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POINT**

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Macroeconomics **THE HIDDEN RISKS BEHIND THE WITHDRAWAL OF QE**

KEY POINTS

- Quantitative easing (QE) measures from central banks have suppressed a number of natural market forces in recent years, reducing uncertainty and dampening volatility.
- Now, the looming prospect of central bank balance sheet retrenchment is raising fears that some of these forces may suddenly reemerge, leaving chaos in their wake.
- But we believe the withdrawal of QE is very likely to occur much more gradually than many investors expect, and its effects may not begin to be felt for some time to come. This will be supportive for wages, growth, and risk taking, which could prompt central banks to hike rates more aggressively than is currently priced in by the markets—a hidden risk that many investors are not prepared for.
- As such, adopting an actively managed approach to bond investing, with exposure to a wide variety of sectors, may be the most prudent approach.

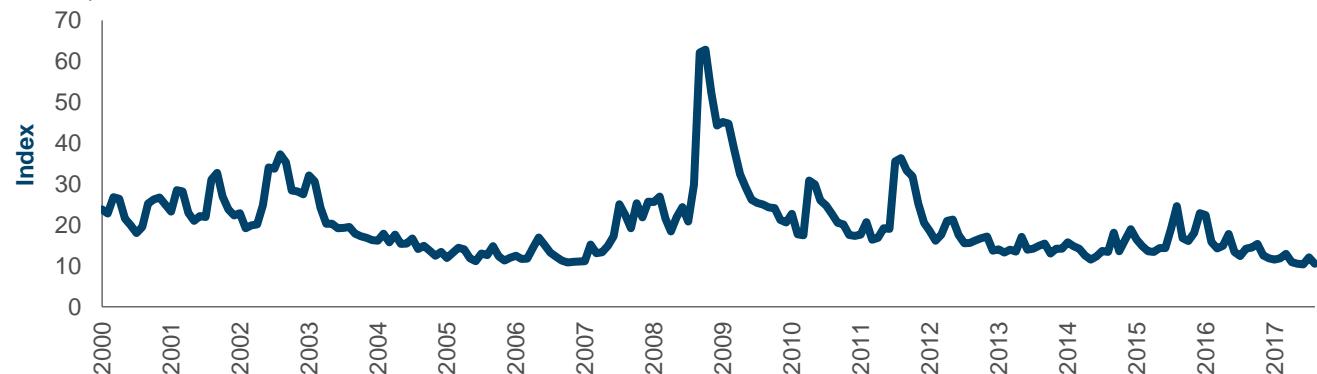
The global economy has lived under false conditions for the past decade. Quantitative easing (QE) measures from central banks have suppressed a number of natural market forces, reducing uncertainty and dampening volatility. Now, the looming prospect of the withdrawal of QE is raising fears that some of these forces may suddenly reemerge, leaving chaos in their wake. However, while central bank balance sheet retrenchment will have an impact on markets, the process may not occur in the way that most investors expect.

QE's role in suppressing market volatility is generally accepted. When central banks purchased trillions of dollars' worth of government and corporate bonds, they significantly reduced the amount of assets available for purchase on the open market, leaving most investors holding a lot of cash on their balance sheets. Since then, yield-hungry investors have bought quickly at any signs of a retrenchment, ensuring that sell-offs are short-lived. There is a self-reinforcing process at work here: If sell-offs are

perceived to be shallow, investors will chase them harder and make them even shallower. As Figure 1 shows, the launch of the U.S. Federal Reserve's QE program in 2008/2009 had an immediate and lasting impact on market volatility, which had spiked violently during the global financial crisis.

Figure 1: VIX From 1999 to 2017

As of September 30, 2017

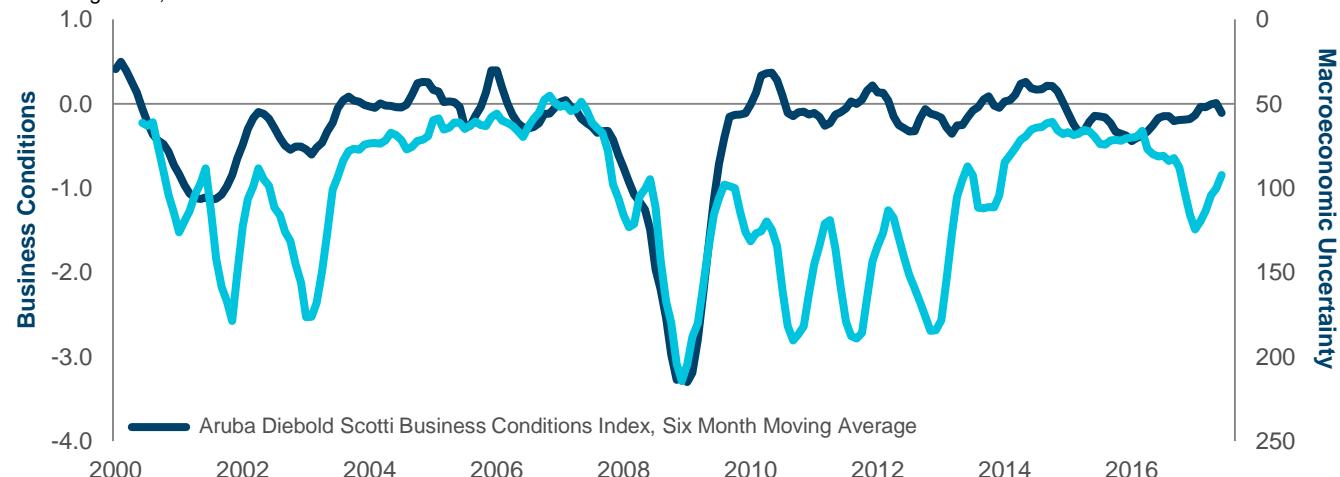


Source: Chicago Board Options Exchange.

Less widely discussed is the effect that QE has had on macroeconomic uncertainty and its impact on growth. Conventional wisdom might suggest that the major political developments of the past few years—Brexit, Donald Trump's election as U.S. president, unconventional central bank actions, and ongoing geopolitical tensions in the Middle East and Asia—would have made it more difficult to accurately predict macroeconomic data. However, the evidence suggests otherwise. The Goldman Sachs Macro-data Platform (MAP) Economic Surprise Index, which tracks up/downside macroeconomic "surprises" relative to expectations, suggests that macroeconomic data have become easier to predict over the past three to four years—i.e., there has been a reduction in the variance of forecast error. This suggests that QE has helped to suppress macroeconomic uncertainty—a conclusion backed up by the Economic Policy Uncertainty Index, which shows that U.S. policy uncertainty fell in recent years in tandem with the growth of the U.S. Federal Reserve's balance sheet. Indeed, as Figure 2 shows, not only has central bank balance sheet expansion helped to reduce uncertainty, it has also reduced the correlation between uncertainty and growth—meaning that even during periods when uncertainty has been elevated, its impact on the wider economy has been muted by QE.

Figure 2: U.S. Macroeconomic Uncertainty Impact On Business Conditions

As of August 31, 2017

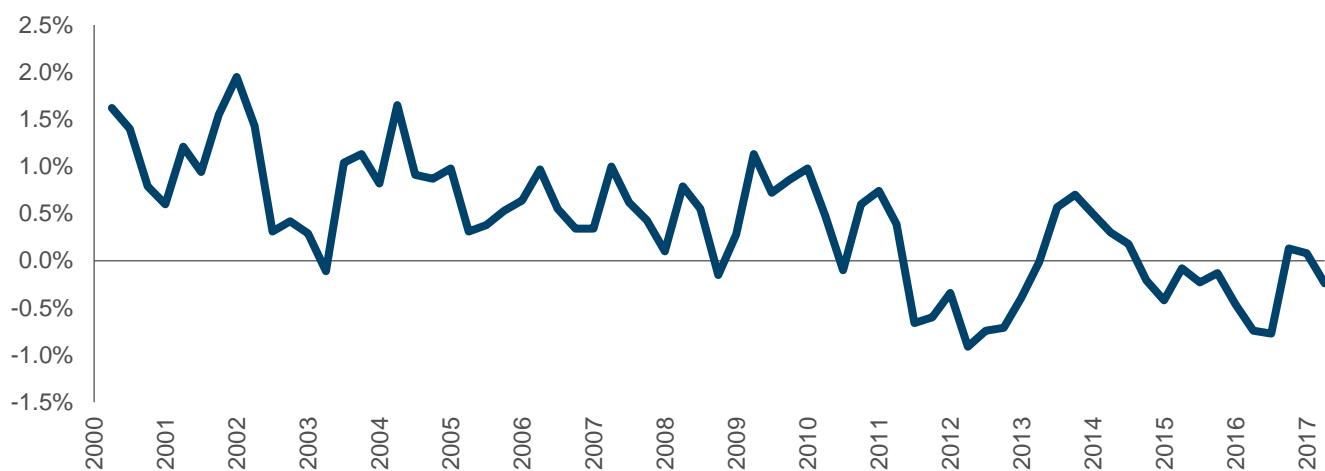


Sources: Federal Reserve Bank of Philadelphia and Economic Policy Uncertainty.

A third impact of QE has been the compression of the U.S. term premium—the excess yield that investors require to invest in a long-term bond over a short-term one. The term premium is calculated as the observed return on 10-year bonds minus the average expected bill rate over the next 10 years. As Figure 3 shows, by reducing the amount of interest rate risk that must be absorbed by the market, the expansion of the Fed balance sheet caused the term premium to contract by 50 to 75 basis points (bps). There is also tentative evidence to show that the Fed balance sheet expansion caused forecasters to revise lower their expectation of yields themselves by 25 to 50 bps. If this is correct, it implies that the Fed's balance sheet expansion affected both the *slope* and the *level* of the U.S. yield curve. The distinction between the impact on the slope of the yield curve and on the overall level of bond yields is important to active bond managers whom can structure their portfolios to take advantage of each of these effects.

Figure 3: 10-Year Term Premium, 2000–2017

As of June 30, 2017



Sources: Survey of Professional Forecasters and Bloomberg Finance L.P.

IS THE “PORTFOLIO BALANCE EFFECT” IN PLAY?

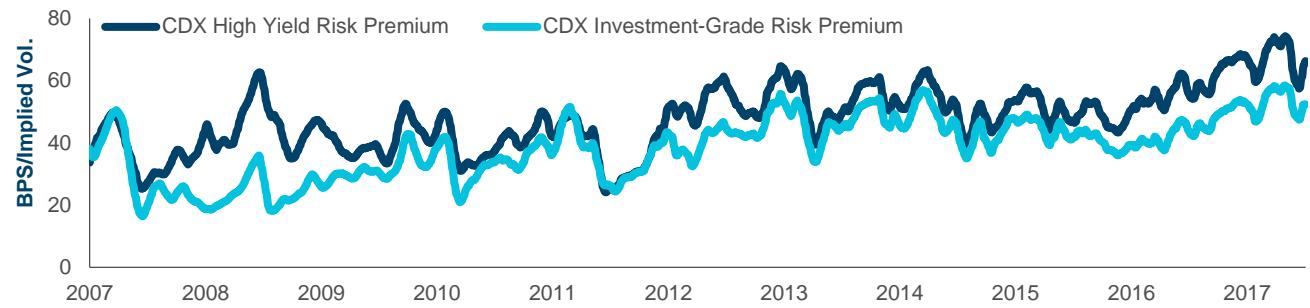
Despite these impacts, however, the evidence suggests that QE may not have worked in exactly the way that central banks expected. As outlined in 2010 by former Chairman of the Federal Open Market Committee Ben Bernanke, one of the main theories behind QE is that of the “portfolio balance effect,” which holds that a central bank’s purchases of longer-term securities affect financial conditions by changing the mix of assets available to investors. More precisely, the theory holds, as different assets are not perfect substitutes for each other, a change in the supply of one asset will affect the price not only of that asset but also of every other asset in the market.

To better understand this, it helps to imagine that you are the only investor in the world. Because the supply of assets is fixed, the only variable that can be changed to ensure that demand meets exogenous supply is the price. Consequently, the price of the different assets must adjust until the point at which you are happy in owning the market portfolio—this is what is understood as financial market equilibrium. Now imagine that a central bank decides to change the supply of assets, forcing you to own more cash. What will you do? For you to be happy with a higher allocation to cash (and as the only investor in the world, you have no say in this matter), bond yields must fall because only at a lower expected return will you be happy owning fewer bonds and more cash. Similarly, the price of equities must rise because only at a lower expected return on equities will you be happy to allocating a greater fraction of your portfolio to cash. This line of reasoning is exemplified by Bernanke’s observation that “some investors who sold [mortgage-backed securities] to the Fed may have replaced them in their portfolios with longer-term, higher-quality corporate bonds, depressing the yields on those assets as well.”

If the portfolio balance channel is in effect today, we would expect risk premiums—the excess return per unit of volatility—to be low across asset classes. However, although risk premiums did fall on the back of the Fed's balance sheet expansion, they have rebounded since: As Figures 4 and 5 show, both U.S. and European credit risk premiums are high by historical standards. This implies that the portfolio balance effect is currently somewhat muted.

Figure 4: U.S. Credit Risk Premium

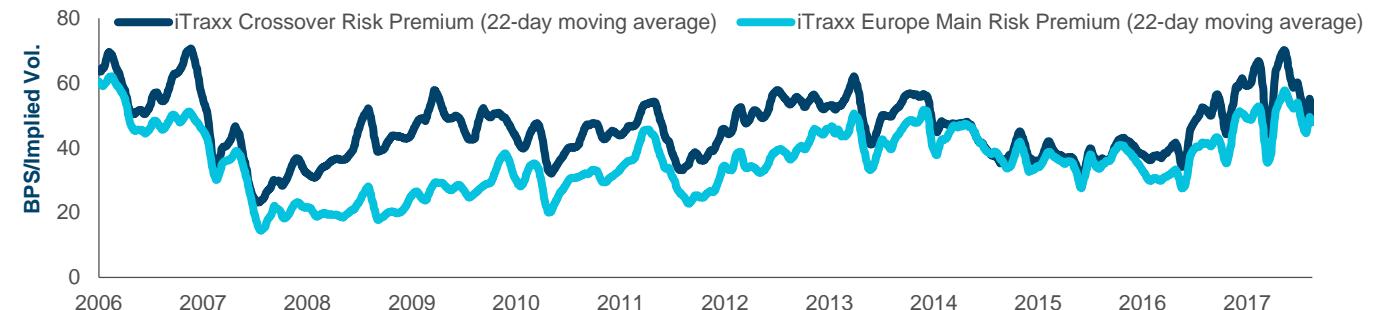
As of September 28, 2017



Source: Bloomberg Finance L.P.

Figure 5: Europe Credit Risk Premium

As of September 29, 2017



Source: Bloomberg Finance L.P.

This is important because the process of unwinding central bank balance sheets is set to start, and there are concerns about the impact it may have on both the economy and the financial markets. The 2013 “taper tantrum,” when the mere suggestion that the Fed might slow its pace of asset purchases wreaked havoc across all segments of the financial markets, is a painful memory for investors and central bankers alike, and any prospect of a repeat will be greeted with anxiety. If the portfolio balance effect is not in operation, the retrenchment of central bank balance sheets may be less disruptive than central bankers and investors fear.

FED KEEN TO AVOID A REPEAT OF 2013

To its credit, the Fed has done everything possible to avoid a repeat of 2013. When Chair Janet Yellen announced plans to begin scaling back the Fed's stock of around U.S.\$4.5 trillion worth of assets, she took pains to reassure the markets that it would be accomplished in the most boring way possible. “We think this is a workable plan and it will be...like watching paint dry,” Yellen said. “This will just be something that runs quietly in the background.” She added that the reductions in reinvestment would start at U.S.\$10 billion a month and increase to U.S.\$50 billion a month after 15 months and that the Fed would be prepared to stop the process if there was “a material deterioration in the economic outlook.”

Let's take the Fed at its word and assume that the pace of balance sheet retrenchment (and that of other central banks when they begin withdrawing from QE) is very gradual. This will mean that a large amount of QE money will remain in the system for several years to come, which in turn will mean that investors are likely to remain long cash for an extended period. In other words, although the tide of monetary stimulus will recede over the next few years, the process will be so slow that its effects will not begin to be felt for a while yet. The status quo will be maintained longer than many people think, continuing to dampen market and macroeconomic volatility until enough QE has been withdrawn for natural market forces to reassert themselves.

RATE HIKE RISK UNDERESTIMATED

We believe that widespread fears over central bank balance sheet retrenchment have left many investors with an exaggerated sense of how quickly it will impact their portfolios, potentially at the expense of giving adequate attention to other, more imminent risks. In our view, the potential extension of QE poses a bigger indirect risk than the prospect of a slow shrinkage of central bank balance sheets. This is because the continued monetary support is likely to support wages, growth, and risk taking, which may prompt central banks—led by the Fed—to raise interest rates more aggressively than is currently priced in by the markets. Indeed, if the Fed manages the early stage of balance sheet retrenchment without upsetting markets, this could itself ultimately pose a bigger risk by increasing the likelihood of more aggressive rate hikes.

To prepare for the possibility of a more aggressive rate-hiking cycle, bond investors may consider diversifying their exposure to a range of fixed income sectors, shortening bond durations, and investing in floating rate notes and asset-backed securities. Identifying the best opportunities requires careful analysis and security selection, which tends to favor active managers. Balance and moderation are key. While we believe that QE will continue to dampen market volatility and macroeconomic uncertainty for some time to come and that rising policy interest rates pose more of a risk than central bank balance sheet retrenchment, it is impossible to be certain about the direction of the markets over the next few years. The lack of historical precedent for the sheer scale of central bank support since the financial crisis makes it very difficult to predict how bond markets will respond once this support is withdrawn. Given this, an actively managed fixed income portfolio with exposure to a range of bond sectors that will respond differently to rate increases would seem to be the most prudent approach.

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