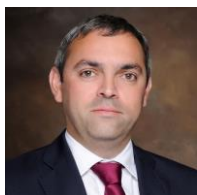




PRICE POINT

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Timely intelligence and
analysis for our clients.



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Global Fixed Income **WHY VOLATILITY STILL MATTERS**

KEY POINTS

- Until its recent comeback, volatility has been notable for its absence since the financial crisis.
 - However, the withdrawal of quantitative easing could mean spikes in volatility could become a more regular occurrence.
 - The low-yield environment of recent years has led many investors to build portfolios comprising highly correlated assets, potentially leading to significant losses if volatility returns.
 - More active approaches to portfolio construction may therefore prove beneficial.
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Volatility has traditionally been a major consideration for investors, but for much of the period since the financial crisis it has been notable largely for its absence. Apart from the occasional spike (the most recent of which has been over the past few months) the Chicago Board Options Exchange Volatility Index (VIX), the popular measure of the stock market's expectation of volatility, has been fairly muted since 2011. However, as central banks begin withdrawing quantitative easing (QE), political risk builds in parts of the world, and the prospect of trade wars looms, volatility could be set to return—and many investors risk getting caught unawares if they are not prepared for it.

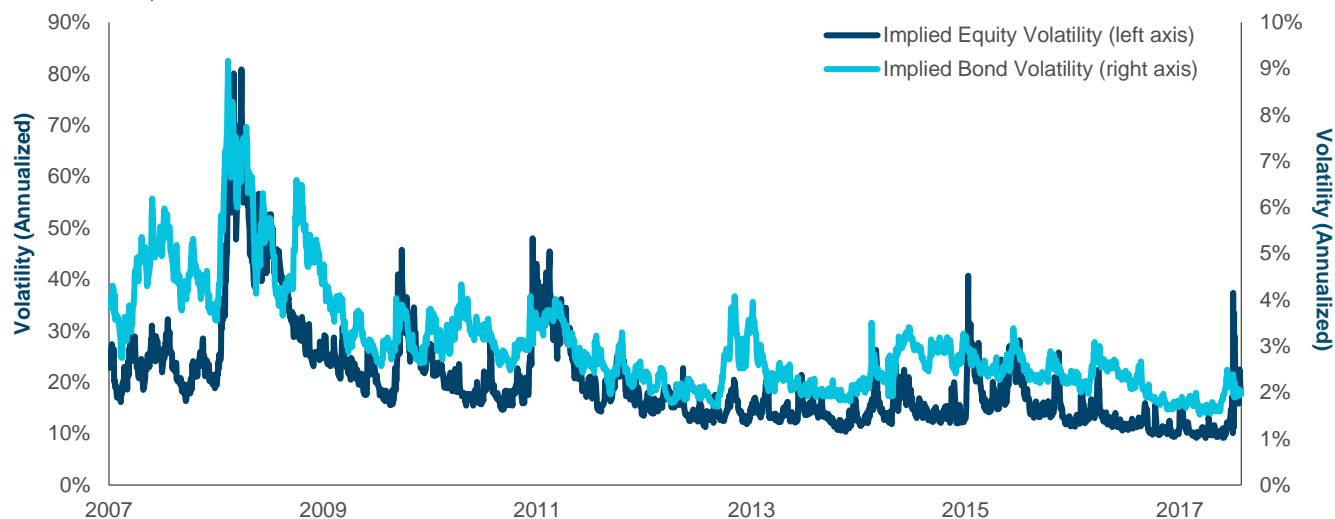
So much importance is attached to volatility because it is a key determinant of asset prices. According to modern portfolio theory, when considering whether to invest in an asset, investors look at three main factors: risk (measured by volatility, or standard deviation), returns, and correlation. Rational investors will always seek to create a portfolio with the highest returns given a specific amount of risk, or the lowest risk given a specific level of return. The theory states that in order to create an “efficient” portfolio with the strongest possible risk/return profile, the assets within the portfolio should be uncorrelated with each other.

THE THREE COMPONENTS OF VOLATILITY

As Figure 1 shows, implied volatility—and therefore risk—of both equity and bond markets has been close to record lows in recent years. To understand why, we need to delve deeper into the three key elements of market volatility: macroeconomics, geopolitics, and asset price bubbles.

Figure 1: Implied Volatility Has Been At All Time Lows

As at March 31, 2018



Implied equity volatility is represented by the VIX index; implied bond volatility is represented by the MOVE index.

Sources: T. Rowe Price, Chicago Board Options Exchange, and Bank of America Merrill Lynch.

Macroeconomic volatility is driven by factors such as growth expectations, inflation, and interest rate movements. Central banks, whose primary responsibilities include setting interest rates, controlling the money supply, and ensuring the stability of the financial system, can strongly influence macroeconomic volatility. The trillions of dollars' worth of QE injected into the global economy by central banks since the global financial crisis (GFC) have kept liquidity in plentiful supply and interest rates low, supporting credit markets and national economies. QE has also changed the supply of assets, forcing the global investor to own more cash.

Steady growth in China, whose share of worldwide investment has mushroomed in recent decades, has provided further ballast for a low-volatility macroeconomic environment. The low oil price has had a similar impact, effectively acting as a stimulus or tax break for consumers.

On paper, geopolitical volatility should have been elevated in recent years. Last year alone, Donald Trump was inaugurated as president of the U.S., the UK triggered Article 50 to formally begin its exit from the European Union, anti-establishment parties contested a number of elections in Europe, and tensions in the Middle East and the Korean Peninsula persisted throughout the year. However, 2017 was remarkable for the calmness of markets—the risk events described above, and others, came and went without causing any sustained disruption. This may have been partly due to the soothing effect of central bank QE money described above, but it may also be that the sheer frequency of unusual political events in recent years has led to complacency setting in—markets tend not to move too much when investors are so accustomed to surprising outcomes that they stop reacting to them.

Finally, while the period since the GFC has been marked by strong asset price growth, it has yet to be marked by the bursting of any asset price bubbles. Again, the market liquidity provided by central banks may have helped to cause this by keeping prices artificially high.

QE WITHDRAWAL MAY UNLEASH NATURAL MARKET FORCES

In summary, the three main drivers of volatility have all been subdued for much of the period since the GFC. It is unlikely that this will continue, however. The withdrawal of QE is expected to unleash natural market forces that have been suppressed by the vast amount of central bank money in the system. The Federal Reserve and Bank of England have already begun unwinding their QE programs, while the European Central Bank and Bank of Japan are expected to follow in due course. This will lead to higher interest rates, increasing the cost of borrowing for businesses and consumers and potentially harming growth.

At the same time, China is rebalancing its economy away from manufacturing and construction and toward services and consumption. While the ruling Communist Party seems to be managing this process well so far, it may struggle to deliver the steady growth of the past few years during this transition period. Energy prices also look set to rise, effectively turning what was a subsidy into a tax on consumers.

Without the reassurance that QE provided for markets, geopolitical events may also begin to cause more volatility. Several major countries face elections this year, a number of which will be contested by populist, anti-establishment parties and individuals fighting corruption charges. The international row over U.S. President Donald Trump's threats to impose heavy tariffs on imports of steel and other goods has the potential to set nerves jangling in key markets, as would any further escalation in tensions relating to the Middle East, North Korea, or Russia.

There is also the possibility that the withdrawal of QE may finally lead to the bursting of some asset price bubbles. Indeed, signs of this have already been seen this year. February's sudden volatility spike led to eye-watering losses in inverse volatility exchange-traded funds, which many investors had piled into believing that volatility would stay low. The recent collapse in the price of cryptocurrency Bitcoin's price is also regarded by some as a classic case of a bubble bursting. If investors become spooked by the prospect of inflation and rising interest rates, asset price corrections such as these may become more frequent.

Contrary to perceptions, equities and sovereign debt are not negatively correlated all the time—in certain periods, particularly those when spikes in volatility are caused by fears over inflation, they can become highly correlated.

BEWARE OF ASSUMED CORRELATIONS IN YOUR PORTFOLIO

If volatility is set for a comeback, investors will need to look carefully at their portfolios to determine whether they are prepared for it. One area in particular they will need to focus on is correlations. As stated in modern portfolio theory, the more correlated two assets are, the more difficult it is to combine them to create an efficient portfolio with a strong risk/return profile. The period of ultra-accommodative monetary policy has led to many investors building more correlated, less efficient portfolios because record-low yields have effectively forced them to invest more heavily in credit markets in search of better returns. As higher-yielding credit instruments are highly correlated with equities, this is a high-risk position at a time when there is a prospect of a return of volatility.

What's more, volatility spikes can lead to unexpected breakdown in correlation between equities and government bonds too. Contrary to perceptions, equities and sovereign debt are not negatively correlated all the time—in certain periods, particularly those when spikes in volatility are caused by fears over inflation, they can become highly correlated. This happened during February's volatility spike, when nervousness over inflation led to bonds

and stocks selling off simultaneously. Investors should therefore not assume that adding duration to their portfolio will automatically be an effective way of diversifying against equity market volatility.

Risk parity strategies, which use risk to determine asset allocations within a portfolio, work far less effectively when correlations increase. Investors seeking to position their portfolios for the potential return of volatility may therefore benefit from adopting a different approach based on active country and sector allocation and duration management. Times like the present, when countries across the world are at very different stages of their interest rate cycles, provide a good opportunity to build portfolios that are diversified across countries and markets, comprising assets with low correlations to each other. We believe this approach may be the most effective way of navigating what could be a volatile period ahead.

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