

The implications of the end of QE2

Little need to fear a market correction

June 2011



Key points

The US Fed's QE2 program will come to an end on 30 June 2011.

Markets question the ability of the economy to achieve sustainable growth without the extraordinary assistance of the Fed and the ability of the markets to absorb the continued supply of US Treasuries post QE2.

However, we would argue that the volatility and directionality in risky assets has been more a function of the low federal funds rate, the direction of economic data, and global macro risks including European sovereign debt restructuring fears, rather than QE2 itself.

We do not believe the end of QE2 in isolation is capable of being the sole catalyst for a market sell-off.

We believe the market is reasonably well positioned to support the incremental Treasury fixed income supply and do not expect a material increase in market yields while fixed income supply remains tight.

We feel the hurdle for QE3 is high and it would require a further slowdown in economic growth and renewed deflation fears before QE3 could become a reality

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The end of QE2 is an important event for the US and global financial markets. As the global economy braces itself for the Fed's exit strategy from the highly accommodative monetary policies that have been in place since the start of the financial crisis in 2008, the uncertainty has led some investors to adopt more cautious positioning. Is that defensive stance justified?

QE2 ends in June

Quantitative easing (QE) is the monetary policy tool utilised by the Federal Reserve to increase the supply of money, ease financial conditions and support economic activity through large scale asset purchases. By purchasing assets directly from private investors, the Fed provided an immediate liquidity injection into the financial system.

QE2, specifically, is the second round of asset purchases announced and implemented by the Fed to promote economic growth following the 2008-2009 financial crisis. The Fed is on schedule to complete the \$600bn government debt purchase programme by 30 June 2011.

What comes next?

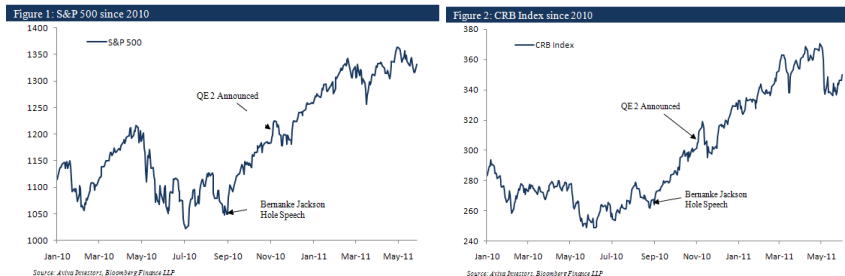
While it can be argued whether QE2 was necessary, the market data strongly suggests that QE, along with other policies, was successful in easing financial conditions, raising asset prices, reducing longer-term borrowing costs, and reducing the value of the US dollar (thereby increasing exports via more competitive pricing of US goods). We see no reason to disagree with Fed estimates that, all things being equal, QE2 potentially resulted in the reduction of longer term (10 year) Treasury rates in the range of -25 to -50 bps¹.

However, the big questions the markets are grappling with now are the ability of the economy to achieve sustainable growth without the extraordinary assistance of the Fed and the ability of the markets to absorb the continued supply of US Treasuries post QE2. The potential implications include:

- A correction in equity and commodity markets (the impact of tightening monetary policy and reducing liquidity)
- Rising US interest rates (limited near term by the economic slowdown, limited inflation, and volatility in risky assets), resulting in higher financing costs for households and businesses
- An increase in volatility, credit spreads and other risk premiums as investor's risk appetites decrease (limited by the supply of non-Treasury fixed income supply and strong demand for fixed income in a 'low yield' environment)

QE2 has been useful – but has not been the driving force behind markets

When the market believes that the government is there to support markets during dire situations, the affect on risky assets can be significant. This was well demonstrated by the appreciation of asset prices that began following Fed Chairman Ben Bernanke's August 2010 Jackson Hole speech and that lasted through to April 2011 as shown in figures 1 & 2 below².



Sources:

1. Federal Reserve, March 2011
2. Bloomberg, June 2011
3. Barclays Capital - Federal Reserve flow of funds data as at end December 2010
4. Investment Company Institute, May 2011

However, over the last 12-18 months, we would argue that the volatility and directionality in risky assets has been more a function of the low federal funds rate, the direction of economic data, and global macro risks including European sovereign debt restructuring fears, rather than QE2 itself. Although QE has played a major role in the supply side of the equation, loose monetary policies dominate the demand side and the resulting substitution of asset classes.

Figure 3: Fixed Income Supply

Annual NSA Flows	Treasury	Municipal Securities	Corporate Bonds	Agency Debt	Agency MBS	Private Label MBS	CMBS	ABS	Total
2002	257	144	294	220	327	80	31	49	1,401
2003	398	120	382	251	335	123	51	-16	1,644
2004	363	114	386	75	41	382	52	-4	1,408
2005	307	171	283	-84	164	573	112	59	1,586
2006	184	153	605	36	293	519	113	116	2,018
2007	237	190	695	282	623	36	139	111	2,315
2008	1,239	51	98	272	497	-312	-40	1	1,805
2009	1,444	108	423	-475	415	-337	-47	-92	1,438
2010	1,580	104	384	-263	187	-231	-50	-48	1,663
2010 vs. 2004-06	1,295	-42	-41	-272	21	-722	-142	-105	-8

Note: Non-seasonally adjusted flows data. Treasuries include T-bills, and agency debt includes discount notes. CMBS includes multifamily, and ABS includes securitized loans/advances in addition to consumer credit. Open market paper, which includes CP, is not shown.

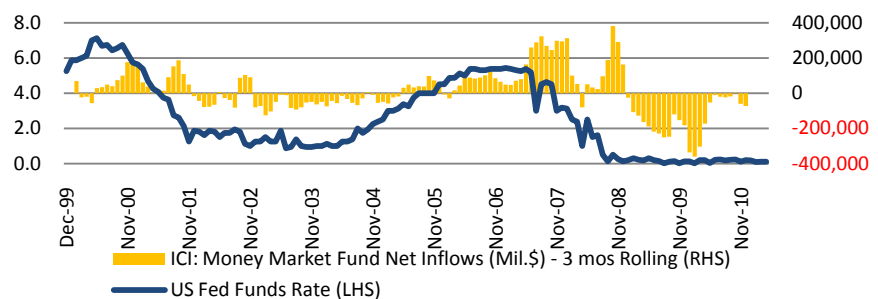
Source: Federal Reserve flow of funds data Barclays Capital

Starting with the supply side, without even considering QE for the moment, there has been a marked reduction in absolute fixed income supply throughout 2008, 2009 and 2010 particularly in the spread sectors of agency debt, MBS, CMBS, ABS and corporate bonds as shown in Figure 3 above³. The advent of QE compounded this tight supply. During a time of reduced fixed income supply, Fed purchases of fixed income securities took additional bonds out of the investment universe. This has unequivocally resulted in higher prices (wealth effect) and lower yields/credit spreads (lower funding rates for households and businesses).

On the demand side of the equation, the exceptionally low federal funds rate environment has resulted in a significant reduction in assets invested in money market funds. The wealth effect created by forcing investors out of low/zero yielding money market investments and into riskier assets appears to be a successful result of Fed policy.

During the entire sub-2 percent fed funds rate environment throughout 2002-2004, \$505bn flowed out of money market funds, of which \$155bn went into fixed income. During the last six months of QE1, the market experienced an outflow of over \$450bn from money market funds, with \$200bn of that finding its way into bonds. There were constant flows in the same direction during the two subsequent time periods from April 2010 to September 2010 (a period of no quantitative easing) and October 2010 to May 2011 (during QE2)⁴. This is depicted in figures 4 & 5 below.

Figure 4: Fed funds rate and money market flows



Source: Investment Company Institute, May 2011

Figure 5: Period Analysis of ICI Mutual Fund Flows

	Total Long-Term Flows	Money Market	Total Equity	Total Bond
6 month Average Dec-99 - May-11	87,420	24,677		
Total Flows 3yrs (Low Rate Regime 2002-2004)	508,226	(505,121)	273,497	155,906
Last 6 mos QE1 Oct-09 - Mar-10	227,063	(457,631)	8,332	200,065
6 months NO QE Apr-10 - Sept-10	90,836	(192,196)	(60,168)	146,173
First 6 mos QEII Oct-10 - May-11	81,921	(59,508)	36,680	20,319

About the authors



Ross Junge

Chief Investment Officer – Fixed Income
Aviva Investors North America

Ross joined the investment industry in 1994 and Aviva Investors in 1998. He is currently responsible for leading, directing and managing the activities of the public fixed income and derivative teams.

Ross has over 14 years of investment management experience, including time spent with Aegon USA Investment Management Inc., where his responsibilities included security analysis, trading and portfolio management.

Ross holds the Chartered Financial Analyst designation, and is a member of the CFA Institute and the CFA Society of Iowa. He earned his Bachelor degree in Economics and Management from Simpson College, and his MBA with an emphasis in Finance from the University of Iowa.



Josh Lohmeier, CFA

Portfolio Manager - Investment Grade

Joshua Lohmeier joined Aviva Investors North America, Inc. in 2008. He assists in managing core aggregate, government/credit and investment grade portfolios.

He has more than 11 years of investment management industry experience, including seven years as a portfolio manager. Previously, Joshua worked for AllianceBernstein as an investment grade portfolio manager. He also was assistant vice president of investments and investment grade portfolio manager at American Equity Investment Life Insurance Company. In addition, he has held analyst positions at Wells Fargo Financial and RSM McGladrey.

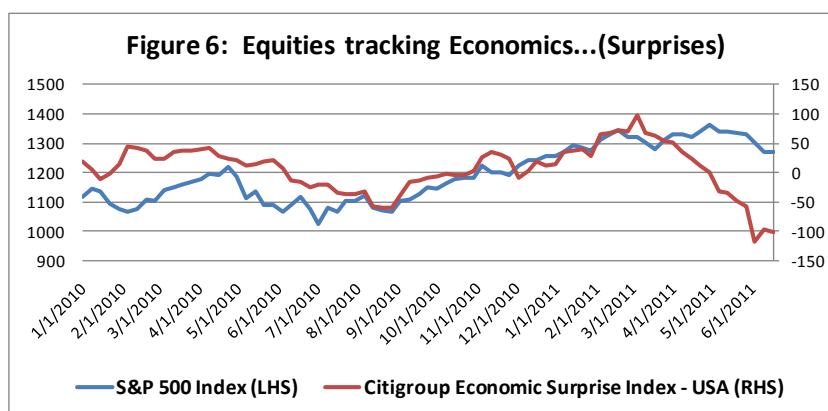
Joshua earned his bachelor's degree in finance from the University of Northern Iowa and is working towards a master's degree in applied economics. He holds the chartered financial analyst designation and is a member of the CFA Institute and the CFA Society of Iowa.

Markets are still driven by fundamental and technical factors

It is also important to remember that markets react to and re-price assets based on fundamental data and technical factors. While we approach the end of QE2, investors are also grappling with various factors, including:

- The slowing pace of economic growth and expectations for future growth (Q1 2011 GDP, manufacturing and non-manufacturing ISM, regional Fed surveys, housing, employment, etc.)
- European sovereign debt restructuring fears and the potential spill-over to European banks and the financial industry
- US fiscal policy tightening (political difficulties, the timing, size and impact on economic growth)
- The impact of higher commodity prices (rising food and energy prices)
- Global monetary and fiscal policy tightening
- Technical investor sentiment (investor risk appetite for risk-free and risky assets)
- Political instability in the Middle East and North Africa

In Figure 6 below, we show how the Citigroup Economic Surprise Index has revealed a fairly decent correlation to the S&P 500 Index since the beginning of 2010. The recent drop off in economic data starting in March 2011 bears responsibility for much of the increased volatility and risky asset underperformance of late.



Like the end of QE1, the end of QE2 is an important step in the process of evaluating the strength of the US economic recovery and its subsequent ability to stand on its own two feet without the life-support of extraordinary loose monetary policy. We believe talk of QE3 in the current environment is premature, and that the Fed needs time to evaluate the impact of holding policy accommodation steady following the end of QE2.

Although we do not rule out the possibility of QE3, we feel the hurdle is high and it would require a further slowdown in economic growth and renewed deflation fears before it would be politically palatable for QE3 to become a reality. We believe bull market advocates looking to QE3 as the ultimate backstop and the panacea to be significantly overweight risky assets in their portfolios should do so with extreme caution. In our opinion, the volatility and potential downside in risk assets between now and the implementation of QE3 – if it is eventually deemed necessary – would be extremely painful.

The market is well placed to absorb the end of QE2

While we believe there is real potential for a market sell-off if the situation in Europe and/or the Middle East/North Africa deteriorates significantly, or if the recent weakness in US and emerging markets economic data deteriorates further, we do not believe the end of QE2 is, in isolation, capable of being the catalyst for a correction.

With the Fed signalling a persistent low rate environment and looking past a short term reduction in investor sentiment, we still see strong demand for risky assets, absent a deeper economic slowdown as opposed to a soft patch. Demand for risky assets has come from cash shifted out of money markets in search of higher returns. We see no reason why this trend would be reversed in the near term. As a result of this phenomenon, we believe that the market is reasonably well positioned to support the incremental Treasury fixed income supply, and we do not expect a material increase in market yields while fixed income supply remains tight.

Appendix –Quantitative Easing: Definition and Mechanics Explained

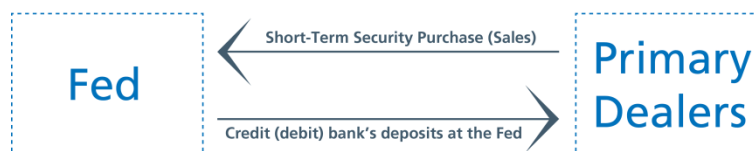
What is Quantitative Easing and why did the Fed implement QE2?

- Quantitative easing (QE) is a monetary policy tool utilized by the Federal Reserve (“Fed”) to increase the supply of money, ease financial conditions and support economic activity when short-term interest rates are at or near zero and there is little scope to ease financial conditions through traditional short-term open market operations.
- QE1 was a \$1.7 billion program implemented at the onset of the financial crisis to inject liquidity into the market. QE1 Fed purchases included approximately \$1.0 billion agency MBS, \$0.4 billion U.S. Treasuries, and \$0.3 billion agency debt. QE1 was implemented between the end of 2008 and the 4th quarter of 2009.
- QE2 was first noted and the market began anticipating a second round of quantitative easing at Bernanke’s Jackson Hole speech on August 27, 2010 when he discussed the “unconventional” policy options the Fed could use to stimulate the economy if needed (officially announced on November 3, 2010). He also indicated that the labor market “remained disappointing” and inflation had “declined to a level slightly below that which FOMC participants view as most conducive to a healthy economy in the long run” and the Fed has “the tools to help support economic activity and guard against disinflation.
- QE2 is the second round of large scale asset purchases announced and implemented by the Fed to promote economic growth following the 2008/2009 financial crisis. The Fed is on schedule to complete the \$600 billion longer-term U.S. government debt purchase program by June 30th 2011.
- The Fed’s objectives for implementing QE2 were to buy assets to ease financial conditions (all else equal). The asset purchase program was intended to ease financial conditions, improve spending by households and businesses, increase employment and keep inflation from falling further by putting downward pressure on long-term borrowing costs (U.S Treasury yields and credit spreads), and raising the value of assets including equities, homes, and other assets to increase household wealth.
- The Fed’s dual mandate which is mandated by Congress via law is to promote **maximum employment** and **price stability**. The Fed took monetary policy action via QE2 based on the following factors: 1) The U.S. unemployment rate remained stubbornly high near 9% and well above maximum employment levels; 2) Very low inflation below price stability mandate (i.e. core inflation sufficiently below the “unofficial” 2% level the Fed considers to be consistent with price stability and well contained inflation expectations); 3) Concerns with the overall fragility of the U.S. economy.

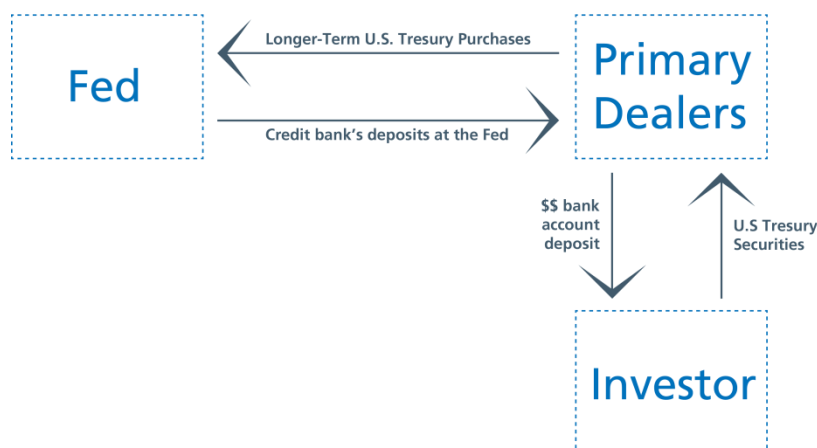
How is QE2 implemented in the markets?

- The Fed usually conducts monetary policy by setting a target for short-term interest rates (“fed funds”) and lowers fed funds to “Ease” monetary policy and raises fed funds to “Tighten” monetary policy.
- QE2 is implemented by the Fed via purchases of longer-term U.S. government debt from private investors in the secondary market through the group of 20 financial institutions called primary dealers. This is the same process the Fed operates when intervening in the markets to raise or lower short-term interest rates with the exception of transacting in longer-term securities as opposed to short-term securities.

Typical Open Market Operations



QE2



Typical open market purchases, such as QE1 and QE2, by the Fed increase liquidity by increasing bank’s deposits at the Fed (i.e. increases bank reserves). When the Fed buys an asset, the effect on money supply depends on who sold the assets and what they do with the funds they receive. If a seller is an investor the transaction results in a deposit into the investor’s bank account and an increase in money supply if they spend the money and do not pay down debt. If the seller is a bank, reserves go up but money supply only increases if the bank responds by lending to more households and businesses (rather than increasing the excess reserves without lending to households or businesses).

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