

December 2013

Volatility as an Asset Class

Over the past few years, central bank influence on markets has challenged standard investment conventions, as well as how investors view and trade volatility. Under the current regime of highly-regulated and controlled markets, volatility has been greatly diminished. While central banks exert unprecedented power, they have also sown the seeds for a potential upsurge in volatility, presenting investors with an attractive opportunity to position themselves in volatility as an asset class.

Volatility

What is volatility? The conventional answer is the magnitude of the variation of a price, or many prices, over time. It may also be defined as the speed with which prices change. As it manifests across markets, volatility can also be thought of as a quantifiable measure of uncertainty and fear. Investors have many choices how to capture volatility or gain exposure to it, the most common being through options. In addition to explicit options, there are also positions that exhibit embedded optionality, and can be categorized as “volatility” trades.

Implied volatility is the price of explicitly buying or selling volatility, such as through an option. Whereas actual, or *realized*, volatility is a measure of the path of a price, implied volatility is the price an investor pays to protect against, or speculate on, this path. A few general dynamics characterize volatility in markets. Volatility tends to be higher in risk-off environments than risk-on ones, rising asset prices typically depress volatility (commodities usually being the lone exception to this), and the single greatest predictor of implied volatility is recent realized volatility.

The term structure of implied volatility also provides useful information. A steep volatility term structure, where longer-dated options trade at higher implied volatility relative to shorter-dated options, implies a greater risk of uncertainty in the future. An inverted volatility term structure, where shorter-dated options trade at a premium to longer-dated options, is normally characteristic of very turbulent markets.

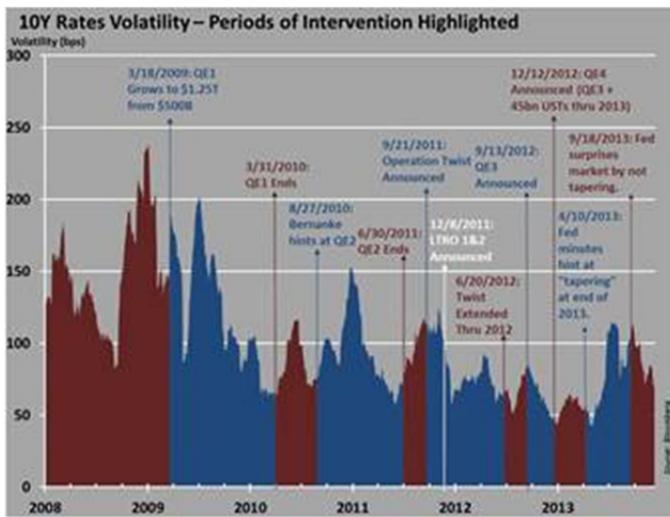
Central Bank’s Role

Examining the mechanics of quantitative easing (QE), it’s easy to understand why both realized and implied volatility decreased substantially as central banks started instituting monetary easing programs. Infinite liquidity, through outright bond purchases and zero-interest rate policy (ZIRP), instilled a certain sense of stability for banks, relieved stress on company balance sheets, and reduced the risk of lending. Money-printing also raised asset prices as monetary stimulus forced investors into higher beta assets as they sought to increase yield, buying everything from high yield credit to equities. Meanwhile, as a tertiary effect of QE, investors also began selling volatility as a means of generating yield in an environment where it had become increasingly scarce, further depressing implied volatility.

The last few years demonstrate how volatility has been depressed by central bank involvement. But does that have to remain the case? There are two natural experiments, both still underway, that reveal something about the intersection of unprecedented central bank intervention and the potential for higher volatility under different scenarios: the U.S. and Japan.

Impact on Volatility

In the U.S., there have been several different iterations of QE since 2008 that have reduced long-term interest rates to levels not seen in the post-Bretton Woods era, while increasing prices across virtually every asset class. The most recent round is the \$85bn of ongoing monthly bond purchases started in late-2012. One of the desired results of easing, severely dampened volatility, has been achieved. The goal of QE was initially to stabilize the financial system, and later to increase economic growth by lowering the cost of capital, increasing asset prices, and stimulating consumer demand.

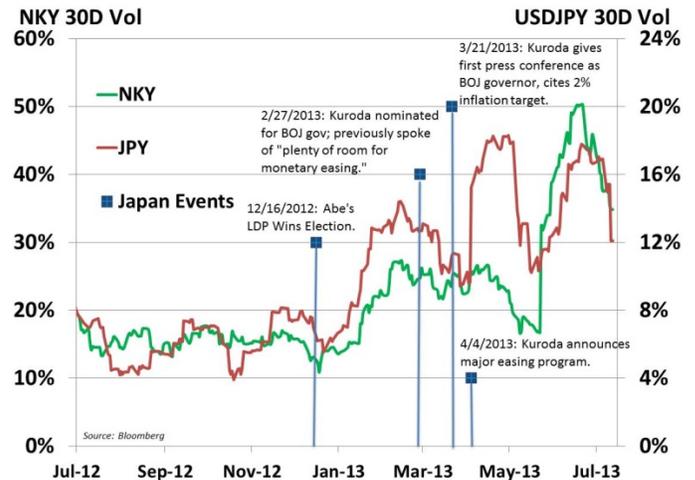


Then, beginning in May 2013, the Federal Reserve managed to initiate a significant reversal in the level of rates and rate volatility just by *hinting* at a potential decrease in monetary stimulus for long-tenor bonds. The mere suggestion that such support could be “tapered” increased volatility for both bonds and equities. Similarly, this volatility spike reversed in mid-September after the Fed made it clear that tapering would not occur in the near term.

Given these sharp reactions, markets could be tumultuous if the Fed indeed *does* reduce bond purchases and begins increasing the fed funds rate. For years now, equity and bond markets have operated under some of the greatest price manipulation in history on the part of the Fed.

Eventually, the transition from this Fed-engineered pricing to market-pricing is likely to generate substantially higher volatility.

Japan’s central bank is diverging from the Fed in terms of policy, but its new QE program had the same effect on volatility as the Fed’s threatened tapering. Japan’s most recent round of QE started in April when Bank of Japan (BOJ) Governor Kuroda announced a massive program of bond buying equivalent in size to the Fed’s own QE program (in a country with less than half the U.S.’s GDP). An unsurprisingly significant depreciation in the currency and a volatile rally in equities immediately followed. Subsequent guidance also precipitated a selloff in Japanese Government Bonds (JGBs) as interest rates experienced volatility not seen since 2008. It was a seemingly perfect execution of monetary stimulus, where markets took central bank guidance as gospel and performed just as the BOJ had planned. However, the months immediately following the expanded QE program were characterized by significantly higher volatility not only in assets that were generally selling off (JGBs), but also in foreign exchange and equities.



Despite the conventional wisdom, in Japan, QE and expectations for it significantly *increased* volatility in the short term. It is worth noting that Japan has been under some sort of QE regime for more than a decade, but the size and scope of Kuroda’s recent endeavor dwarf those previous efforts. Also, this

announced revamp of QE came not at a time of financial crisis or turbulent markets, but on the heels of moderate economic growth and stable consumer prices. Despite the conventional wisdom that seemingly endless liquidity absorbs severe volatility in markets, Japan on its own demonstrates this need not be the case.

Impact on Investing

Some observers have concluded that central banks have effectively become the stewards for the economy, and indeed, for all financial markets. Bonds, equities, currencies – all asset prices are essentially being governed first and foremost by central bank policy and action, not fundamental economic factors. Economic indicators only matter inasmuch as they suit the goals of the monetary politburo running the show.

Despite potentially different trajectories for their QE programs, the recent history of Japan and the U.S. illustrate the inherent instability in markets created by central bank intervention on such a grand scale.

What happens when central banks become the puppet-masters for the market? This presents a paradox that grips the markets and unsettles investors: Central bank pronouncements, strict guidance on monetary policy and quantitative stimulus provide conditions for reduced price volatility, but significantly raise the risk of large moves in asset prices.

The current dynamic of central banks providing stewardship over an economy, rather than just support for it, underscores the appeal of trading volatility as an asset class. Positioning oneself in volatility as policy changes are imminent is attractive whether there is a shift towards a removal of

stimulus, or a massive expansion of already significant easing.

Current volatility-based approaches to investing attempt to take advantage of central bank intervention and the unique opportunities it has created to structure portfolios that maintain limited downside risk, positive-carry, and long volatility exposure to benefit from the risk of idiosyncrasies inherent to market governance by monetary mandarins.

To look at options markets today, one would believe that asset price stability is here to stay, and the future of centrally-planned markets looks calmer than ever. Despite even the recent evidence to the contrary in the U.S. and Japan, volatility markets have been lulled into a sense of security that will likely prove to have been imprudent. Over time, this approach of vesting trust and capital into assets trading in markets where prices are essentially administered by government fiat has proved a losing proposition.

Currently, allocating capital to volatility strategies has never looked more attractive. The volatility market is dislocated, failing to account for the paradigm shift experienced on the part of central bank intervention and the potential for significant near-term changes in policy. Across many different asset classes, from commodities to credit and interest rates, there are myriad trade opportunities to position the astute volatility investor to benefit both if this dynamic continues or if the paradigm shift reverses.

Disclaimer: The information contained herein is accurate as of the date referenced above and is likely to change and does not constitute an offer to sell or the solicitation of any offer to purchase any securities or provide any investment advisory services. This information has been provided for informational purposes only and should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. This information is qualified in its entirety by reference to the offering memorandum of the applicable fund or investment product, including the Risk Factors disclosure set forth therein. This information is confidential and may not be distributed without the express written consent of Ionic.