The Silver Bullet

ALGEBRIS INVESTMENTS

The Low Volatility Trap

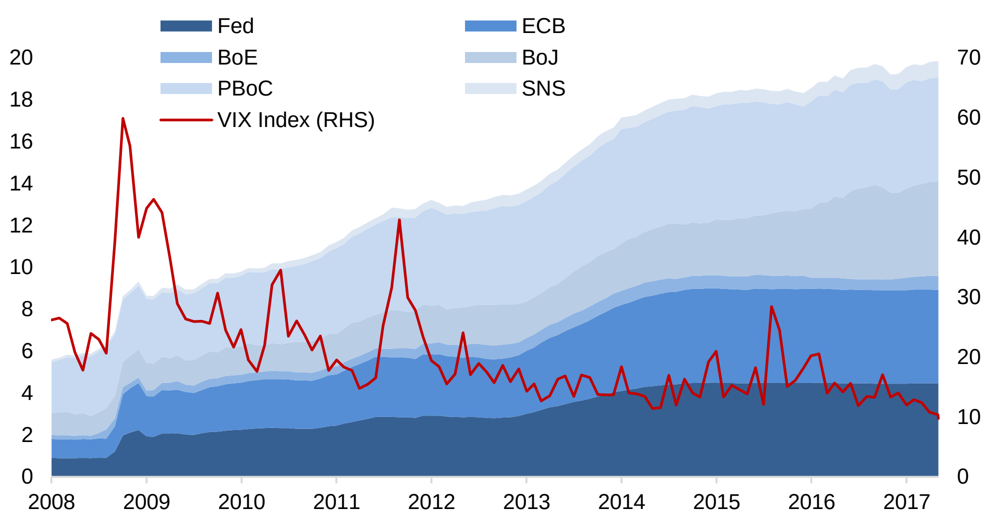
"Stability leads to instability. The more stable things become and the longer things are stable, the more unstable they will be when the crisis hits."
Hyman Minsky

Is volatility dead? – this has been a constant question for investors in the post-crisis era of expansionary monetary policy.

With global central banks taking turns to inflate their balance sheets, implied volatility and volatility have fallen to record lows. Yet investors who have been trying to buy volatility have lost, so far, as realised volatility has stayed low too. What are the causes of this persistent low-volatility environment? Where are the risks and when will these re-emerge?

Global QE Has Dampened Volatility

Central bank balance sheet size, $ tn vs VIX Index



Source: Algebris (UK) Limited, Bloomberg

Prolonged low volatility does not mean low risk. Against the current market tranquility are rising international geopolitical risks and domestic populist threats. As previous crises have taught us, the repricing in volatility risk premium can be sharp and disproportionate vs actual realised volatility – once the self-fulfilling loop is broken. In the run-up to the 2008 crisis, the cycle of cheap funding costs, search for yield, low risk premia and low volatility was fuelled by

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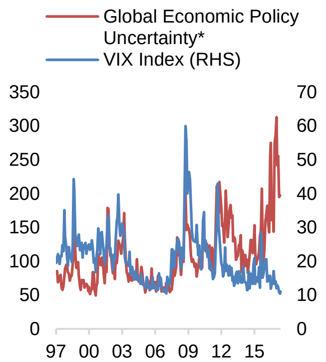
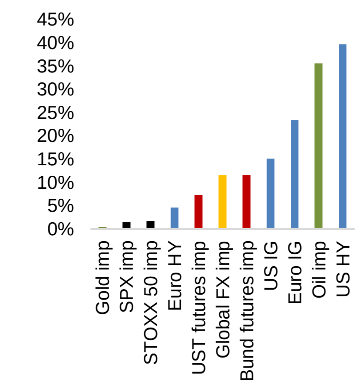
Low volatility, high uncertainty



Source: Algebris (UK) Limited, Bloomberg.
*Long-term average = 100

Volatility is low across assets
Percentile of current volatility since 2005



Source: Algebris (UK) Limited, Bloomberg.
Blue = credit, green = commodity, yellow = FX, red = rates, black = equities. Imp = implied.

leverage in the private sector (CDOs, leveraged credit instruments, etc.). Today, it is loose central bank policy which is allowing companies to borrow cheaply and pushing investors to search for yield. That said, macroeconomic data is improving, and both the Fed and the ECB are searching for a normalisation path.

This means volatility is not dead, it is just asleep. Instead, global QE and the resulting search-for-yield activity have led to a divergence between real world uncertainty and market-priced volatility. So far, this has put central banks in a trap to ease more whenever markets tremble. There are two ways to break out from the trap, in our view: a good one where central banks are able to gradually exit monetary easing and volatility risk premium normalises thanks to monetary policy and reforms, or a bad one with a sharp risk repricing.

QE: A Squeeze on Yields and Volatility

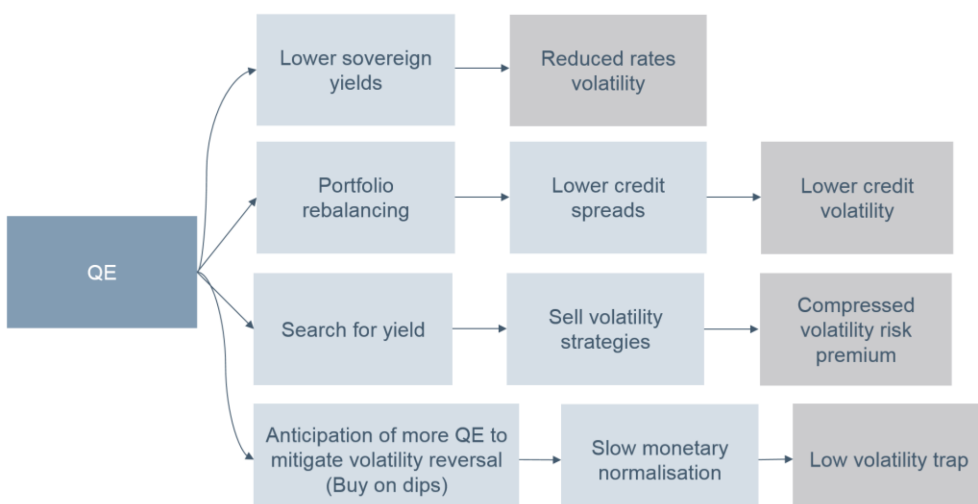
QE filters into a low volatility regime through four channels:

1. QE caps range and volatility of long-term interest rates. This is the most direct transmission channel of central bank bond purchases on volatility. Using Gilts as an example, research has found that QE neutralised the six-fold increase in volatility seen during the crisis.

2. QE reduces credit spreads and credit volatility. QE provides a strong anchor to credit, by purchasing investment grade debt and pushing bond investors to go down into high yield. This leads to spread compression across the spectrum. Loose financial conditions also reduce default rates, by allowing companies to refinance cheaply.

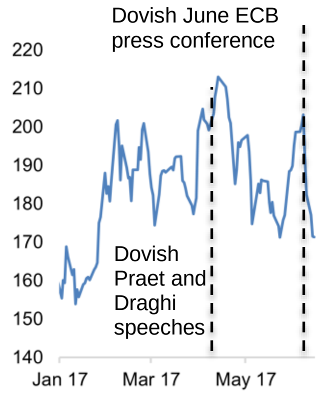
3. Lack of yield in bonds and credit pushes investors into other short volatility strategies. As central bank easing continues to take out nominal yield from bond markets and compresses risk premia, investors are forced to look for alternative sources of yield. One example is short volatility strategies, which became attractive vs credit on a relative value basis and have produced positive risk-adjusted returns post-crisis. That said, there has been a significant growth in volatility-tracking ETFs, making the implementation of short volatility strategies even more common.

From QE to Markets: How Loose Monetary Policy Reduces Risk Premia and Volatility



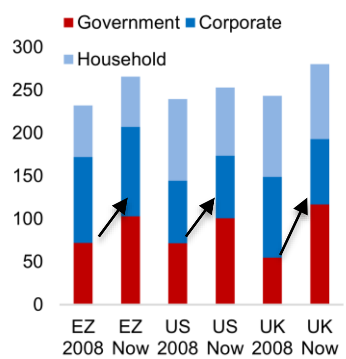
Source: Algebris (UK) Limited

ECB reaction function
10y Italian sovereign spread



Source: Algebris (UK) Limited, Bloomberg

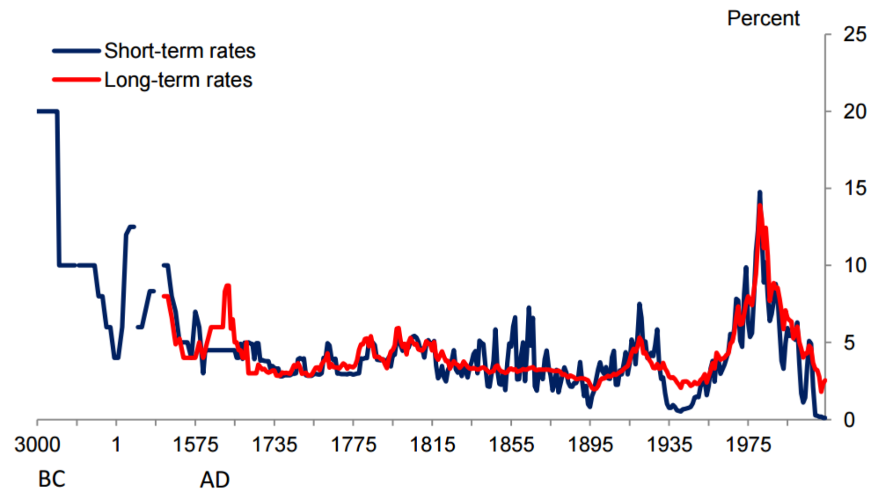
Leverage moved to the public sector
Debt as % GDP



Source: Algebris (UK) Limited, BIS

4. Market participants adapt their expectations to central bankers' reaction functions. Betting on the QE put has almost always worked in the post-crisis era. While in theory central bankers should not base their policy decisions on financial market developments, a sharp rise in volatility could lead to an excessive tightening in financial conditions, threatening their inflation targets. This interdependence could have partially contributed to the ECB's dovish tone before the French elections and around uncertainty over the Italian elections, for example. But the prolonged use of a QE put reaction function by central banks can influence market participants' expectations to take on more risk, or buy the dips.

Interest rates: we are at an all-time low



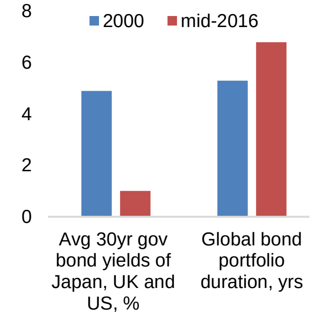
Source: Homer and Sylla (1991), Heim and Mirowski (1987),Weiller and Mirowski (1990), Hills, Thomas and Dimsdale (2015 forthcoming), Bank of England, Historical Statistics of the United States Millenial Edition , Volume 3 and Federal Reserve Economic Database.

Make Volatility Great Again

What can make volatility come back? The short answer is political and geopolitical risks, and policy errors. Arguably all the efforts taken since the crisis to reduce private leverage and capitalise banks should have led to a safer financial system to withstand any major shock. Nevertheless, today we also have more indebted governments, record-level of inequality and rising political/geopolitical risks. These factors have led to a growing divergence between market-priced volatility and real world uncertainty. In our view, political risk as well as macro or micro policy mistakes could trigger a rise in volatility:

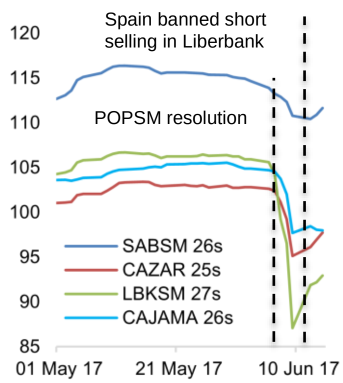
1. Political and geopolitical risks: One collateral effect of prolonged QE is rising wealth inequality, which together with the lack of social mobility provide the economic conditions for a rise in protest politics. Concerns about major political events since last year including the Brexit referendum, US and French presidential elections have been weighing on markets. The unexpected results at the UK referendum and US elections also triggered a sharp increase in global economic policy uncertainty. Neither event sparked a wider risk repricing, thanks to quick easing actions from the BoE and an improving growth and fiscal policy backdrop in the US, as also argued by ECB research. Nevertheless, the same may not hold true in future. Risks on the horizon include tensions between the US and North Korea, within the Middle

Long bonds: a crowded trade
Average yield vs duration



Source: Algebris (UK) Limited, IMF GFSR October 2016

POPSM hit other Spanish LT2s
Lower tier 2 bond prices, pt



Source: Algebris (UK) Limited, Bloomberg.

East, investigations over President Trump's Russian links and the upcoming Italian elections (though more likely to happen next year in our view).

2. Macro policy mistakes/abrupt monetary normalisation: A gradual normalisation of bond yields as growth improves and central banks exit QE should be positive for financial stability. However, there are risks of a sharp repricing in bond yields, as the ECB warned in its latest Financial Stability Review. This could be caused by central banks waiting for too long to normalise monetary policy and overdoing it when the economy overheats, or communication missteps that lead to abrupt changes in market expectations, as happened during the taper tantrum. In the US, underwhelming inflation led markets to adjust downwards their rates expectations, yet the Fed at its June meeting adopted a hawkish tone by looking through recent weak data. The mismatch triggered a sell-off across risk assets, highlighting the danger of a potential policy mistake. In Europe, growth is accelerating and political backdrop has turned more supportive after French elections. The ECB has remained dovish so far, but may need to change course as growth improves. An abrupt shift in communication could shock markets.

3. Micro policy mistakes: With general market volatility at all-time lows, idiosyncratic shocks can trigger disproportionate ripple effects. One example is the recent resolution of Spanish bank Banco Popular by European regulators. By fully writing down not only equity, additional tier 1 but also lower tier 2 must-pay debt in an unprecedented action, regulators did not take into account second-round effects on other mid-tier banks: the share and bond prices of other mid-tier banks in Spain dropped substantially following the intervention.

Conclusions: Policy and Politics Can Bring Volatility Back

1. Loose monetary policy encourages a low-volatility regime. There are several links in the transmission channel, given the central bankers' reaction function to spreads and the subsequent search for yield activity which follows from a low interest rate environment. From sovereign bonds and credit, the low-volatility regime can spread to other asset classes.
2. Political and geopolitical risks are rising, while central banks are still holding investors' hands. We currently see the widest divergence in recent history between market volatility and political/geopolitical risks. There are various ways risk events can wake markets up: policy errors at a macro or micro level are one such example.
3. Policy mistakes at a macro and micro level can bring volatility back. Central bankers have been cautious in normalising policy, following the experience of the tantrums caused over the previous years. But investors have grown used to central bankers' reaction functions, taking even more risk and incorporating a buy-the-dip mentality. Strategies that serially buy volatility have not performed well in the past. Given the persistence of loose monetary policy, it is likely that risk events will continue to be dampened. That said, investment strategies which are active and flexible should outperform in an environment where volatility makes a comeback.

"It's a trap!" – Admiral Ackbar, Star Wars Episode VI: Return of the Jedi

The Silver Bullet is Algebris Investments' macro letter.

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Additional reading:

European Central Bank Financial Stability Review, May 2017

Steeley, J., Matyushkin, A., The effects of quantitative easing on the volatility of the gilt-edged market, International Review of Financial Analysis Volume 37, January 2015

Bekaert, G., Hoerova, M., Lo Duca, M., Risk, uncertainty and monetary policy, ECB Working Paper Series No 1565, July 2013

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