WHEN THE FED YIELDS
DYNAMICS AND IMPACT OF U.S. RATE RISE
MAY 2015
Summary

The U.S. labor market is strengthening, inflation appears to have troughed and financial markets are looking frothy. What happens when the Federal Reserve (Fed) finally yields to this reality and raises short-term interest rates? Our portfolio managers in April debated the powerful, often conflicting forces shaping the Fed’s decision and the U.S. yield curve. Here are our main conclusions:

- We expect the Fed to raise short-term interest rates in 2015—but probably not before September. Technological advances are set to keep dampening wage growth and inflation, reducing the need for the Fed to raise short-term rates as quickly and as high as in past tightening cycles.

- The longer the Fed waits, the greater the risk of asset price bubbles—and subsequent crashes. Years of easy money have inflated asset valuations and encouraged look-alike yield-seeking trades. We would prefer to see the Fed depart from its zero interest rate policy (ZIRP) sooner rather than later.

- A glut of excess bank reserves and the rise of non-bank financing mean the Fed’s traditional tools for targeting short-term rates have lost their potency. Overnight reverse repurchase agreements are part of the new playbook. We expect the Fed’s plan for ending zero rates to work, but do not rule out hiccups.

- The impact of any U.S. rate hikes on long-maturity bonds is crucial. We suspect the Fed would prefer to see a gentle upward parallel shift in the yield curve, yet it has only a limited ability to influence longer-term rates. We detail how the absence of a steady buyer in the U.S. Treasury market will start to be felt in 2016.

- We see the yield curve flattening a bit more over time due to strong investor demand for long-term bonds. Demand for high-quality liquid fixed income assets from regulated asset owners alone (think insurers and central banks) is set to outstrip net issuance to the tune of $3.5 trillion in 2015 and $2.3 trillion next year.

- The forces anchoring bond yields lower are here to stay—and their effects could last longer than people think. Yet yields may have fallen too far. Bonds today offer little reward for the risk of even modestly higher interest rates or inflation. A less predictable Fed, rising bond and equity correlations and a rebound in eurozone growth could trigger yield spikes.

- Asset markets show rising correlations and low return for risk, our quantitative research suggests. We see correlations rising further as the Fed raises rates. We are now entering a period when both bonds and stocks could decline together. Poor trading liquidity could temporarily magnify any moves.

- Overseas demand should underpin overall demand for U.S. fixed income, especially given negative nominal yields in much of Europe. Credit spreads look attractive—on a relative basis. U.S. inflation-linked debt should deliver better returns than nominal government bonds in the long run, we think, even if inflation only rises moderately.

- Low-beta global equity sectors such as utilities and consumer staples have become bond proxies and look to be the biggest losers when U.S. yields rise. Cyclical sectors such as financials, technology and energy are potential winners.

- Angst about Fed rate rises, a rising U.S. dollar and poor liquidity could roil emerging markets (EM). Yet EM dollar debt looks attractive given a global dearth of high-yielding assets. EM equities look cheap, but many companies are poor stewards of capital. We generally like economies with strong reform momentum.
Timing of Rate Rise

The Fed is ending years of zero rates—at a time when other major central banks are going the opposite way (more than 20 central banks have cut rates so far this year). This is an unusual situation. The impact of the start of the rate-hiking cycle is underappreciated, we believe. Complacency is high among many asset owners who have benefited from the greatest carry trade in history, the $5 trillion-plus expansion in central bank balance sheets since 2008. We are in uncharted territory.

Current U.S. wage and inflation data bear limited resemblance to conditions at the start of the three most recent Fed tightening cycles. There are good reasons for this: The impact of a weak post-crisis recovery and technological advances have depressed both. Yet the unemployment rate stands at a similar level as in 2004—the last time the central bank started hiking rates. See the first row of the table below.

Central banks have dominated markets by buying up long-duration, high-quality liquid assets in return for cash. The resulting shortage of high-quality assets has lowered corporate bond yields and, in turn, encouraged equity shortages created by debt-funded buybacks and mergers. Private equity and real estate valuations are soaring on overheated markets and easy credit. There is only limited diversification available when the quantitative easing (QE) tide has floated so many boats.

U.S. Treasuries trade at historically low yields and offer almost no term premium (compensation for the risk that interest rates rise faster than expected; see pages 8–9). Yet they look like great value compared with German bunds. See the table’s second row. Credit spreads are not pricey on a relative basis versus the past (the third row).

Earnings yields of major stock indexes are at similar levels to previous hiking cycles, except that Japanese equities currently offer better value than in the 1990s (the fourth row). Other markets give very different readings. The dollar has rallied much more in the past 12 months in anticipation of the Fed’s tightening—and given loose monetary policies elsewhere. Oil prices in the past year have seen a slide more precipitous than any year since the 1980s.

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### THIS TIME FEELS DIFFERENT
Economic and Market Indicators at Start of Rate Hiking Cycles, 1994–2015

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<td>U.S. Unemployment</td>
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<td>U.S. 10-year Yield</td>
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<td><strong>U.S. DOLLAR AND COMMODITIES</strong></td>
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<td>U.S. Dollar Index (12-month change)</td>
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<td>Oil Price (12-month change)</td>
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<td>9%</td>
<td>38%</td>
<td>3%</td>
<td>-43%</td>
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Sources: BlackRock Investment Institute, Thomson Reuters, JP Morgan, Barclays and MSCI, April 28, 2015. Notes: Yield curve and spreads are in basis points. Historical yields are not indicative of future levels.
ZERO IS THE WRONG NUMBER

The Fed has a window of opportunity to raise interest rates. Markets are pretty stable, U.S. employment is growing at a steady clip, and other central banks—led by the Bank of Japan (BoJ) and European Central Bank (ECB)—are flooding global markets with liquidity. The BlackRock U.S. Employment Index—our gauge of 10 key labor market indicators—has risen back to pre-crisis levels. See the chart on the right.

All of our index’s subcomponents have turned positive this year. Its momentum has slowed a bit recently, yet non-farm payrolls (the largest component of our index) have been growing at the fastest 12-month pace since 2006. The Fed funds rate stood at 6% back then, versus zero today.

To be sure, inflation today is much lower than in 2006. Yet zero is the wrong number for short-term rates, we believe. Giving regular doses of morphine to a patient who is no longer in much pain is a health hazard and a waste of medical supplies.

Zero may also be a dangerous number. The Fed’s highly accommodative monetary policy has inflated asset values across global markets. The longer the Fed leaves its target rate at zero, the greater the chance of asset price bubbles—and eventual crashes. Modest rate rises would merely take U.S. monetary policy to very stimulative, down from ultra-stimulative.

Fed Chair Janet Yellen’s modus operandi appears to involve flagging a tightening measure—and then soon soothing markets with the message easy monetary policies are here to stay. This probably reflects a legitimate fear that long-term interest rates could snap back sharply when the Fed changes gears, undermining the economic recovery. The Fed has always said its stance depends upon the strength of economic data. Yet it appears to be moving the goal posts:

1. **Old story:** The data would need to be very weak to prevent us from hiking.
2. **New story:** The data must to be strong enough to justify hiking.

Markets have picked up on this subtle but important shift. Fed funds futures currently point to a mere 8% chance of a June rate hike (versus over 60% back in December 2014)—and have fully priced in a rate rise by year end. We do not rule out a rate hike in June but think a September liftoff is more likely.

The U.S. economy is once again underperforming expectations (as it has in the first quarter of the past five years). The Fed, therefore, has stated it wants to see two things before it is ready to push the launch button:

1. **Solid jobs growth:** The U.S. economy has generated an average of 260,000 jobs per month over the past year. Jobs growth has been pretty steady (despite a March blip)—and it is hard to see this trend changing any time soon. This argues for raising the short-term rate sooner rather than later.
2. **A trough in inflation:** Falling oil prices and the strong U.S. dollar have dampened headline consumer price index (CPI) inflation—and have even dragged long-term inflation expectations lower (these expectations have overshot, in our view; see page 12). The Fed’s preferred core inflation gauge—personal consumption expenditures (PCE)—stood at just 1.4% in March. This is well below the central bank’s 2% target.

The Fed has said it does not expect to see inflation hit its target before raising rates. The effects of an aging population and rapid technological innovation are suppressing inflation and nominal growth, as detailed in *Interpreting Innovation* of September 2014. Goods prices have been stagnant over the past five years, dragging overall inflation lower.

“The Fed keeps employing emergency policy settings—at a time when there is no longer an emergency.”

— Bob Miller

Head of Multi-Sector and Rates,
BlackRock Americas Fixed Income
Hike Mechanics

Ending the zero interest rate policy should be pretty straightforward. Or should it? The Fed is unusual among global central banks in that it does not set a policy rate. Instead, the central bank targets a range for short-term lending in the interbank market, the Fed funds rate.

The Fed used to guide markets toward its targeted funds rate by adjusting the supply of reserves in the banking system. To raise interest rates, it would drain reserves from the system by selling securities.

The problem: Excess reserves in the U.S. banking system—the amount of cash banks keep in hand above and beyond regulatory requirements—have swollen to around $2.6 trillion. (The Fed bought many of its securities under QE from commercial banks, which opted to park the proceeds at the Fed instead of lending them.) As a result, the Fed has introduced two new measures:

1. **Interest on excess reserves (IOER):** The Fed started paying interest on banks’ excess reserves in 2008, at a rate of 0.25% a year. This was supposed to act as a floor for short-term rates by reducing the incentive for banks to lend at rates below IOER. Yet in practice, the level has looked more like a ceiling. The reason: Non-bank financial institutions such as money market funds have no access to IOER. These institutions also have a glut of cash—and have been investing it in short-term U.S. Treasuries, pushing short-term rates below the Fed’s target.

2. **Overnight reverse repos:** These overnight reverse repurchase agreements enable the Fed to offer interest to non-bank financial institutions. Here is how it works: The Fed sells a security to these institutions, taking in cash and thereby draining liquidity from the system. It then agrees to buy it back a day later at a slightly higher price. The annualized reverse repo rate currently stands at five basis points. This tool now acts as the true floor for interest rates.

The Fed expects the effective Fed funds rate—a weighted average rate of overnight lending between banks—to drift in a “corridor” between the reverse repo rate and IOER. The system has worked since the introduction of the reverse repo program in September 2013. See the chart on the right.

Will the Fed be effective in using these tools to lift the short-term rate and tighten monetary conditions? It depends on what the Fed’s goals are:

1. Stabilization of the Fed funds rate. This is definitely doable, in our view, with some hiccups along the way.
2. Anchoring the short end of the yield curve. The Fed should have no trouble focusing the market’s attention on one of the rates, and defining that rate as a floor or a ceiling.
3. Influencing the shape of the entire yield curve. This objective is the most important for both the economy and markets. Yet it is the trickiest to control through the Fed funds rate (see pages 6–7).

To control short-term rates, the Fed will likely have to lift its $300 billion daily cap on reverse repos. This is not ideal: The central bank limited the facility to avoid becoming the go-to safe house in times of market stress. If this fails, the Fed could sell short-dated Treasuries. How much is in its coffers? Some $400 billion matures by the end of 2017. If the Fed were to start selling these securities, short-term rates should rise. Yet this would suggest the Fed’s master plan has failed. Short-term yields could spike as market participants rush to get ahead of the Fed sales. This, in turn, could pressure rates up the yield curve.

“Unconventional monetary policy calls for an unconventional exit.”

— Terry Simpson
Global Investment Strategist, BlackRock Investment Institute
A fixation on the timing of the Fed’s first rate hike risks missing the big picture. What matters more is the pace and trajectory of rate rises after liftoff. We are on a long journey. The important thing is keeping in mind the destination, not obsessing about whether we will make a left or right turn at the next intersection depending on the traffic. Markets are pricing in a gentle climb, with interest rate futures currently pointing to a rise of just 0.7% in short term rates in the year after September. Two key points:

- Even if market participants agree the Fed will tighten at a gentle pace, there are many possible paths from zero.
- A steady and well-telegraphed monetary tightening may not prevent an initial snap back in yields, the International Monetary Fund warns in its latest Global Financial Stability Report. A sudden rise of one percentage point in U.S. Treasury yields is “quite conceivable” as the Fed’s first rate hike approaches, it says. The long period of low rates has extended the U.S. bond market’s duration, or sensitivity to moves in short-term interest rates. The duration of the Barclays U.S. Aggregate Bond Index now stands at 5.5 years versus 4.3 in 2007.

An even more important question: What happens to the U.S. yield curve once the Fed successfully lifts short-term rates? This question really falls into two parts:

1. What does the Fed want to happen? It would like to see the entire curve shift upward (gently), we think. A steeper yield curve, by contrast, would drive up mortgage rates and could torpedo the economic recovery. This would undo much of the Fed’s post-crisis work: Its purchases of U.S. Treasuries and mortgage-backed securities were aimed at lowering long-term rates to spur mortgage lending and reduce the cost of credit for businesses and households.

2. What actually happens to the yield curve after liftoff? Any snap back in the term or inflation risk premia (see pages 8–9) could lead to a temporary steepening. Yet our best guess is a gentle flattening over time as the entire curve shifts upward. Why? Long-end yields are capped by a shortage of supply of high-quality bonds, inelastic demand and lower yields in other developed countries.

Demand from regulated asset owners alone (insurers, central banks, pension funds and banks) is set to outstrip the total global supply of high-quality, liquid fixed income in 2015 and 2016, we estimate. (Demand for bonds is relatively inelastic, yet supply is on the decline; see page 7.) The situation flips in 2017, when we expect a big rise in the net supply of sovereign debt as the ECB and BoJ exit QE. See the table above.

Regulated asset owners fall into two broad categories:

1. “Price-insensitive” buyers such as insurers and reserve managers. They hold $40 trillion-plus in high-quality, liquid fixed income assets, we estimate. These asset owners have annual reinvestment needs of some $4 trillion—and have little choice but to keep plowing it into bonds.

2. “Price-sensitive” asset owners such as pension funds and banks. This group holds $20 trillion-plus of top-rated fixed income, we estimate. These buyers need to buy bonds for regulatory purposes (pension fund defeasement and bank capital requirements) but have a little more leeway to wait for attractive prices. They have annual reinvestment needs of at least $500 billion.

Many regulated asset owners suffer from a duration mismatch. Eurozone insurers tend to have liabilities (future payouts) with a longer duration than their assets. As yields fall, they must scramble to buy even more long-term bonds to keep the duration mismatch from widening further. This is a bit like a dog chasing its tail, according to research by the Bank for International Settlements published in April.

Neither the Fed nor markets should be confused: There is no such thing as an immaculate tightening. There are powerful, conflicting forces.”

— Peter Fisher
Senior Director,
BlackRock Investment Institute
FINANCIAL CURIOSITY

Bidding up the price of long-dated bonds only ends up extending the duration of insurers’ liabilities further. The risk? The more the term premium gets depressed, the greater the potential snap-back when the decline is reversed (see pages 8–10).

From whom will the regulated asset owners buy? Answer: return-seeking investors such as mutual funds and sovereign wealth funds. This price-sensitive group holds over $50 trillion of high-quality liquid fixed income, we estimate.

Markets expect this resulting dynamic to last for a long time. 10-year forwards on 10-year U.S. swap rates currently trade at 2.8%, implying a rise in yields of just 0.8% over the next decade. That is just eight basis points a year! See the chart below. And markets are pricing in a dire outlook for the eurozone and Japan, with 10-year forwards below 2% a decade from now. This makes little sense (unless you believe these economies will suffer permanent stagnation). Nominal bond yields should, in theory, track nominal economic growth rates in the long run. That would imply long-term yields closer to 4%-5% in the U.S. and 3% in the eurozone.

Government bond investors have a high probability of loss at this time. Bonds of a dozen or so eurozone countries come with negative yields. And the ones that do provide a paltry income can quickly turn into loss-making investments. The act of paying a government for lending it money deserves prime shelf space in the cabinet of financial curiosities.

Muted supply is another factor keeping yields low. Fiscal austerity means budget deficits are coming down around the world, curbing governments’ need to issue debt.

VERY LOW FOR VERY LONG


Sources: BlackRock Investment Institute and Thomson Reuters, April 28, 2015.

WANTED: BONDS

Developed Market Net Bond Issuance, 2000–2015

Notes: The bars reflect fixed income issuance in the U.S., eurozone, Japan and U.K. Issuance is net of central bank purchases. Securitized products include covered bonds.

In Short Supply

Issuance of sovereign debt (net of central bank purchases) is expected to be negative in 2015—the first time on record. See the chart above. Corporate issuance is already at highs and unlikely to come to the rescue, we think. Companies raising debt to buy back shares could trigger ratings downgrades, impairing their ability to issue debt in the future. And the rise of asset-light business models (the sharing economy) means fewer corporations need to tap the debt markets.

Global sovereign bonds have become a single bet on duration, as seen in the long-term convergence of yields across countries. Demand for U.S. Treasuries is underpinned by overseas investors. Treasuries look attractive from a European and Japanese perspective. Japanese Government Bonds (JGBs) have long yielded next to nothing, driving domestic investors with yield targets to buy foreign bonds. The ECB’s asset purchases have triggered a collapse even in the yields of riskier sovereign credits. Portuguese 10-year sovereign debt now yields less than equivalent U.S. Treasuries. We expect the ECB’s fire hose of liquidity to support eurozone bonds. Yet valuations are getting disconnected from fundamentals, and we are wary of chasing yields lower.

Bottom line: Exiting a long period of zero interest rates is tricky and a bit unsettling. Some of us feel like the informed citizens of Pompeii around 79 AD: We are grateful for the lovely sea views but worry about the volcano in the background.
Yield Breakdown

Bond yields around the world are eerily low. U.S. long-term yields are near record lows, Japanese 10-year government bonds yield just 0.3% and eurozone yields hover near zero or have actually gone negative in short- and medium-term maturities (there are reports of home owners suing their banks to get interest on their mortgages).

Why is this so? We break down the 10-year U.S. Treasury yield into four components to help answer this question: Expected inflation, the real expected short rate, the inflation risk premium and the real term premium.

**Expected inflation:** Nominal bond yields must compensate investors for the expected loss in purchasing power due to inflation. Expected inflation as measured by Goldman Sachs has been the largest component of the 10-year yield over the past decade or so, yet it has remained relatively steady. See the green shaded area in the chart below.

**Real expected short rate:** This reflects market expectations for the Fed’s policy path over the coming year. It was stuck in a range of -50 to -100 basis points from the financial crisis through 2012, as the Fed flooded markets with liquidity. It has been on an upswing since the “taper tantrum” in 2013 (a yield spike caused by the Fed’s announcing a tapering of its asset purchases). The current reading reflects expectations that the Fed will soon normalize policy (gently).

The Fed has said it will stop (or start phasing out) reinvesting when it raises the Fed funds rate. We expect it to keep re-investing for three months after liftoff—and then “taper” re-investments in U.S. Treasuries to zero over several months. It likely will keep re-investing maturing mortgage securities for the time being to avoid derailing a U.S. housing recovery.

Where will the Fed’s absence be felt most acutely?

1. The Fed’s maturing five-year Treasuries are equivalent to a whopping 35% of gross issuance in the first half of 2016.
2. The Fed’s maturing seven- to 10-year Treasuries equal half the gross issuance starting in 2018.

Letting these bonds run off represents an additional tightening of monetary policy—a dynamic that will well have greater impact on financial markets than the ending of ZIRP in the short run.
PREMIUM PUZZLE AND REAL RIDDLE

The remaining two components of the 10-year yield make up the nominal term premium. A compression in the term premium has been the key contributor to the decline in 10-year yields since 2013. We break down this premium into two parts: the inflation risk premium (shaded light-green in the chart on page 8) and the real term premium (purple).

Some observations on each:

**Inflation risk premium:** Bond holders typically demand an additional premium to compensate them for the risk that their inflation expectations may be wrong. This inflation risk premium has historically swung between zero and 1%—but recently dipped below zero. This is an oddity that we think will adjust itself.

The decline in U.S. yields is reflected by a compression of the inflation risk premium by about 0.75% over the past two years. Today’s negative inflation risk premium is puzzling—the uncertainty around expected inflation does not appear lower than usual, a recent paper from the Cleveland Fed shows. In fact, we believe inflation risks may be growing. Potential upside and downside shocks over the next decade include:

- Further swings in the price of oil and other key commodities.
- The risk of unintended or unwanted market reactions to central banks exiting their unconventional monetary policies.
- Signs some central banks are feeling more relaxed about overshooting their inflation targets, while others (the Bank of Canada, for example) are making noise about the benefits of raising their inflation targets.

**Real term premium:** Holders of long-term bonds also need to be compensated for the risk that real interest rates will rise by more than expected in the future. The real term premium has flipped in and out of negative territory in the past couple of years. It rose to as high as 1.3% during the taper tantrum and then started a rapid decent that put it in negative territory this year.

There are good reasons to believe the real term premium could take off from today’s depressed levels. QE compressed the term premium by sparking an appetite for yield and encouraging investors to pile into look-alike trades. Low premium levels have often been followed by sharp reversals. What could bring this about?

A change in the Fed’s policy path could trigger such an upward movement, possibly steepening the yield curve for a while. And the gravitational pull of rock-bottom eurozone interest rates’ dragging global bond yields lower may be waning. Eurozone yields appear to have fallen by more than the ECB’s program of bond purchases justifies (even allowing for asset shortages).

Today’s low term premium partly reflects muted volatility in yields. Yet Fed policy is becoming more unpredictable with the end of zero rates. This will likely result in more volatility.

The correlation between equity and bond returns has been mostly negative since the financial crisis. Bonds have been handy portfolio diversifiers, rallying when equities fall. Investors have been willing to trade off some of the usual premium for term risk in exchange for this hedging value. Yet correlations between equities and bonds have risen sharply in 2015—and are now positive again. See the chart above. This could act like an amplifier for the term premium.

It is not just bonds and equities starting to move in lock step. Markets overall are characterized by rising correlations and relatively low returns for risk, our quantitative research shows. Poor trading liquidity plays into this. The situation is acute in corporate bonds, but even many equities suffer from transactional limits, as detailed in The Liquidity Challenge of June 2014. Illiquidity runs the risk of magnifying market moves, as highlighted in A Disappearing Act of May 2014.

Conclusion: One might be excused for thinking today’s low rates are caused by expectations the Fed will tighten at a gentle pace and end at a historically low level. Yet the recent dive in 10-year U.S. Treasury yields is best explained by the collapse in the inflation risk and term premia. Structural forces such as technological innovation mean these risk premia are likely to settle at lower levels than in the past. Yet they appear to have overshot to the downside. Yields could spike—even if the Fed tightens steadily and predictably.
**WHAT-IFS AND THEN-WHATWS**

It pays to be prepared. This is why our Risk and Quantitative Analysis group works with portfolio managers to create economic and financial scenarios—and to assess their likely impact on our portfolios and segments of global financial markets. Recent analyses have focused on the effects of oil price changes, China's economic trajectory and the ECB’s kicking off bond purchases.

The table below gives a flavor of how we approach global monetary policy outcomes. It outlines three scenarios that could influence the Fed’s next move and highlights the likely market impact for each (without getting into the nitty-gritty of expected performance in each asset class).

The Global Stagnation scenario assumes a failure by the ECB and BoJ to revive their economies as well as other geopolitical and economic headwinds. This should keep the Fed on hold for longer than markets currently expect. The result is not great for most markets, except for government bonds, in this scenario.

The U.S. Growth as Expected scenario has U.S. growth shrugging off temporary setbacks and plodding ahead. The Fed raises short-term rates as expected. This would boost most asset classes with the main exceptions of short-term bonds and gold.

The Rapid U.S. Rate Rises scenario has the Fed playing catch-up to strong economic data. This would hit most asset prices except for a strengthening U.S. dollar, we think. U.S. assets would generally outperform other geographies.

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### CONTINGENCY PLANNING

BlackRock Economic and Market Scenarios, 2015

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<tr>
<td><strong>Global Stagnation</strong></td>
<td>Global growth disappoints and/or markets lose confidence in central banks using quantitative easing to jumpstart economies.</td>
<td>The U.S. economy stays on a recovery track, shaking off weakness induced by a severe winter and port strike.</td>
<td>“Taper tantrum” redux. Fed rate hikes spook the markets and trigger a sell-off in (richly valued) risk assets.</td>
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<td></td>
<td>▶ Geopolitical risks in peripheral Europe and/or Russia flare up. China slowdown dampens global demand.</td>
<td>▶ Robust GDP growth creates a positive feedback loop, reinforcing the Fed's decision to continue raising rates.</td>
<td>▶ Subdued global growth expectations and short-term worries around liquidity result in a “knee-jerk” reaction to the Fed tightening by the markets.</td>
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<tr>
<td><strong>Global Equities</strong></td>
<td>▶ Japan and eurozone underperform the U.S.</td>
<td>▶ EM stocks and momentum strategies underperform.</td>
<td>▶ Bond proxies (utilities) underperform sectors benefiting from higher rates (financials).</td>
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<td></td>
<td>▶ Defensive stocks outperform pro-growth (consumer discretionary) and rate-sensitive (financial) sectors.</td>
<td>▶ Cyclical sectors such as financials outperform defensives.</td>
<td>▶ Global equities fall, but the U.S. outperforms Europe.</td>
</tr>
<tr>
<td><strong>Credit</strong></td>
<td>Credit spreads widen significantly.</td>
<td>Credit spreads narrow a bit (and stay there). U.S. leads the rally.</td>
<td>Market overreaction causes a sell-off in credit. Spreads widen.</td>
</tr>
</tbody>
</table>

Source: BlackRock Investment Institute, April 2015.
**Market Impact**

QE has created asset shortages. This is feeding an appetite for lower-quality bonds, bond-like equities, real estate and private equity. Leverage is rising. The longer this lasts, the riskier. A sell-off triggered by an unwinding of leverage and magnified by poor liquidity could sink many boats.

Think of it as a fruit market. A couple of people are buying up all the apples every day, irrespective of price. Other shoppers rush to buy pears, oranges and guavas to meet their vitamin C needs. Prices rise to record levels. Then one day the apple buyers disappear. The result: a rapid resetting of prices.

How close are we to this scenario? Our “bubblemeter” (see *Squeezing Out More Juice* of December 2013) is no longer flashing red, but is on the rise again. Our gauge’s numerator—a measure of corporate leverage—has been climbing since 2012. The denominator (equity market volatility), however, has modestly rebounded.

A boom in mergers and acquisitions (M&A) is underway. M&A peaks have in the past coincided with equity downturns. See the chart to the right. Yet M&A activity today (by value) is still roughly 35% below past highs in 2000 and 2007.

What happens to global financial markets when the Fed tightens the liquidity spigot? The past may be an imperfect guide because monetary stimulus has been way off the pre-financial crisis chart. The history of the past three U.S. rate hiking cycles is worth a quick review. See the chart below.

U.S. bond yields rose in both 1994 and 1999, with most of the movement coming after the Fed’s first hike. The biggest bond sell-off was in 1994, when the Fed surprised markets by hiking rates much faster than expected.

Global equities performed well in the year ahead of the first rate rise in a tightening cycle—and extended those gains in the year thereafter (except in 1994). Bottom line: Equities performed well before and after the rate hike when the pace of tightening was steady and/or predictable (1999 or 2004).

**FEARING THE FED?**

Returns of Stocks and Bonds Around First Fed Rate Hike

**BUYING AT THE HIGH**

*Global Monthly M&A Activity and Equity Prices, 1995–2015*

Sources: BlackRock Investment Institute, Thomson Reuters and MSCI, April 2015.

Notes: M&A activity is based on the monthly enterprise value of announced deals for publicly listed targets, including spin-offs. The M&A average is a 12-week trailing measure.

Sources: BlackRock Investment Institute and Thomson Reuters, April 2015.

Notes: Charts are rebased to zero on the day of the first rate rise in a cycle. World equities are represented by the MSCI World Index; U.S. bonds are 10-year U.S. Treasuries.
“We have seen a trough in inflation for now; we are beginning to see some anecdotal evidence of wage pressures.”

— Gargi Chaudhuri
Portfolio Manager,
Inflation-Linked Bond Portfolios, Americas

**A HISTORY OF VOLATILITY**

**Asset Volatility, 2010–2015**

**TANTALIZING TIPS**

We have already outlined why we currently see little long-term value in nominal government bonds. Long-term Treasury Inflation Protected Securities (TIPS) and other inflation-linked debt are likely to deliver better returns, even if inflation only rises moderately from today’s depressed expectations.

Breakeven inflation rates (a market-implied measure of inflation expectations and the inflation risk premium) have collapsed over the past two years. The plunge in five-year/five-year breakevens (the Fed’s favorite measure), is more severe than that seen at the height of the global financial crisis in late 2008. See the chart below. The market looks to have overreacted.

**WITHER INFLATION**

**U.S. Five-Year/Five-Year Breakeven Inflation Rate, 2002–2015**

Source: U.S. Federal Reserve, April 2015. Notes: The breakeven inflation rate is a market-based measure of expected inflation and the inflation risk premium derived from five-year U.S. Treasury bonds and five-year inflation indexed Treasuries. The value reflects inflation expectations five years from now for the following five years.

TIPS are pricing in an average CPI rate of just 1.8% over the coming decade, compared with 2.3% over the past 10 years (a period that included the worst financial crisis since the Great Depression). The Fed’s favored inflation measure—core PCE—typically runs 0.35% below CPI inflation. This means the market sees core PCE stuck at 1.45% over the next decade, far below the central bank’s 2% target. The market is effectively predicting a consistent failure in Fed policy until 2025.

The implication: Core PCE only has to average above 1.45% (a low bar) over the next decade for 10-year TIPS to outperform nominal Treasuries. If inflation were to exceed the Fed’s target, hedged TIPS (buying TIPS while simultaneously selling equivalent Treasuries) would be a home run.

**VOLATILITY ALERT**

There are plenty of caveats. The S&P 500 Index, for example, has fallen a median 8% after a rate rise coincided with a turn in the business cycle (13 episodes since the 1950s), our research shows. The sell-offs typically have been short-lived (about two months). The reason: increased uncertainty rooted in the withdrawal of excess liquidity. Even in cases when the Fed flagged the move well in advance, U.S. equities have shown a knee-jerk reaction to the first hike in a cycle. The move in real interest rates is key, we find. When inflation stabilizes and real rates do not move much, equities have historically been resilient.

We believe financial market volatility will rise further. Currencies have grabbed the volatility lead so far in 2015. See the chart above. We expect bonds and equities to follow. It is not so much the level of volatility that matters; it is the upward change in volatility that matters today. Why? In the (near) zero-rate world, many asset owners have taken on more risk. Markets where gains have been driven by rapid multiple expansion (rather than earnings growth) look most vulnerable to corrections. It would not take much volatility for the momentum of popular trades such as U.S. biotech shares and bond-like equities to reverse course.
CREDIT CONUNDRUM

The Fed’s tightening has the potential to threaten the dynamics supporting U.S. credit markets: domestic growth momentum and the global hunt for yield. It could also lay bare fault lines: poor liquidity, rising corporate leverage, deteriorating underwriting standards and high (absolute) valuations. Now is a time for increasing credit quality, boosting liquidity and reducing risk in credit portfolios, we believe.

What about high yield? The Fed’s impact will depend upon its effect on economic growth expectations, we believe. Some observations from previous tightening cycles:

- 1994: A big spike in 10-year bond yields lowered growth expectations. This led to a rise in high yield bond default expectations, hurting the sector.
- 2004: Rate hikes had little impact on 10-year yields, and growth expectations held steady. Ditto for default rates—and the performance of high yield bonds.

The caveat: We have never before exited ZIRP. It is difficult to separate the signal from the noise when drawing conclusions from a few previous tightening cycles. What is different today? A long period of low interest rates has triggered huge inflows into high yield bonds, making the sector more sensitive to movements in short-term rates. This is particularly true for lower-quality credits such as CCC-rated bonds, we believe.

The U.S. high yield benchmark index currently offers a higher premium above U.S. Treasuries than at the start of past tightening cycles, as the table on page 3 shows. A bloodbath in energy issuers (15% of the index) has made the segment look more reasonable.

EQUITIES EXPLAINED

Low-beta sectors such as utilities and telecoms have done well since the crisis, outperforming the MSCI World Index by a cumulative 15%, our research shows. Lower volatility and higher returns! What is not to like? Yet this has made these stocks momentum trades—and vulnerable to any rate rise. Their stable cash flows become less valuable when rates move up, as detailed in Risk and Resilience of September 2013.

Utilities, in particular, are sensitive to rate rises. Their correlation with daily changes in the 10-year U.S. Treasury yield has been the highest of any sector in recent history. Whenever yields rise, global utilities tend to significantly underperform global equities. See the right bar in the chart to the right. This was true even before the financial crisis, as the chart shows. (See the dot within the bar.)

The key change? All sectors appear a lot more sensitive to interest rate changes these days.

The correlation with yield changes hovered around zero for all sectors except utilities in the period 2005 to 2007, as the chart shows. Correlations have recently increased, however, indicating the Fed’s policy has been driving sector performance. Consumer staples and telecoms have now joined utilities as bond proxies. Global financials currently offer a mirror image of utilities. The sector usually outperforms when yields rise. See the left bar in the chart below. The outperformance has been even more stark for U.S. financials. Why? Even a small rise in interest rates could deliver a big boost to bank earnings. We will detail our views on the effect of the Fed’s tightening on U.S. equities in Market Perspectives of May 2015.

European and Japanese equities should be resilient in the face of U.S. rate hikes. We see the ECB and BoJ pressing on with QE, lending support to eurozone and Japanese bond proxies. A rising U.S. dollar (and weak euro and yen) boosts the earnings of European and Japanese cyclical. Japanese companies have found religion. Buybacks and dividend rises are becoming more common. At the same time, domestic pension funds are re-allocating from domestic bonds to equities. Result: sizeable domestic investor demand for the first time in 30 years or so. In Europe, we like cyclical sectors such as autos. These benefit from the weak euro and a rebound in domestic demand from depressed levels. Yet the continent’s equities are no longer dirt-cheap.
Emerging Markets

The Fed’s moves and the path of the U.S. dollar have always loomed large in EM economies. This appears to be playing out again. Unusually, most EM assets have been in the global financial markets’ dumpster—even before the Fed has started to tighten. The taper tantrum triggered a sell-off in EM debt and currencies in mid-2013, hitting countries with large current account deficits particularly hard.

The U.S. dollar has since risen by 17% on a trade-weighted basis. This is challenging for countries and companies that have feasted on cheap U.S. dollar debt. The strengthening dollar has depressed (dollar-denominated) commodities prices, hurting exporters of raw materials. The depreciating euro and yen have made eurozone and Japanese goods more competitive against high-end EM manufacturers.

Yet many EM economies have a lot more financial firepower to weather the storm this time: piles of foreign currency reserves, domestic savings pools to balance any foreign selling, healthy fiscal balances and investment grade ratings. See our interactive EM Marker for details.

And traditional export markets are on a gentle upswing. Japan and Europe are slowly growing, boosted by depreciating currencies and QE. The U.S. economy is a relative outperformer. EM locomotive China is slowing, but growth is coming off a much larger base. All major economies stand to benefit from lower oil prices, as detailed in Concentrated Pain, Widespread Gain of February 2015.

Our overarching theme in EM investing is differentiation, as EM economies are developing at very different speeds (some appear to be going in reverse, actually). That said, angst over the Fed’s tightening is likely to affect the asset class at times (with plenty of out- and underperformance between countries, sectors and strategies).

We favor Asian fixed income due to solid credit fundamentals, attractive valuations and economic reform momentum. India and China lead in perceived progress on structural reforms. See the chart above. We also like selected Eastern European countries such as Poland. These “satellites of love” orbiting the ECB benefit as eurozone investors search for alternatives to negative yields at home.

“The underperformance of the asset class in recent years can be explained by the lack of export growth momentum.”

— Gerardo Rodriguez
Portfolio Manager,
BlackRock Emerging Market Allocation Fund

HARD CURRENCY RULES

U.S. dollar-denominated EM debt looks especially attractive as a result. Average yields are twice those of U.S. Treasuries, and much sovereign EM debt carries an investment grade rating. Around 64% of the J.P. Morgan hard currency EM sovereign bond index is investment grade, versus 40% a decade ago.

Country selection is critical. We expect credit ratings to drift lower in 2015 on the back of slower economic growth and falling commodity prices. Venezuela, Russia and Brazil have been among the biggest losers — yet big falls in asset prices mean investors in these countries are now better compensated for the risks.

Local-currency EM debt is a riskier bet. These bonds offer nice diversification potential, but a rising U.S. dollar (mirrored by falling EM currencies) threatens to erode their attractive yields. Emerging economies with current account deficits and a reliance on dollar funding would be most vulnerable to Fed rate hikes, we believe.

Investors should consider currency hedges when venturing into local markets, as detailed in Headache or Opportunity? of September 2014. This is because monetary policy in many EM countries is in clear easing mode and the U.S. dollar rally appears to have legs.
CORPORATE CHALLENGES
What happens to EM corporate debt when the Fed finally lifts rates? The answer depends on the time frame:

**Short term:** Expect an increase in volatility, exacerbated by poor liquidity. Some countries lack a stable base of domestic buyers and we fear many foreign buyers are “investment tourists” ready to bail at the first sign of trouble. Higher volatility could impair the functioning of capital markets, but we expect any such hiccups to be temporary.

**Medium to long-term:** Fundamental credit risks are the key to performance. The rising U.S. dollar poses a risk to countries and companies dependent on external funding. Companies headquartered in emerging markets have binged on cheap debt in recent years. They raised a record gross $371 billion in 2014, according to J.P. Morgan, up almost fourfold from 2005 levels.

The mountain of dollar-denominated EM corporate debt has increased as a share of GDP, but is still at relatively low levels. China’s corporate dollar debt has jumped 15-fold from 2009 levels, for example. Yet the total outstanding makes up a paltry 2% of GDP, according to J.P. Morgan. Corporate dollar debt makes up 10% of GDP in Latin America, however.

The good news: Many EM corporates have been cutting capital expenditures (due to falling commodity prices and lower oil exploration) and will have less need to issue debt in the future. Relatively muted supply and yield-seeking investor demand should underpin the market. Rapid capital markets development and growing financing needs for infrastructure and social spending are likely to boost domestic demand for yielding assets. We see two caveats:

1. Many companies have a currency mismatch: revenues in local currency, but debt-servicing costs in U.S. dollars. Currency depreciation can cause financial mayhem. Telecoms, media and domestic airlines are the biggest potential losers in the EM world. There will be a handful of winners: Companies in IT services, pulp and paper, sugar, steelmaking and infrastructure often have dollar revenues, but costs in local currencies.

2. Many EM companies are poor stewards of capital. What happens if you raise debt, fail to earn a return and are faced with rising servicing costs? You hit a wall.

EXAMINING EM EQUITIES
EM equities closed out 2014 with a fourth straight year of underperforming developed markets. We could see them do better this year if strong economic data give the Fed confidence to raise U.S. rates. U.S. growth is good news for export-oriented EM economies, removes a drag on performance (the lack of export growth momentum) and could boost investor risk appetite in an increasingly interlinked world.

Our India equities team, for example, notes the country’s benchmark index has generated average quarterly returns of 8.3% in the five periods of rising U.S. rates in the last two decades (outperforming both the S&P 500 and EM indexes). We believe history is likely to repeat itself here and in other EM equities markets. Valuations look attractive and currency weakness is an added booster.

CURRENT ACCOUNTING
EM equities in countries with steepening yield curves tend to outperform those with flattening curves, our equities quants find. We suspect the reasons include easy funding for companies and an expectation of future growth as expressed by higher long rates. High short-term rates sometimes point to high inflation and/or a brewing currency crisis.

We use current account trends as a risk factor in the short term for this strategy. The performance of the “Fragile Five” (Brazil, India, Indonesia, South Africa and Turkey) in 2013, for example, shows emerging markets with gaping current account deficits can plummet in the face of funding fears.

Yet the story changes completely in the long run: Countries with high current account deficits tend to outperform others, we find. The reason? They tend to face more pressure to enact structural reforms and are a bit like value stocks—they have a lot of upside due to low investor expectations.

Similarly, countries with the weakest currencies far outperform others in the long run. Credit Suisse’s 2014 Global Investment Returns Yearbook shows. A weak currency often forces necessary economic adjustments. Investors demand higher risk premia as a result. Cases in point so far in 2015: The Indonesian and Indian stock markets (also boosted by reform momentum after electing new leaders in 2014).

“We don’t see a repeat of the taper tantrum as EM economies and currencies have adjusted. But U.S. policy normalization is also unlikely to push the EM boat forward.”

— Sergio Trigo Paz
Head, BlackRock EM Fixed Income

DYNAMICS AND IMPACT OF U.S. RATE RISE [15]
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