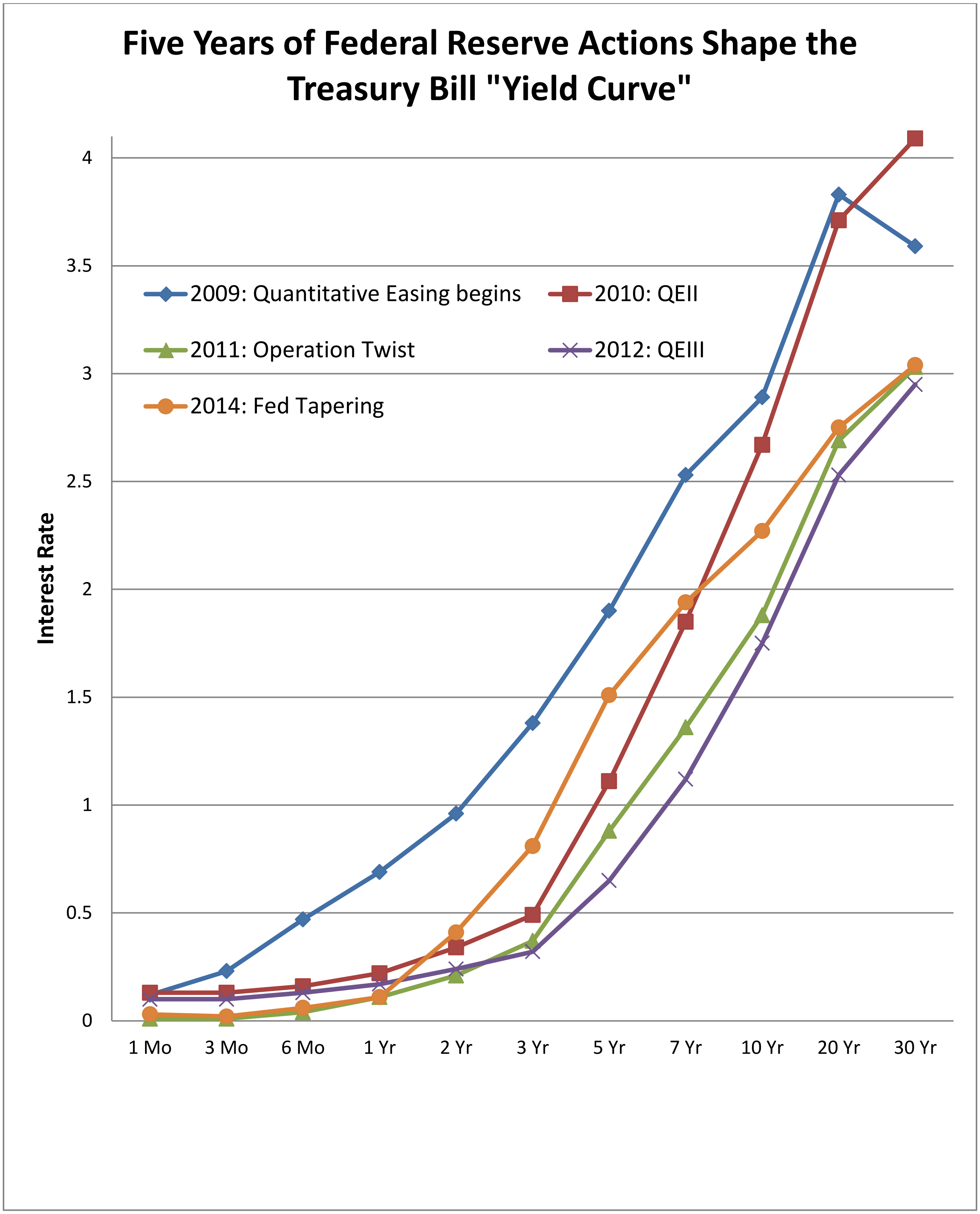
After five years of QE, with unemployment falling and the economy growing, the Fed must manage the consequences of unwinding "extraordinary measures." Although its asset purchases have ended, how does it manage the reduction of the largest portfolio of marketable Treasury debt in the world?

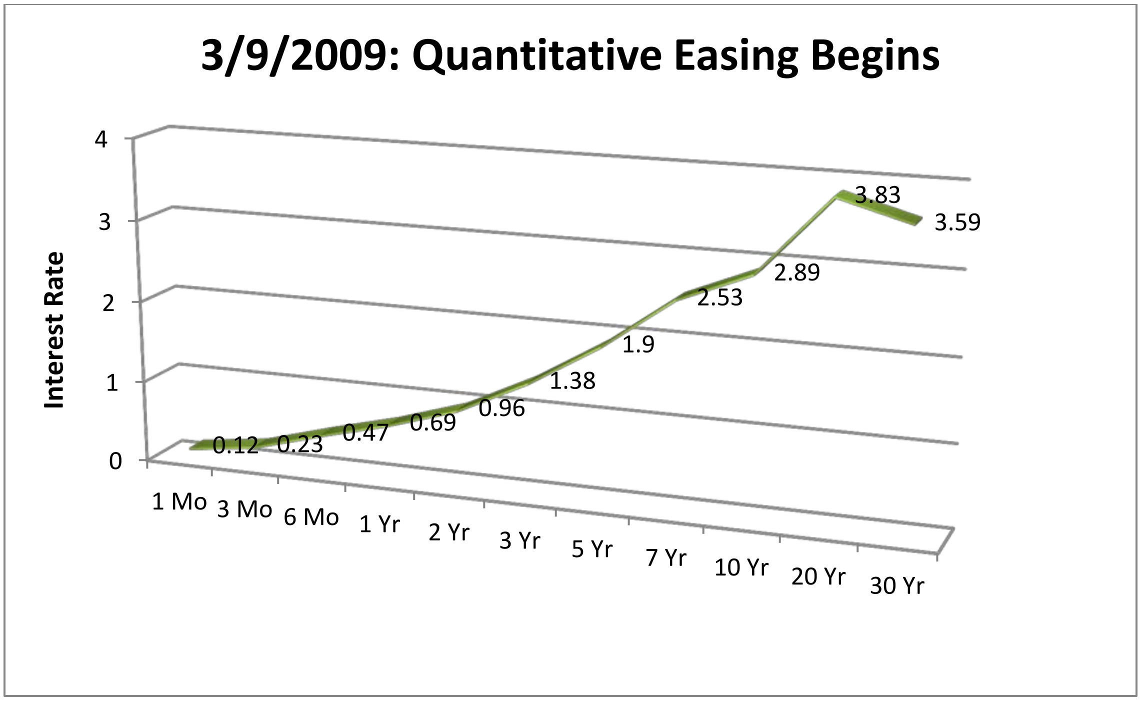
QE Withdrawal Risks to Watch

- How much, how quickly will **interest rates rise** after the Fed exits?
- Has "cheap" debt caused **asset bubbles** in real estate or the stock markets that will burst when low rates are gone?
- Do individual investors, particularly those nearing retirement, face **financial risk** because they invested in higher-risk bonds and stocks when Treasury rates were low?
- Did five years of low interest rates force retirees to **deplete retirement savings** when they needed cash to replace lost interest income?
- How does the Fed reduce its balance sheet back to pre-recession levels without **impairing the financial markets**?
- Have artificially low interest rates numbed the impact of doubling Debt Held by the Public over five years, and how much will **federal interest costs and deficits rise** as the Fed divests its Treasury assets?
- In the event sustained economic growth picks up to 3 percent or higher, is there a risk that **core inflation accelerates** quickly?

February 4, 2015

JEC Republicans Chart Book:
Monetary Policy through Quantitative Easing

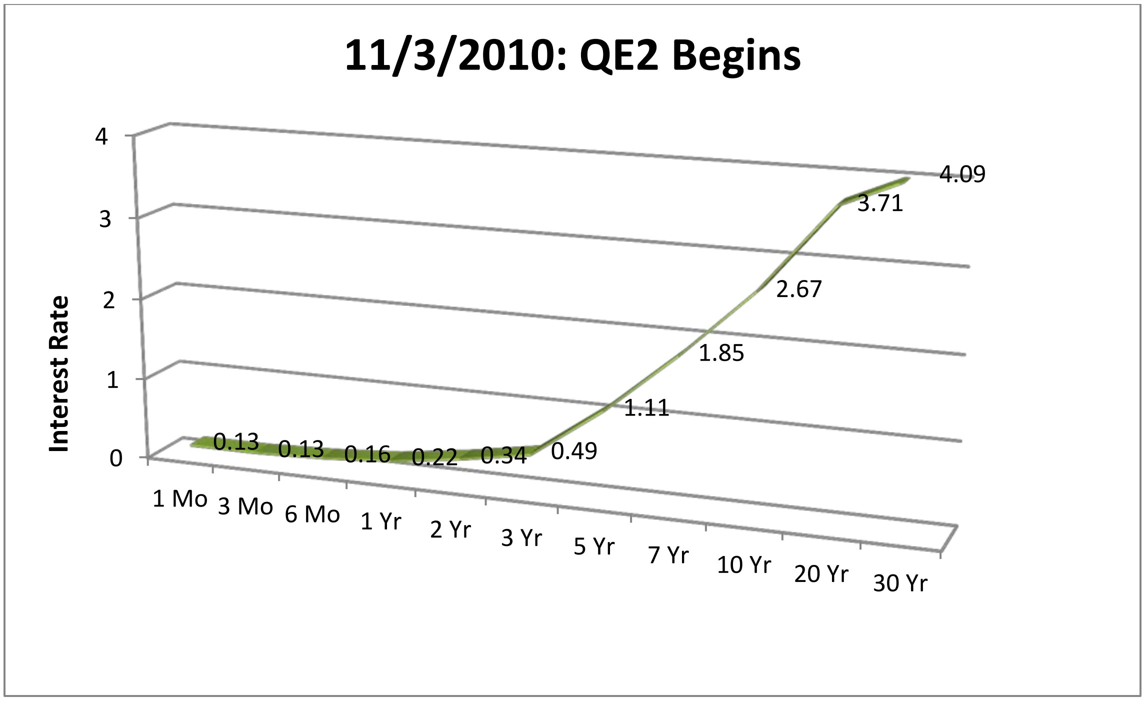




When the Federal Reserve announced "QE" asset purchases:

- Real GDP was falling
- Unemployment was steadily rising
- Nearly 2% of U.S. homes were in foreclosure
- Without any change in the yields, interest costs rise as negative monthly consumer price index (CPI) statistics raise deflation worries
- The S&P 500 had dropped 60% from its 2007 high

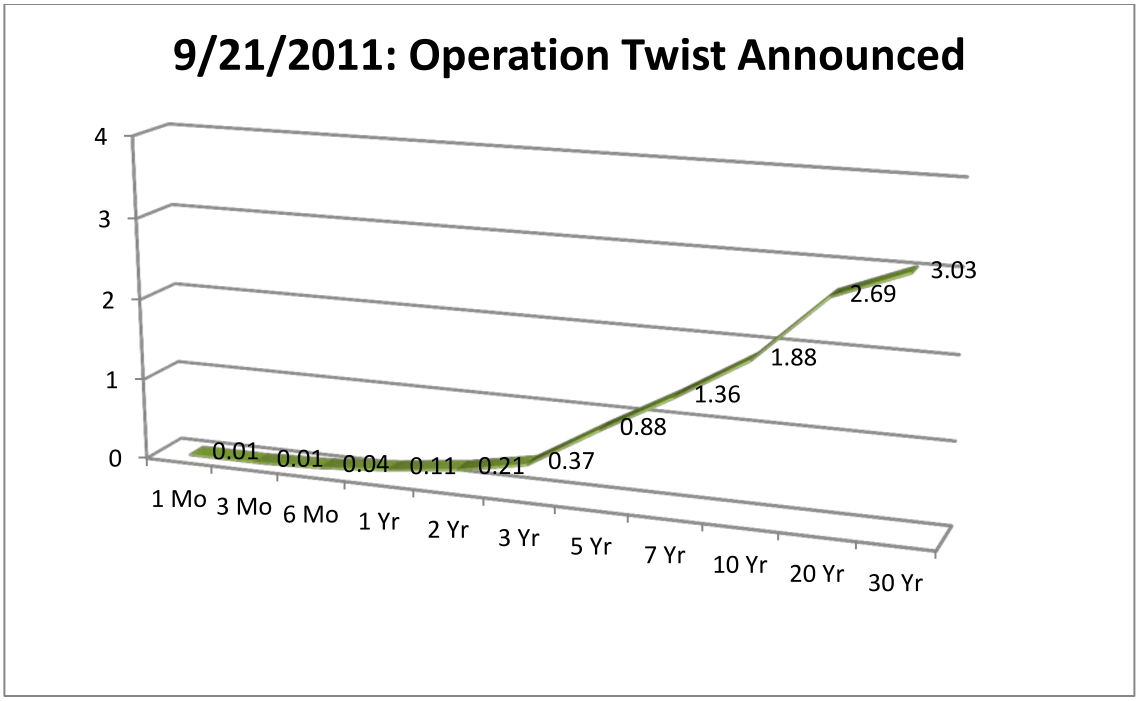
Key Variables:	
S&P 500 (closing, day of announcement)	677
30-yr. mortgage	5.0%
Mortgages in delinquent status	10.7%
Unemployment rate	8.3%
GDP (current four quarters, $ in billions)	$14,384
Real GDP growth (year-over-year)	-5.4%
Federal Spending/GDP	23%
Treasury Debt Held by the Public ($ in billions)	$6,579
Treasury Debt Held by the Fed ($ in billions)	$475



Although the economy emerged from recession, weakness remained:

- A total of $2.7 trillion FY09/ FY10 deficit spending stimulated GDP growth
- Despite stimulus, unemployment rates remained stubbornly high
- Almost 5% of mortgages fell into foreclosure
- Short-term rates were down, but long-term rates remained high
- S&P 500 remained 30% below its 2007 high

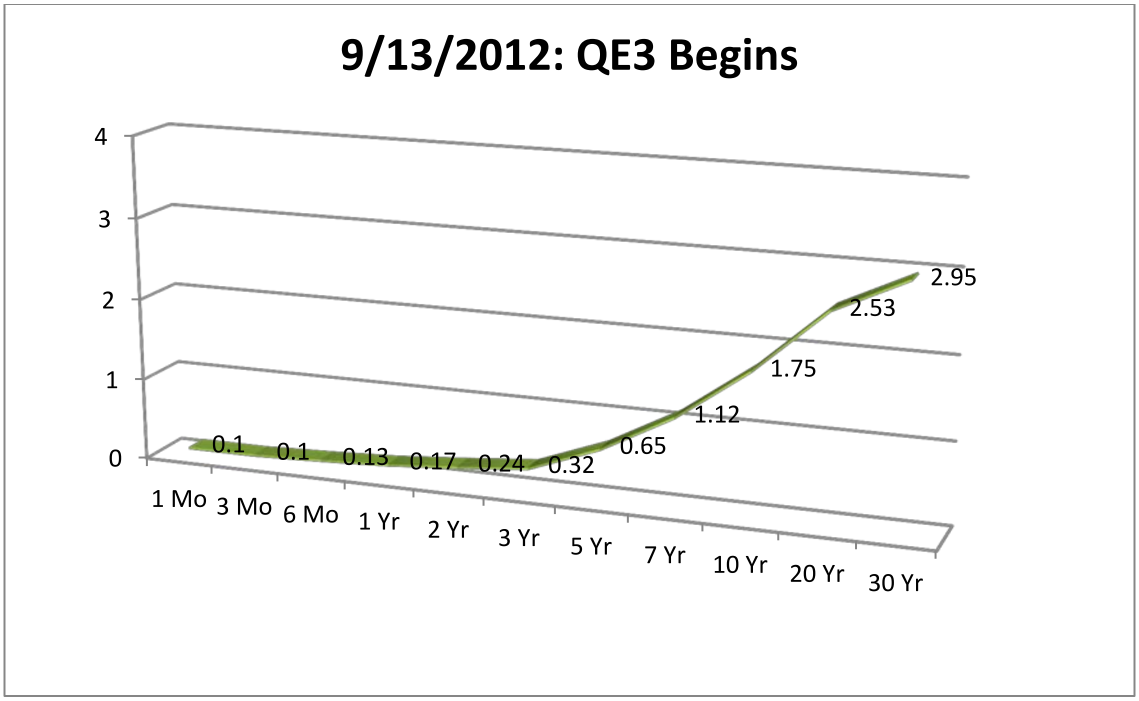
Key Variables:	
S&P 500 (closing, day of announcement)	1198
30-yr. mortgage	4.9%
Mortgages in delinquent status	10.5%
Unemployment rate	9.4%
GDP (current four quarters, $ in billions)	$15,230
Real GDP growth (year-over-year)	2.5%
Federal Spending/GDP	25%
Treasury Debt Held by the Public ($ in billions)	$9,070
Treasury Debt Held by the Fed ($ in billions)	$838



When unemployment, anemic growth persisted, “Twist” targeted all interest rates:

- GDP growth receded to a rate below 2%
- Despite a year of monthly job gains, unemployment stagnated around 9%
- Mortgage delinquencies fell, but mainly as a result of bank foreclosures
- Federal interest cost shrank despite a growing Treasury debt burden from deficits totaling more than $4 trillion over the past three years
- The stock market stalled, showing no gains for the year

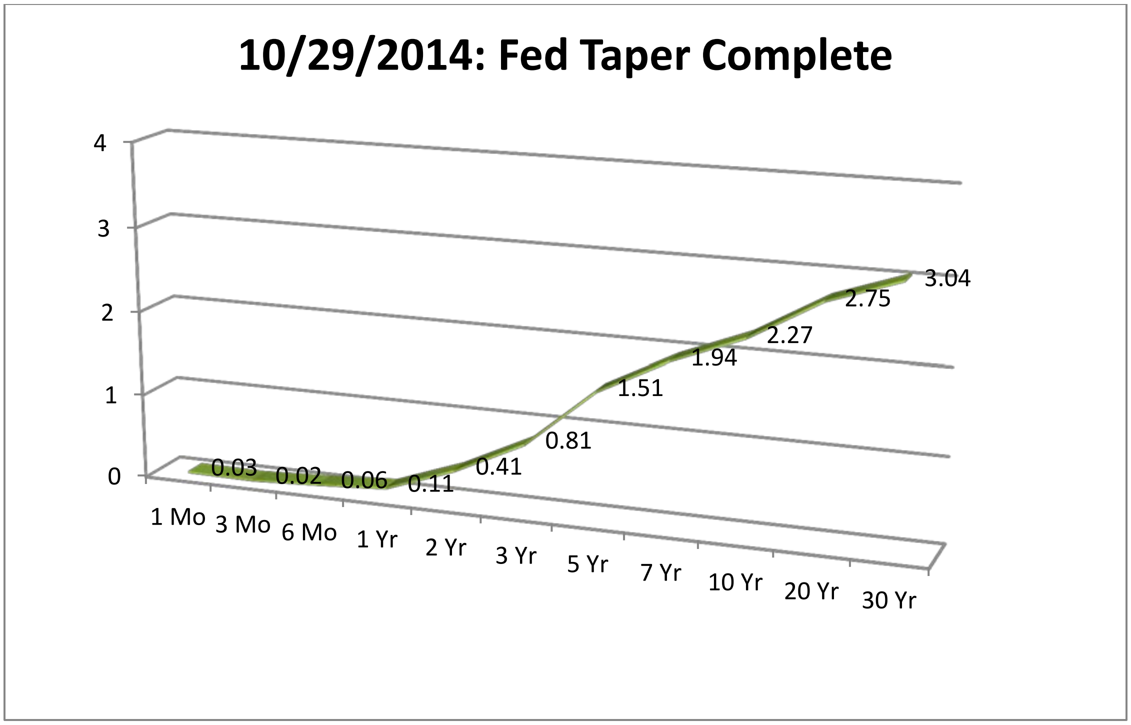
Key Variables:	
S&P 500 (closing, day of announcement)	1167
30-yr. mortgage	4.3%
Mortgages in delinquent status	8.2%
Unemployment rate	9.0%
GDP (current four quarters, $ in billions)	$15,587
Real GDP growth (year-over-year)	.8%
Federal Spending/GDP	24%
Treasury Debt Held by the Public ($ in billions)	$10,024
Treasury Debt Held by the Fed ($ in billions)	$1,652



QE's third round put Fed support behind mortgages, as jobs and growth returned:

- GDP trends picked up, along with expectations of 3%+ future growth
- Jobs increased every month, but unemployment fell slowly
- Mortgage delinquencies persisted, and 21.5% of homeowners were "under water," owing more than their house is worth
- Fed purchases shifted to longer-term assets, keeping those yields from rising
- Low interest rates drove yield-seeking investors into stocks

Key Variables:	
S&P 500 (closing, day of announcement)	1460
30-yr. mortgage	3.5%
Mortgages in delinquent status	7.5%
Unemployment rate	8.1%
GDP (current four quarters, $ in billions)	$16,269
Real GDP growth (year-over-year)	2.5%
Federal Spending/GDP	23%
Treasury Debt Held by the Public ($ in billions)	$11,273
Treasury Debt Held by the Fed ($ in billions)	$1,639



Following a data-driven path, the Fed gradually ends monthly asset purchases:

- GDP growth of 2.6% looks strong compared to other countries
- The unemployment rate is below the Fed's QE target since mid-2014
- Real estate gains raise concern that years of low rates lead to asset "bubbles"
- Treasury rates stay low, defying expert predictions
- The S&P 500 reaches all-time highs by mid-year, but drops as economists lower GDP growth projections for 2014 and 2015

Key Variables:	
S&P 500 (closing, day of announcement)	1982
30-yr. mortgage	4.1%
Mortgages in delinquent status	6.0%
Unemployment rate	5.9%
GDP (current four quarters, $ in billions)	$17,600
Real GDP growth (year-over-year)	5.0%
Federal Spending/GDP	20%
Treasury Debt Held by the Public ($ in billions)	$12,785
Treasury Debt Held by the Fed ($ in billions)	$2,449

($ in billions) Date	JEC Republicans QE Chart Book: Data Table and Source Detail 3/9/2009	11/3/2010	9/21/2011	9/13/2012	12/18/2013	10/29/2014
S&P 500 (a)	677	1198	1167	1460	1811	1982
30-yr. mortgage rate (b)	5.0%	4.9%	4.3%	3.5%	4.5%	4.1%
10-yr. Treasury rate (a)	2.9%	2.7%	1.9%	1.8%	2.9%	2.3%
1-yr. Treasury rate (a)	.69%	.22%	.11%	.17%	.13%	.11%
Mortgage delin-quency rate (c)	10.7%	10.5%	8.2%	7.5%	6.4%	6.0%
Unemployment rate (b)	8.3%	9.5%	9.0%	8.1%	7.0%	5.9%
Nominal GDP (d)	$14,384	$15,230	$15,587	$16,269	$17,078	$17,600
Real GDP growth (d)	-5.4%	2.5%	.8%	2.5%	3.5%	5.0%
Federal Spending/GDP	23%	25%	24%	23%	22%	20%
Interest/Federal Spending	9%	10%	11%	10%	11%	13%
Debt Held by the Public (b)	$6,579	$9,070	$10,024	$11,273	$12,281	$12,785
Treasury Debt Held by Fed(b)	$475	$838	$1,652	$1,639	$2,164	$2,449
MBS Held by Fed (b)	$236	$1,038	$871	$835	$1,497	$1,718
Federal Spending (d)	$3,248	$3,770	$3,744	$3,760	$3,746	$3,504
Interest expense (d)	$305	$395	$421	$394	$414	$448

(a) As of the close of the date the Federal Reserve announced its policy
(b) End of previous month
(c) End of quarter
(d) Annualized, based on current quarter

Sources: Haver Analytics and the Federal Reserve Bank of St. Louis/FRED; Treasury yields and Debt Held by the Public from the Treasury Financial Management Service; Federal Reserve assets from the H.4.1 weekly releases; S&P closing prices, foreclosure rates, single-family mortgage and delinquency rates provided by various news reports and the Mortgage Bankers Association; CBO’s FY14 actual federal spending used for Federal Spending in the 10/29/2014 column