

# US Credit Outlook

## 14 for '14 (part 1), fourteen *predictions* for 2014

- In this first of a three-part investment-grade outlook series, we offer fourteen predictions for 2014 that encompass our forecast for returns, expectations for corporate releveraging, anticipated issuance, and the risks with which investors will likely contend in the year ahead.
- We reckon that the main question for credit investors in 2014 will be what happens when extraordinary monetary policy goes back to simply being ordinary. Fixed income markets have become accustomed to an environment where the technical backdrop has been overwhelmingly supportive, but that will likely change as tapering comes to an end.
- Indeed, in the post-taper world to come, we expect higher yields, buybacks to accelerate, ratings downgrades to increase, a rise in new issue concessions, mutual fund outflows to continue, and spreads to begin to reflect the deterioration in fundamentals that has occurred.
- Nevertheless, there will be pockets of strength. Long-end corporate debt is well supported at higher yields by liability-driven investors, and financials should continue to outperform industrials. Higher yields and the perception of a strengthening USD are also likely to attract foreign inflows, at least in the near term.
- In the forthcoming part 2 of the series we will discuss our favorite trading strategies for 2014, to be followed by part 3, an in-depth outlook for supply. From the entire credit strategy team, we hope you enjoy the predictions, find at least a few of them non-consensus, and experience a more fruitful 2014 than 2013.

---

### High Grade Credit Strategy

**Jason Shoup**

+1-212-723-6147

jason.b.shoup@citi.com

**Sonam T Pokwal**

+1-212-723-3807

sonam.t.pokwal@citi.com

**Lina Lavitsky**

+1-212-723-1104

lina.lavitsky@citi.com

### Single Name Credit Strategy

**Erin Lyons**

+1-212-723-1102

erin.lyons@citi.com

**Swati Verma**

+1-212-723-3554

swati1.verma@citi.com

---

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

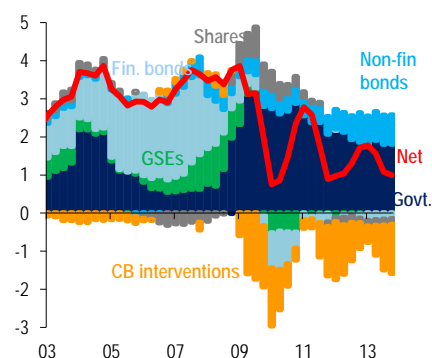
## Table of Contents

|   |    |
|---|----|
| Introduction  | 3  |
| I. Excess returns will be flat-to-lower, but still positive | 4  |
| II. There will be more buybacks                             | 5  |
| III. Nonfinancial ratings downgrades will increase          | 6  |
| IV. It will be easier to get an allocation next year        | 8  |
| V. Liquidity won't get any better and the Fed doesn't care  | 9  |
| VI. Tapering will be finished well before year-end          | 10 |
| VII. Inflation will take center stage by year-end           | 11 |
| VIII. The US economy's indebtedness will grow               | 12 |
| IX. There will be outflows                                  | 13 |
| X. There will be an "accident" in EM                        | 15 |
| XI. The perception of USD strength will benefit credit      | 17 |
| XII. More fiscal fights to come, but with limited impact    | 18 |
| XIII. Alpha opportunities will finally increase             | 19 |
| XIV. Nonbank 10s30s will invert; bank curves will steepen   | 20 |
| Summary   | 21 |

## 14 for '14, fourteen *predictions* for 2014

There's little doubt that the central bankers of the world's advanced economies will judge their efforts in 2013 largely a success. Extremely accommodative monetary policy has suppressed many of the systemic risks that plagued the previous two years and has helped to foster recoveries in the US, Japan, and Europe. Yet there is growing acknowledgement that so much liquidity sloshing around the financial system is not without consequence. As such, the main question for credit investors looking ahead to 2014 is what happens when extraordinary measures go back to simply being ordinary.

Figure 1. Net issuance vs. CB interventions, 4q-rolling-sum in \$tn



Source: Citi Research, Haver Analytics

In that respect, the US is likely to act as a test case for navigating the withdrawal of liquidity for central bankers worldwide—a task that is by no means trivial, as 2013's mid-year selloff demonstrates. Fixed income markets have become accustomed to an environment where the technical backdrop has been overwhelmingly supportive, but to the extent supply starts to exceed demand going forward, the potential for volatility to increase next year is considerable.

As Figure 1 illustrates, while net issuance of financial assets across advanced economies is at a nadir due to central bank interventions—currently exceeding \$1.5 trillion per year in dollar terms—it is likely to rise substantially by the end of 2014. Indeed, at the current run-rate of \$85 billion per month, Fed purchases of Treasuries and mortgage bonds account for more than \$1 trillion of interventions. As a result, shortly after the Fed is finished with tapering, we expect global net issuance to grow to the highest level since the first quarter of 2011.

That being said, the rapid growth in net supply is likely to be partially cushioned by accommodative monetary policy elsewhere and falling deficits. While foreign central banks will not provide a dollar-for-dollar replacement to the lost accommodation from the Fed, we expect the Bank of Japan and the European Central Bank to provide a limited offset to tapering in 2014, as the former steps up its quantitative easing program and the latter contemplates the reintroduction of LTROs. Likewise, declining net Treasury issuance implies that the Fed purchases also *should* decline in order to keep accommodation neutral from a flow perspective.

What's more, the Fed has considerable leeway to adjust the pace of tapering for the time being should financial market volatility become undesirable. Although, at some point that flexibility to tack back and forth is likely to disappear as the Fed becomes hemmed in by inflation, financial recklessness, or a combination of both. As such, we see room for credit to perform well near-term while the Fed remains unfettered and “forward guidance” goes unchallenged. With that said, we are skeptical that 2014 will end on as strong a note as it begins for fixed income generally, and credit, in particular.

At the heart of that trepidation is the observation that investment-grade companies in the US have been relevering at an alarming rate. Yet due to plenty of liquidity and a shortage of assets, the deterioration in fundamentals has not resulted in materially wider spreads. It therefore seems natural to expect valuations to catch up with fundamentals to some degree as the Fed moves to a less accommodative stance.

Add it all up, and to our minds, the current environment is one that is likely to offer very little in the way of beta, at least of the beneficial variety. In all likelihood, 2014 will confirm that the credit cycle has turned and that the tights of this credit cycle have passed. But that is just the first of fourteen predictions that we've compiled for 2014, and which comprise part one of our three part outlook series for IG credit. From the entire credit strategy team, we hope you enjoy the predictions, find at least a few of them non-consensus, and experience a more fruitful 2014 than 2013.

## I. Excess returns will be flat-to-lower, but still positive

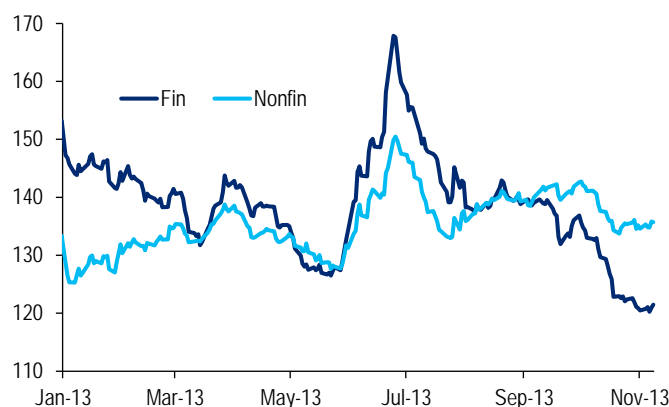
It's a nontrivial task to forecast exactly how much wider credit spreads will go in 2014, but we reckon that the simple answer is no more than 10-15bp, barring a tail event. As such, after including carry in the calculation, excess returns for investment-grade credit are likely to end 2014 in the region of 50-75bp, positive but substantially lower than 2013's excess return of roughly 200bp. As always though, the devil's in the details.

Indeed, as Figure 2 illustrates, the statement that investment-grade credit spreads have failed to reflect rising leverage is misleading. After all, nonfinancial spreads are only 1-2bp tighter in 2013, and were for most of the year trading wider than where they started. In contrast, financial spreads—where releveraging is of limited-to-no concern—tightened by nearly 40bp during the course of 2013 and now stand comfortably inside nonfinancials. To our minds, such a divergence in performance strongly suggests that releveraging played a part in investor preference for owning financial risk over nonfinancial risk.

Furthermore, the fact that nonfinancials were essentially flat year-on-year could be taken as a disappointing outcome for at least two reasons. First, nonfinancial spreads rallied by 8bp on the first trading day of the year as policymakers averted the fiscal cliff—a move tighter that ultimately was given back in its entirety. Second, nonfinancials enjoyed a substantial tailwind in the form of declining dollar prices throughout 2013. In fact, long-end nonfinancials declined by 15-20 points from the start of the year, which is a move that should have been worth 20-30bp if one were to simply apply an average discount of 1-1.5bp for every dollar above par.

Consequently, we reckon the year was not nearly as benign for nonfinancials valuations as the numbers seem to suggest. What's more, that illusion should be made plain in 2014 as the tailwinds that helped to obfuscate weak performance this year dissipate. **Indeed, we expect nonfinancials to widen 15-20bp and financials to continue to tighten 10-15bp**, with the former biased toward 10s30s flattening and the latter biased toward 10s30s steepening (discussed in greater depth in prediction #14).

Figure 2. Financial and nonfinancial OAS, in bp



Source: Yieldbook, Citi Research

Figure 3. Financial less nonfinancial spread, OAS difference in bp



Source: Yieldbook, Citi Research

Continued divergence between financials and nonfinancials of the magnitude we anticipate next year would drive the spread differential toward 40-50bp, a level last observed in the middle of the previous decade (Figure 3). At first blush, such a large difference may seem unrealistic considering that, during the tights of the previous credit cycle, financials traded significantly tighter than where they do now. However,

we view the current environment as unique in many respects. For instance, rarely has it been the case that industrial companies lever up while regulators simultaneously pressure banks and other financials to de-risk.

## II. There will be more buybacks

Unfortunately for credit investors, there is little indication that the releveraging of corporate balance sheets will abate any time soon. If anything, the momentum is in the opposite direction. As Figure 4 indicates, share buybacks tend to be highly correlated to the level of the S&P500, suggesting that companies often behave sub-optimally, repurchasing high and issuing low.

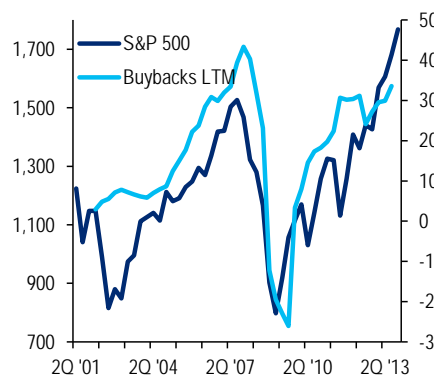
Indeed, it's difficult to argue that companies should not be focused on returning excess cash to shareholders when the return on invested capital is so low for many industries. What's more, as long as the yield on investment-grade debt remains hundreds of basis points below the earnings yield of the S&P500, the mathematical incentive to issue debt to fund buybacks should remain intact (Figure 5).

Similarly, we expect M&A activity to increase and contribute to the corporate releveraging theme more than it has over the past three years. Historically speaking, M&A activity has also correlated well to the level of the S&P500, albeit with a lag of 6-12 months (Figure 6). But a gap has opened up in the relationship that suggests that there may be a fair amount of pent-up activity waiting to be unleashed should confidence return and economic growth surprise to the upside.

To that end, dissecting Verizon's deal to acquire the 49% of Verizon Wireless it did not already own is an instructive exercise. While the circumstances that allowed the telecommunications giant to issue nearly \$50bn of investment-grade debt in one go were unique, the reaction of equity markets to the trade was not. Verizon stock is up by more than 17% this year largely, we believe, thanks to the deal (Figure 7), a response that's not atypical for the stock prices of acquirers in 2013.

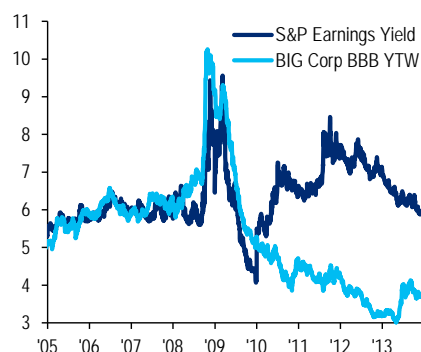
Of course, the Verizon deal did not leave credit investors unscathed. Existing 10-year bonds more than doubled in spread over the course of 2013 from about 70bp to 140bp. Yet crucially, widening credit spreads had little impact to the economics of the deal from Verizon's perspective or the perspective of its shareholders. Nor does it seem to have been all that important of a consideration to management that the deal priced at a time of elevated Treasury yields, relatively weaker demand for credit, and consequently, required enormous concessions. That insensitivity to the price of debt should give all credit investors pause for thought.

Figure 4. S&P 500 vs buybacks, in \$bn (right)



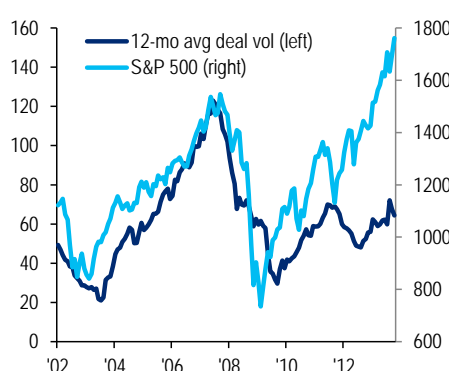
Source: Citi Research, Yieldbook, Co. Filings  
Note: share buybacks defined as net decrease in cap. stock over a 4q-period.

Figure 5. S&P earnings yield vs BBB YTW, in %



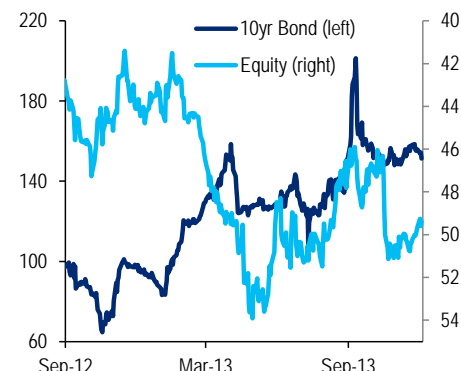
Source: Citi Research, Bloomberg, Yieldbook

Figure 6. S&P 500 vs M&A volume, in \$bn (right)



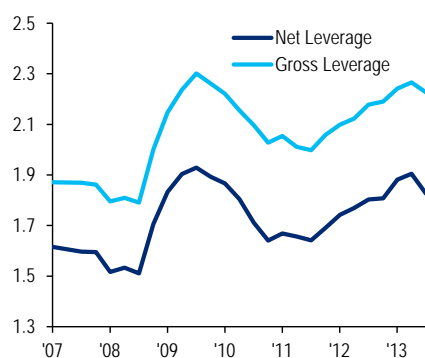
Source: Citi Research, Yieldbook

Figure 7. Verizon 4.6 '21 vs equity, in bp (left)



Source: Citi Research, Bloomberg

Figure 8. Investment grade gross and net leverage, debt/EBITDA



Source: Citi Research, Moody's

To be sure, bondholders have so far been willing accomplices in the releveraging of corporate America. Indeed, the net demand for new supply has been tremendous, thanks to plentiful central bank liquidity driving record inflows into bond funds while simultaneously removing the supply of higher-quality fixed income securities. But the most important lesson from the Verizon deal might be that when the technical backdrop changes, the likelihood that a releveraging transaction reprises the market will be high, and even punitive pricing may not dissuade a company from doing a deal.

A primary reason for this, in our opinion, is that IG companies generate such a substantial amount of cash and profits, that even with extra interest expense, it makes sense to add debt to boost the firm's equity valuations. If we look at the balance sheets and cash generating ability of most IG companies, it takes a lot of extra debt at egregious interest rates to really make a dent in the cash generating ability of these credits. The median company in the BIG Corp Index generates about \$400mm of annual free cash flow and has about \$3.3bn of debt. Debt could double, and even at an interest rate of 10% the median company would still generate positive cash flow.

Remarkably, it has taken only five years for leverage at America's most credit worthy companies to reach levels last seen at the depth of the Great Financial Recession. Yet there's a key difference this time around: In 2009, investment-grade leverage climbed by roughly 0.5 turns to 2.3x largely due to a broad-based decline in revenue/EBITDA, whereas non-financial leveraging over the past three years has been intentional and primarily the result of higher quality companies repurchasing shares and increasing dividends (Figure 8). What's more, the trend of fundamental deterioration is unlikely to go unnoticed for much longer.

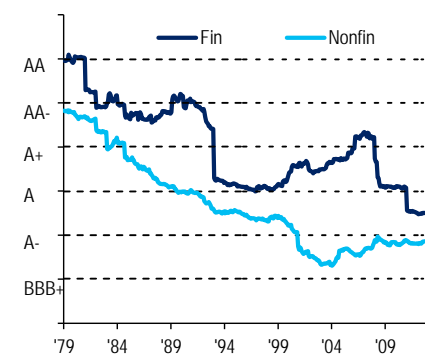
### III. Nonfinancial ratings downgrades will increase

Apart from a few notable exceptions, the releveraging hasn't been much of a ratings event as of yet. In fact, the overall credit quality of the nonfinancial portion of Citi's Broad Investment Grade Corporate Index is rising, as ratings are now higher than where they were pre-crisis (Figure 9). That disconnect is surprising, to our minds, and not just a reflection of the common criticism that credit ratings tend to be lagging indicators of credit quality.

To the contrary, the rating agencies are not ignoring the rise in leverage. Agencies, like Moody's, publish industry methodologies that detail ranges for the various financial metrics they use when assigning a rating. As one would expect, a leverage metric of some variety is ubiquitous and on average contributes 13% to the final rating<sup>1</sup>. What's more, other criteria, like a firm's financial policy, can effectively double how much influence leverage plays in determining a rating.

As such, it's possible to get a sense of whether a given company's leverage is consistent with its rating, or whether the company is rated too high or too low. The result of such an analysis should raise concerns. As Figure 10 illustrates, the percentage of companies that are operating with gross leverage that's higher than the upper bound of the range corresponding to their current rating is approaching 2009's peak at more than 36%. Likewise, the number of companies operating with leverage headroom—i.e. they have capacity to add leverage without threatening their current rating—has declined to below 25%, a six-year low that's below even the first quarter of 2009.

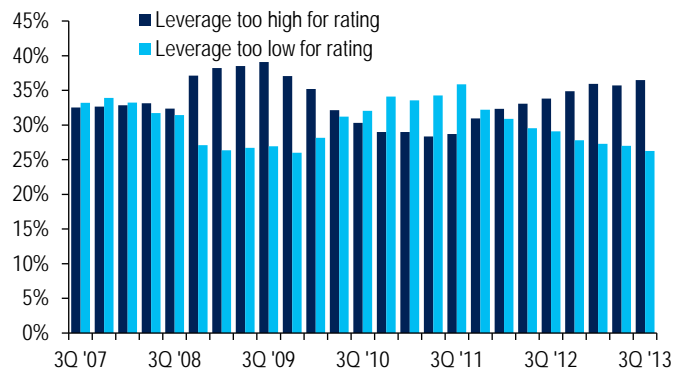
Figure 9. Average BIG Corp rating



Source: Citi Research, Yieldbook

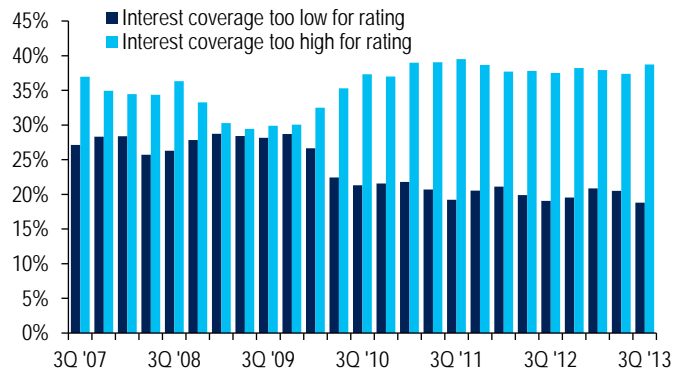
<sup>1</sup> Based on an analysis of 60 industry rating methodologies from Moody's

Figure 10. Companies that are over/underleveraged w.r.t. leverage vs Moody's rating, as a % of total US companies rated



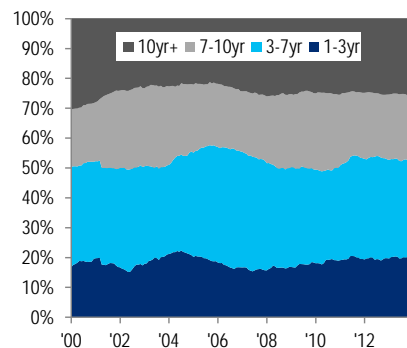
Source: Citi Research, Moody's

Figure 11. Companies that have interest coverage ratios too high/low w.r.t. interest coverage vs Moody's rating, as a % of total US companies rated



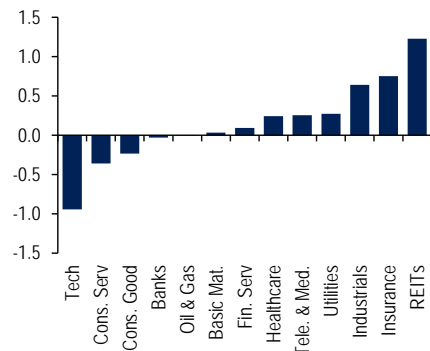
Source: Citi Research, Moody's

Figure 12. Distribution of IG debt by tenor, as a % of total debt



Source: Citi Research, Yieldbook

Figure 13. Diff btw 2014-15 maturing coupons and wgt'd avg 10y yld of sector, in %



Source: Citi Research, Yieldbook

Yet, as concerning as the leverage metrics look, they aren't the only determinant of a rating. An equally important consideration these days is the interest coverage ratio, which also features in nearly all industry rating methodologies and on average contributes 11% to the final rating. In other words, in the eyes of the agencies, a company can offset the ratings drag associated with adding leverage, if the interest on the additional debt can be added at a low enough cost. And as Figure 11 illustrates, that's just what's happening. A record number of companies are operating with an interest coverage ratio substantially above that which matches their current rating.

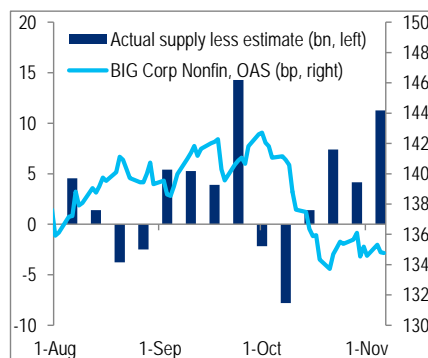
But what then happens as rates rise? To the extent that companies have termed out a substantial portion of their debt and locked in the low coupons that were on offer from late 2011 through mid-2013, there's not much to worry about. Yet as we look at the debt distribution of investment-grade companies (Figure 12), it's clear that relatively few nonfinancials have been able to materially shift their debt load to longer tenors. Indeed, a number of investment-grade sectors are likely to see their refinancing costs rise even if yields don't rise further from here (Figure 13).

That's in stark contrast to high yield, where call structures have allowed management teams to be far more opportunistic when taking advantage of the exceptionally low interest rate environment, and where, as a consequence, the impact from rising rates should be relatively muted.

As such, we can't help but think that as rates rise, there will be more investment-grade downgrades to come as the benefits of exceptionally high interest coverage ratios roll off while leverage continues its steady climb higher.

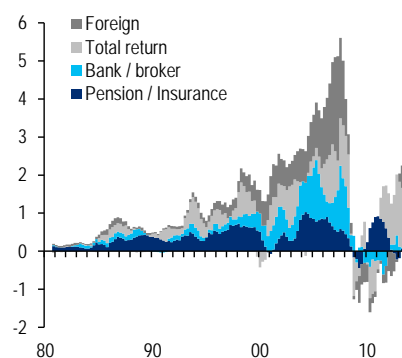


Figure 14. Unexpected supply, in bp



Source: Citi Research, Yieldbook

Figure 15. Net demand, in \$bn



Source: Federal Reserve, Citi Research

#### IV. It will be easier to get an allocation next year

It's unlikely to be much consolation to bondholders, but 2014 should be a year in which it will be significantly easier to get a new issue allocation. Rising leverage, steady-but-moderate EBITDA growth in the US, and an uptick in maturing debt should combine to keep gross issuance at a level similar to 2013—even as Yankee supply is likely to decline as the cross-currency basis swap moves into territory where it's less favorable to issue in USD. Yet while the amount of supply is not likely to change materially, we expect that demand for corporate debt will be softer over the next 12-18 months.

Already, there are indications that the sensitivity of spreads to issuance is increasing. Since the beginning of August, there's been a surprisingly strong relationship between "unexpected" supply—that which comes in excess of syndicate estimates—and the direction of spreads. When the market has had to digest more issuance than it expected, spreads have drifted sideways or sold off. Conversely, when supply has come in light—like it did throughout October and the end of November as the government shutdown and Thanksgiving, respectively, kept issuers on the sidelines—spreads have rallied (Figure 14).

We can only surmise that the reason why supply is starting to influence secondary spreads is that the balance between supply and demand is far more finely poised than it has been in the last few years. In all likelihood, that's a result of mutual fund outflows and the loss of the total return buyer of investment-grade credit due to expectations of QE coming to an end. Indeed, the Fed's flow of fund data suggests that total return buyers of corporates accounted for substantially all the net purchases of US corporates during the past three to four years (Figure 15).

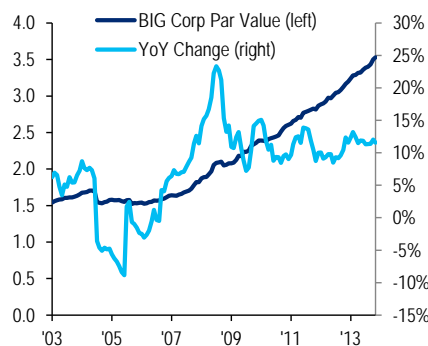
As such, unless one believes that mutual fund outflows will reverse and inflows will resume, we suspect that there will be less competition for issuance going forward. An increase in liability-driven demand and less net supply will certainly help to offset a portion of the lost mutual fund demand, but we still expect softer conditions.

But the old catch-22 about supply coming from the companies you don't want to own and not coming from the companies you do want to own is likely to hold true. So while it may be substantially easier to get a heftier allocation from a nonfinancial triple-B company issuing 10y debt—i.e. where mutual funds have been the marginal buyer—it's likely to be far more difficult to get a single-A/NAIC-1 rated nonfinancial issuing 30y debt, where an ALM/LDI buyer frenzy is building.

*Please see our forthcoming 2014 supply outlook for our full issuance forecast for next year.*

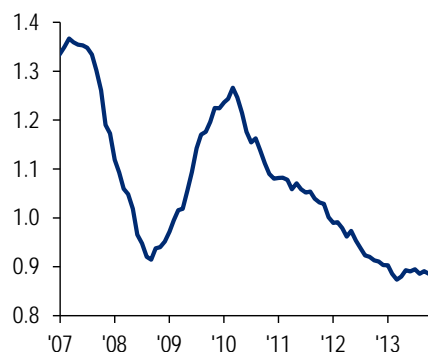


Figure 16. BIG Corp par vs YoY change, in \$tn (left) and % (right)



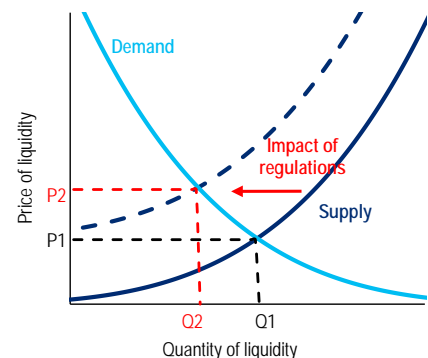
Source: Citi Research, Yieldbook

Figure 17. Volume turnover, 12mo rolling IG TRACE volume / BIG Corp par in %



Source: Citi Research, Yieldbook, Bloomberg

Figure 18. Supply / demand impact of regulations



Source: Citi Research

## V. Liquidity won't get any better and the Fed doesn't care

An unintended consequence to another massive year of investment-grade supply is that bond market liquidity will likely suffer as a result. Since the end of 2007, the par value of Citi's Broad Investment Grade Corporate Bond Index has grown from just over \$1.8 trillion to \$3.5 trillion at an annual growth rate that's averaged more than 12% (Figure 16). Yet over the same time period, the Street's capacity to intermediate risk has shrunk, judging by the decline in dealer inventory, as reported by the NY Fed.

Yet the decline in trading has a chicken and egg feel to it. To be sure, the Street is balance-sheet constrained to a far greater degree than it was pre-crisis. However, if there was profitable trading to intermediate, then the Street would no doubt expend balance sheet doing so. As such, the decline in trading when viewed as a percentage of the outstanding bonds (i.e. the turnover, Figure 17), could be as much a reflection of a more homogeneous investor base that either requires less liquidity or is less willing to pay it.

Indeed, we view liquidity a bit like the amount of deposits in the financial system. Banks hold deposits (including those parked at the Fed), but they have very little influence over the total amount of deposits on their balance sheet, which is determined by where the Fed funds rate is relative to alternative demand for those funds, like C&I loans. Similarly, banks don't really determine the amount of liquidity they can offer their clients either—at least, in an aggregate sense. There's a classic econ 101 supply-demand curve at work (Figure 18).

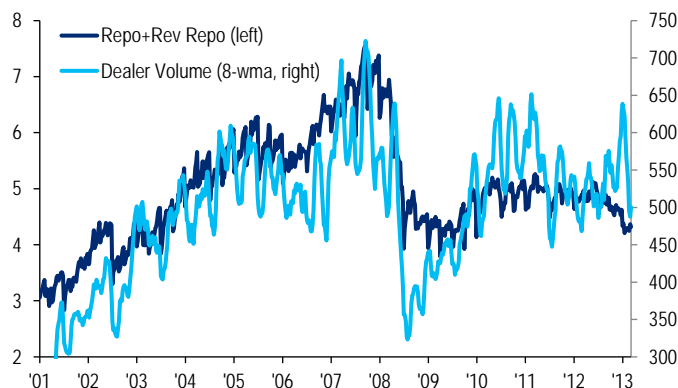
Unfortunately, the Fed, acting in its capacity as a regulator, is clearly not concerned with shifting the liquidity supply-curve to the left through the adoption of new rules, like the supplemental leverage ratio (SLR) and the Volcker rule. Indeed, new monetary tools such as the Fed's new fixed-rate full allotment reverse repo facility or the potential to end interest on excess reserves appear designed to disrupt the symbiotic relationship between banks and money market funds that has enhanced the underlying liquidity of fixed income.

The SLR, in particular, will likely pressure repo activity and the notional exposure of derivative businesses to the detriment of fixed income liquidity. Frankly, the high correlation between repo outstanding and the volume of Treasuries traded is a disconcerting relationship that implies that should the rules governing the SLR become more strict, as the Basel Committee on Banking Supervision has proposed, the impact to markets could be quite severe (Figure 19). Indeed, it's notable that there's also a strong correlation between the size of a banks' matched repo business and their fixed income market share (Figure 20).

One way forward is to make market-making as balance-sheet efficient as possible through better order matching technology and less at-risk execution while simultaneously turning financial-based leverage—which tends to be much shorter in term—into structural leverage, like one might get through the equity tranche of a CLO.

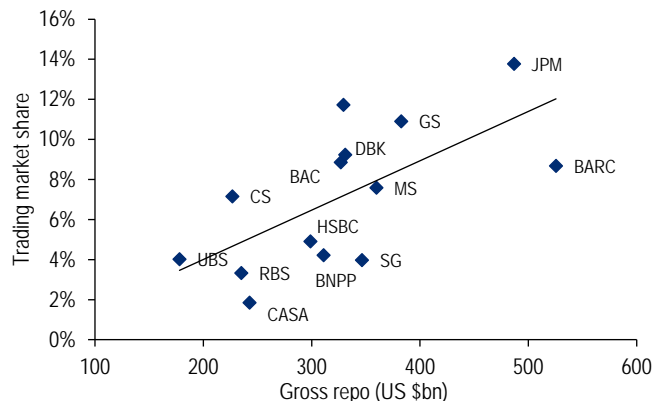
Yet solutions of that sort do not address the real issue with the deterioration in fixed income liquidity, in our opinion. We'd argue that there's a high likelihood that the current equilibrium amount of liquidity offered by the Street—set in accordance with the supply-demand curve—is too low should investors try and sell a significant portion of their holdings at one time, as might be the case should mutual fund outflows accelerate in the face of rising rates. And in that environment, balance-sheet efficient behavior can break down and the market's capacity to gap wider dramatically increases.

Figure 19. Dealer repo outstanding vs. UST volume, in \$tn (left) and \$bn (right)



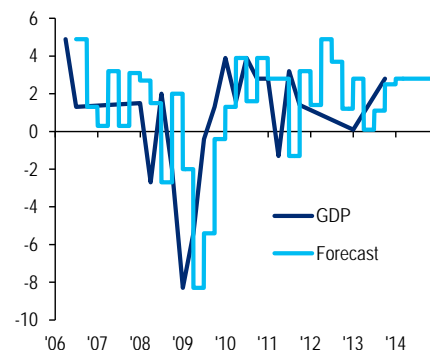
Source: Citi Research, New York Fed, Bloomberg

Figure 20. Bank gross repo vs trading market share, in \$bn (x) and % (y)



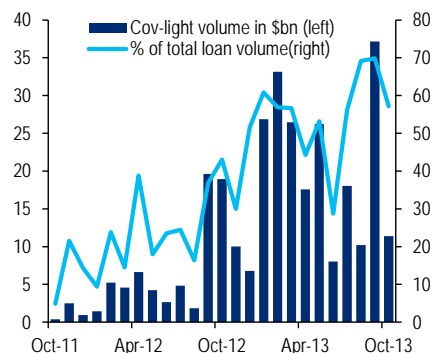
Source: Citi Research, Company Reports

Figure 21. GDP versus median expectations 1-year prior, in %



Source: Citi Research, Bloomberg

Figure 22. Cov-lite loan issuance, in \$bn (left) and % of total loan volume (right)



Source: Citi Research, S&P/LCD

In effect, the risk is that regulators raise the cost of liquidity to such a high level during a period of time when demand for it is relatively low, that when it's needed most, potentially a short time later, the repricing implications end up being severe. As such, at least in this dimension, we believe the market is likely riskier now than it was in 2008—and the Fed hasn't shown any indication of caring.

## VI. Tapering will be finished well before year-end

For credit investors, concerns about outflows and the potential for a liquidity squeeze are only heightened by the prospect of the Fed tapering its purchases of Treasuries and mortgages during the course of 2014. While the ultimate timing of the first taper and the pace of the subsequent tapering has yet to be decided, we think the pertinent fact for credit investors is that tapering is likely to be concluded by the end of 2014.

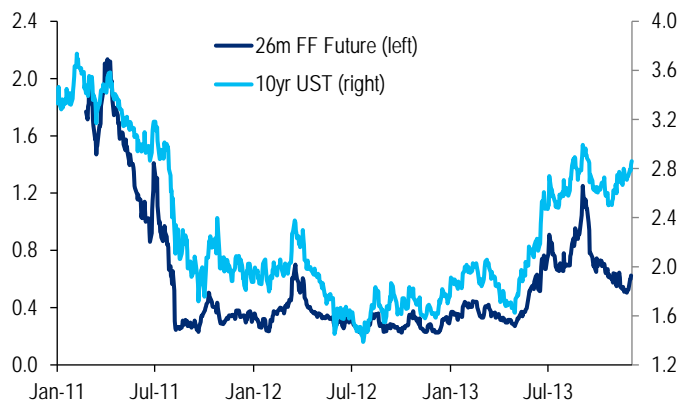
Fundamentally, the case for completely winding down QE in 2014 has seemingly strengthened over the second half of the year. Consensus estimates for US GDP growth in 2014 average 2.6%, suggesting that most economists expect sequestration headwinds to abate in 2014 and cyclical forces to dominate—a view with which [Citi economists agree](#). Moreover, there's some evidence that consensus expectations have been too low over the course of 2013, after four years of being too high following the rebound in 2009 (Figure 21). To our minds, that suggests that expectations for next year might, if anything, be a touch too conservative.

What's more, ever since Jeremy Stein's speech in February of 2013 warning about the unintended consequences of quantitative easing, it appears that many members of the Fed have become far more nervous about prolonging extraordinary monetary policy for too long, irrespective of the fundamental backdrop. For the time being, such concerns have yet to directly impact the pace of asset purchases. Yet we'd note that the regulator's October letter to US banks warning on lax leveraged loan underwriting standards suggests the Fed is mindful of the negative consequences to their actions (Figure 22).

Finally, any remaining hesitancy to taper should be overcome by the fact that the market appears to have accepted the Fed's commitment to "forward guidance" in recent months. In contrast to what happened during the taper-induced mid-year selloff in 2013, long term rates have been able to rise without dragging Fed fund futures contracts along with them, suggesting that the Fed's "lower for longer"

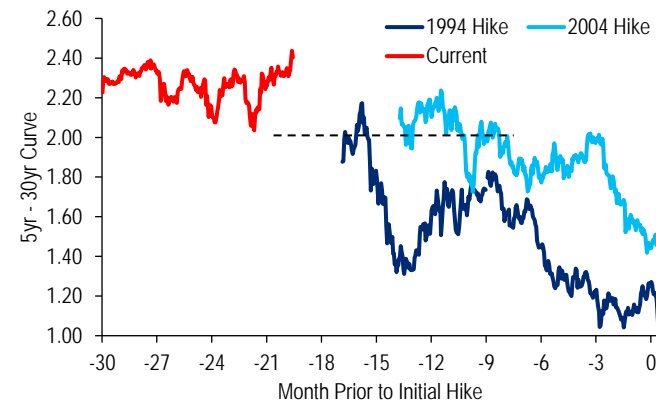
strategy is finally gaining credence among investors (Figure 23). Likewise, there's been considerable steepening in the 5s30s Treasury curve, which when viewed in relation to past hiking cycles is consistent with a Fed that's on hold for the next 18-24 months (Figure 24).

Figure 23. 26<sup>th</sup> Fed Fund future vs 10yr Treasury, yield in %



Source: Citi Research, Bloomberg

Figure 24. Treasury curve 5s30s steepness prior to Fed Funds hike, yield in %

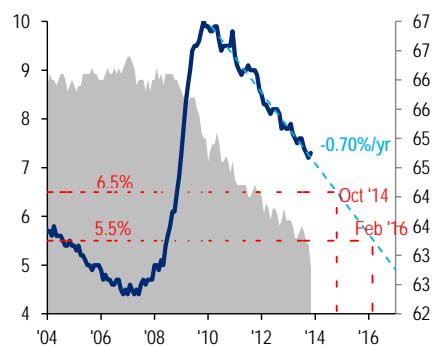


Source: Citi Research

## VII. Inflation will take center stage by year-end

In the not too distant future we suspect that this uneven labor inflation will present a problem for the Fed as economic inequality increases, the unemployable are left behind, but the best off start adding to inflation in a way that prevents the Fed from meeting its maximum employment mandate.

Figure 25. US unemployment rate vs labor force participation rate, in % (right and left)



Source: Citi Research, Haver Analytics, BLS

Whether the Fed will ultimately be able to stand by its commitment to “forward guidance” is an open question of monumental importance for credit investors. Unquestionably, the answer will depend on the path of inflation going forward. If CPI remains chronically low along with future expectations of inflation, then a Yellen-led Fed arguably could have sufficient latitude to hold off raising the Fed funds rate almost indefinitely. But that is not our expectation and it isn't the consensus expectation of economists either, who collectively have CPI averaging 1.9% for 2014 and rising to 2.1% in 2015.

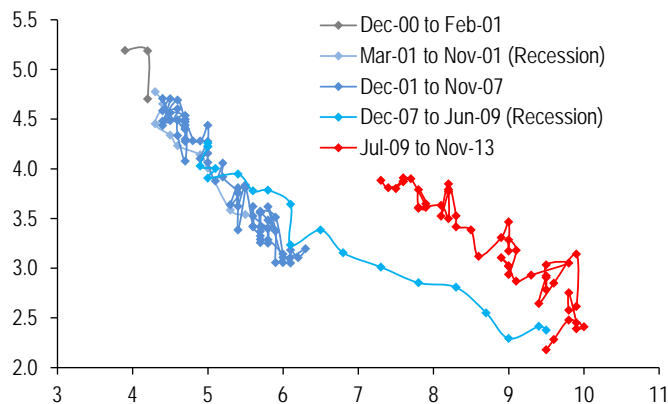
Indeed, it's highly likely that by the end of 2014 market participants start to price in expectations of higher inflation going forward as a direct result of Fed's ultra-loose monetary policy, in our opinion. For we believe the Fed is fundamentally misjudging the amount of slack in labor markets. As Figure 25 illustrates, the unemployment rate has fallen far more quickly that the Fed anticipated and there's no indication that it won't continue its linear descent given the continued decline in the labor force participation rate and an employment-to-population ratio that has seemingly plateaued.

The idea that the US is grappling with an employment crisis that is more structural in nature than cyclical is not new by any means, it's just seemingly unacknowledged by the Fed and not incorporated into current monetary policy. For instance, alternative measures of the output gap in the US indicate the potential for growth is far lower than the Fed model implies.

Moreover, when it comes to employment, there's mounting evidence that the economy is simply in a “new normal” —to borrow an over-used term. For instance, in today's economy we observe the same number of job openings at 7%

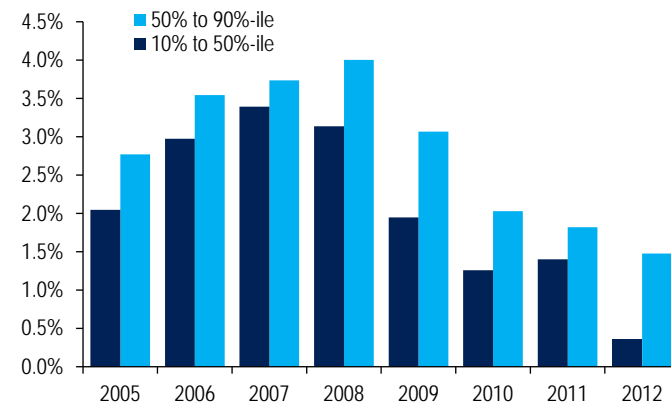
unemployment as we previously did at 5% unemployment before the recession (Figure 26). Similarly, a huge gap has opened up between the top 50% of employed Americans and the bottom 50% in terms of wage growth (Figure 27). In the not too distant future we suspect that this uneven labor inflation will present a problem for the Fed as economic inequality increases, the unemployable are left behind, but the best off start adding to inflation in a way that prevents the Fed from meeting its maximum employment mandate.

Figure 26. Job openings vs unemployment rate, in % (x and y)



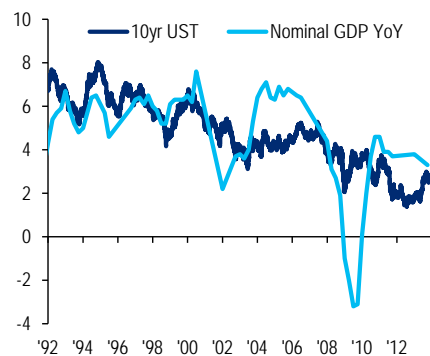
Source: BLS, Citi Research

Figure 27. Wage inflation by wealth percentile, in YoY %



Source: Citi Research, BLS

Figure 28. 10yr Tsy yield vs nom. GDP, in %



Source: Citi Research, Bloomberg

Stare at the economic forecasts long enough, and the extent to which economists have boxed themselves into a corner becomes obvious, along with the danger to credit and fixed income. In the marginally optimistic scenario where CPI reaches 2% and GDP hits 3% by the end of 2014, then the nominal GDP growth rate will be at 5%. That could be entirely consistent with a 10-year Treasury rate that's 3.4%—the current consensus expectation—provided the market hasn't revised its long-term growth and inflation expectations upward at all and the Fed isn't facing any pressure to raise rates (Figure 28). Yet we worry that the risks are increasingly to the upside and liable to catch the market unaware.

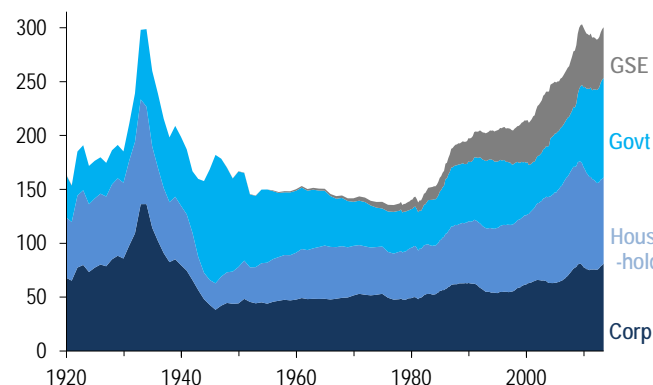
## VIII. The US economy's indebtedness will grow

In many respects, the recovery in the US and expected acceleration next year is analogous to a drug addict that has relapsed. The common narrative that advanced economies have entered a deleveraging period that's likely to depress growth for a decade or more is intellectually appealing; too bad then that it stopped being true in the middle of 2012. Since then, the combined total debt across all sectors of the US economy (excluding the financials) has actually reverted back to near peak levels at 300% of GDP (Figure 29).

Of course, a major driver of the growth in debt is attributable to the US government, which has been running a deficit well in excess of 2% of GDP since the start of the recession. And while the deficit has dropped far faster than anticipated by many, including the nonpartisan Congressional Budget Office (Figure 30), it is expected to stay negative to the tune of -3.5% in 2014.

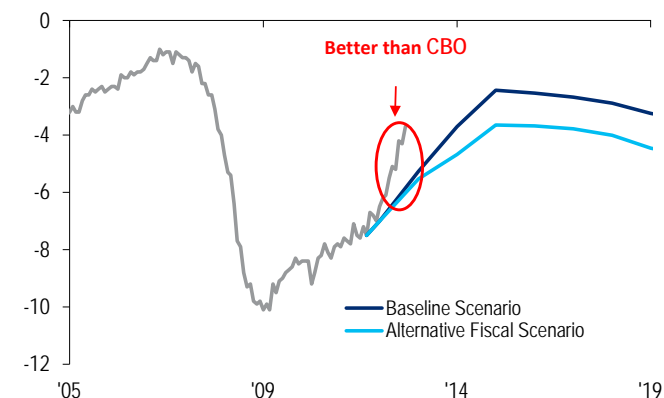
Similarly, there's no indication that corporates or households will return to deleveraging anytime soon. Indeed, the household savings rate in the US has dropped for three years in a row and could potentially fall another 200bp or so before reaching the pre-recession lows (Figure 31).

Figure 29. US debt by sector (ex-financials), as a % of GDP



Source: Citi Research, Federal Reserve

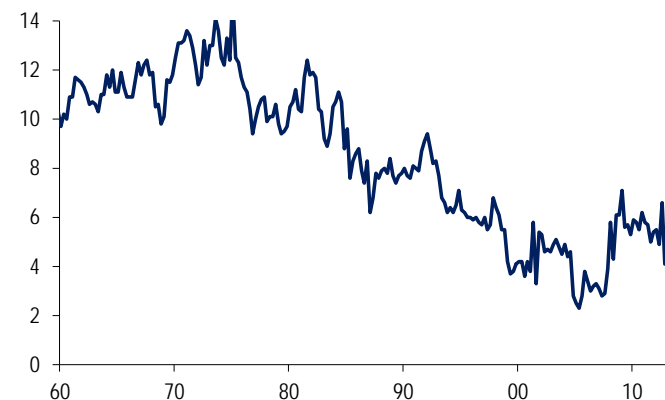
Figure 30. Fiscal deficit vs last year's CBO projections, as a % of GDP



Source: Citi Research, US Treasury, Congressional Budget Office, Haver Analytics

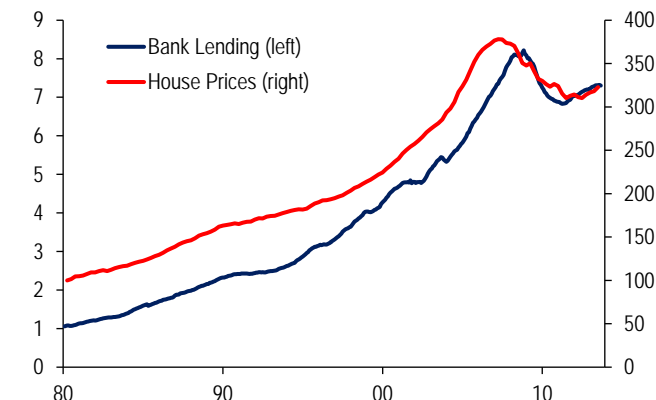
As such, while we find ourselves bullish on US growth and the likelihood that it will surprise to the upside in 2014, it's for all the wrong reasons. If there's a silver lining to the debt relapse, it's that the US is one of the few countries that can engage in this sort of credit-fueled growth model with relatively little immediate consequence, as a result of the USD's status as a reserve currency. Nevertheless, we can't help but think this is just the sort of environment that precipitated the housing bubble and is likely to do so again (Figure 32).

Figure 31. Household savings, as a % of disposable income



Source: Haver Analytics

Figure 32. Bank loans vs FHFA Home price index, in \$tn (left)



Source: Citi Research, Federal Reserve

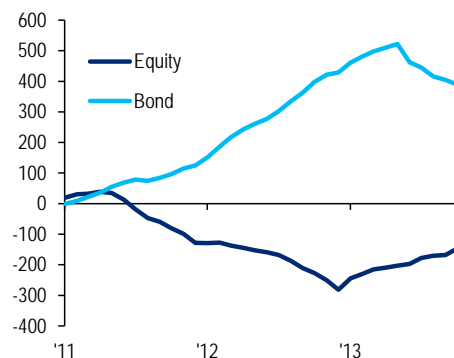
## IX. There will be outflows

Broadly speaking, stronger US growth should continue to favor increasing allocations to equity funds at the expense of bond funds in 2014—the continuance of a trend that started in 2013 (Figure 33). Yet the pace of outflows to corporates, specifically, and the level of disruption that could result remain key unknowns in the outlook for the year ahead.

Indeed, gauging the vulnerability of investment-grade mutual funds to outflows is far from straightforward. On the one hand, it's apparent that fixed income mutual fund outflows have been concentrated in municipal and government debt, while corporates and world bond funds have comparatively fared much better (Figure 34). But the story changes considerably if one digs a little deeper. As Figure 35 illustrates, corporates flows have been substantially bolstered by inflows into short

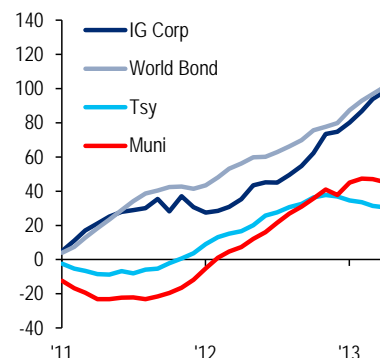
duration funds while outflows from intermediate and longer term funds have been considerable and relatively uninterrupted since mid-year.

Figure 33. Equity vs bond fund flows, cumulative flows since Jan '11 in \$bn



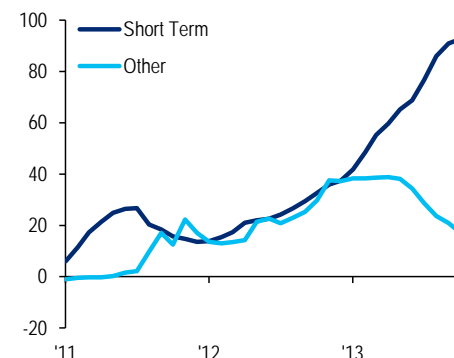
Source: Citi Research, EPFR

Figure 34. IG fund flows by asset class, cumulative flows since Jan '11 in \$bn



Source: Citi Research, EPFR

Figure 35. IG corporate fund flows, cumulative flows since Jan '11 in \$bn

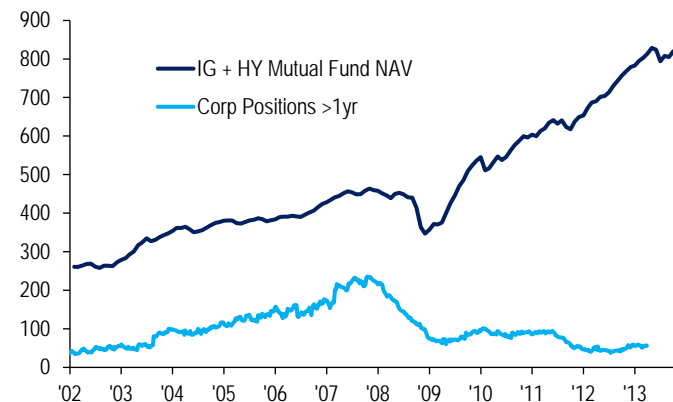


Source: Citi Research, EPFR

What's more, to our minds, the vulnerability to mutual fund outflows depends heavily on what percentage of the asset class is owned by said funds. In the municipal world, retail investors own roughly 60% of the market which explains much of the acute weakness there. But even when it comes to corporate bonds, where institutional participation is comparatively high, mutual funds own a not-insignificant 15-20% of the market. If mutual funds were forced to liquidate a substantial portion of their IG positions into an environment of constrained liquidity, the impact to valuations could be grave and far greater in magnitude than 2013's mid-year selloff (Figure 36). We'd note that LQD, an IG ETF, has lost 36% of its AUM since December 2012 peak (Figure 37).

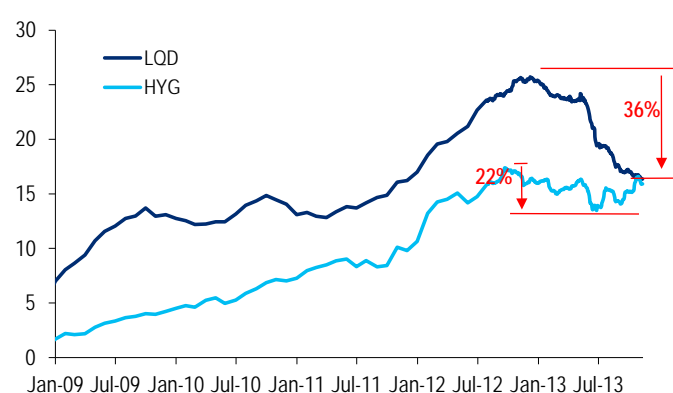
Yet retail/mutual fund flows are just one-fifth of the story; any forced selling by retail investors could just as well be absorbed by the institutional and foreign investors that own the other 80% of the market, as has been the case in 2013. In fact, a rise in government bond yields is likely to continue to drive a pick-up in demand from liability-driven investors such as pension funds and life insurance companies.

Figure 36. Mutual fund AUM vs dealer inventories, in \$bn



Source: Research, EPFR, Bloomberg

Figure 37. LQD and HYG AUM, in \$bn



Source: Citi Research, Bloomberg

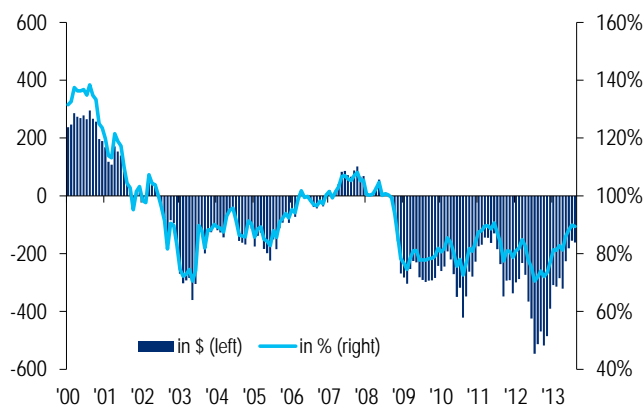
Corporate pension plans, in particular, will likely add to investment-grade exposure in 2014 as more funds move to fully funded status and seek to de-risk/immunize their portfolios. Indeed, we reckon that nearly 50% of plan-assets are already 90%



of the way to being fully funded (Figure 38). If equities continue to rise and single-A corporate yields continue to back up in 2014, pension flows could end up being a tremendous source of demand as the typical corporate fund is only 40% invested in fixed income and plan assets total roughly \$2 trillion. How much demand might materialize is up for debate, but if 50% of plans were to up their fixed income exposure by just 5%, it would result in \$100bn of demand for fixed income—undoubtedly biased toward long-dated single-A corporates.

As such, the risks associated with mutual fund outflows should not be overstated. The real danger is that retail money leaves *en masse* and swamps institutional demand, much as it has in the muni market. Yet over the course of 2014 we doubt flows will become so unbalanced as to create a real-and-lasting disruption to credit spreads, provided that rates rise only gradually—a view that’s substantially similar to the one we expressed in our 2013 outlook. That being said, the prospect of another sudden 100bp move higher in rates precipitating substantial-and-persistent outflows cannot be easily dismissed and remains one of the higher probability tail risks with which investors must contend in the year ahead.

Figure 38. Pension funding status surplus/deficit vs funding ratio, in \$bn (left) and % (right)



Source: Citi Research, Milliman

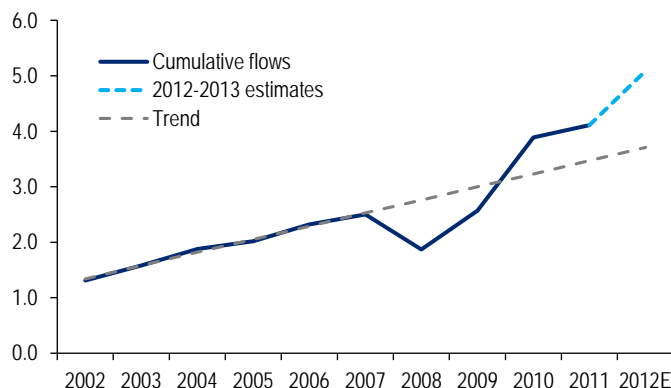
## X. There will be an “accident” in EM

Emerging markets look set to remain particularly vulnerable to the prospect of tighter US monetary policy, and as such will continue to be of broad concern for all fixed income investors throughout 2014, particularly in the markets that are the most liquidity constrained—like credit. Indeed, as [Citi’s EM economists point](#) out, EM countries have been the beneficiary of “excessive” inflows in recent years, which appear highly sensitive to the level of DM rates, and as a result, appear to be at risk of reversing (Figure 39).

Arguably, many of these risks are well understood at this point. India, Indonesia, Turkey, Brazil, and South Africa—the fragile five—have been well flagged for various reasons including the growth in their current account deficit, their exposure to commodity prices, and their dependence on speculative inflows as a source of financing (Figure 40). In addition, in each case, the prospect of meaningful structural reform to close growing deficits is unlikely as each will hold elections in 2014.

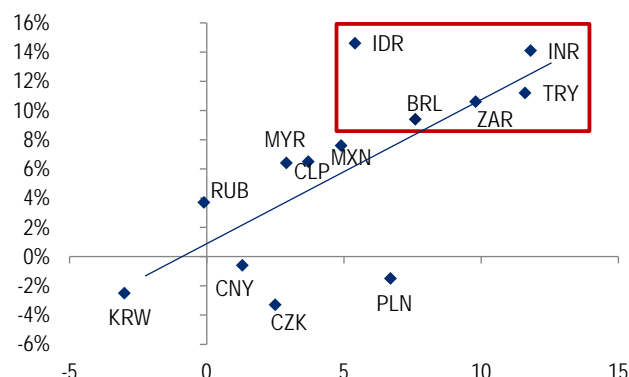


Figure 39. Cumulative flows from advanced to EM economies vs long-term trend, as a percent of advanced economies' GDP



Source: Citi Research, International Monetary Fund

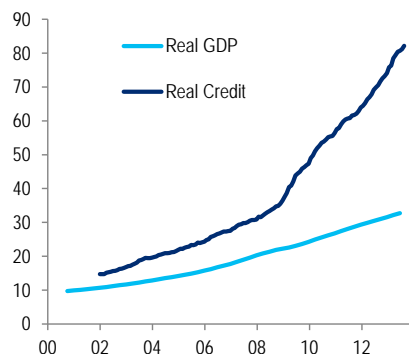
Figure 40. EM FX performance relative to risk factors, in % change from 1<sup>st</sup> May



Source: Citi Research, Citi Macro Strategy

Note: Risk index components: changes in GDP growth forecasts, changes in current account as a % of GDP, changes in fiscal balance as a % of GDP, forecast current account and fiscal balance, commodity ranking (% commodity exports less imports to GDP)

Figure 41. China total social financing vs GDP growth, in trn of '01 Yuan

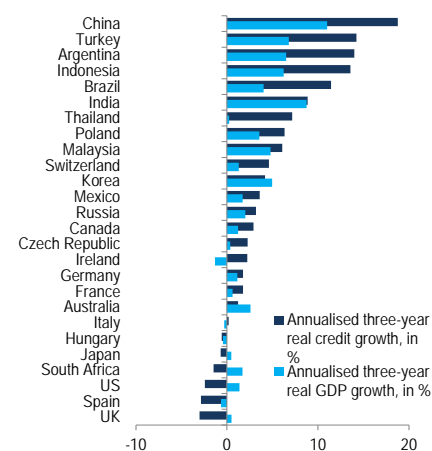


Source: Citi Research, CNBS, Haver Analytics

Similarly, we believe concerns about the sustainability of China's growth model are also warranted but are already on the radar of the majority of investors. That being said, a recent string of good industrial production numbers and the reforms introduced at the Third Plenary have likely combined to relieve anxiety—at least, if the level of China CDS is anything to go by. And yet, it's difficult to escape the notion that China's heavy dependence on credit to fuel its investment-based growth model is rapidly encountering ever diminishing returns, whereby incremental growth from each successive yuan lent to local governments and SOEs has declined (Figure 41).

Past experiences in Japan and Korea suggest that an investment-based growth model rarely transitions smoothly to a consumption-based one, a fact seemingly made obvious mid-year when Chinese authorities unsuccessfully attempted to scale back lending. Moreover, it's not just China that has relied on credit to fuel growth; the problem is one that is endemic to EM (Figure 42).

Figure 42. 3yr real private credit growth vs GDP growth, % per annum



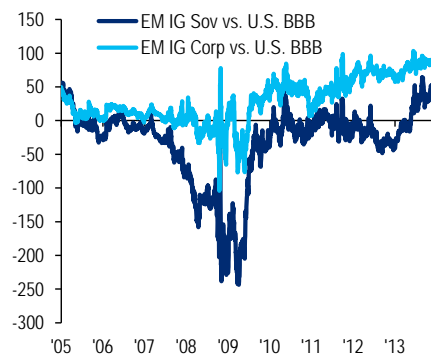
Source: Citi Research, BIS, central banks, OECD

Yet what precisely is the threat to investment-grade credit spreads? Clearly, if Chinese growth was to abruptly slow, spreads would likely react negatively to what would be a global growth shock. But as worried about China as we are, the trigger to create such an outcome is illusive. Likewise, as difficult as the road ahead is likely to be for the central banks of the fragile five, Citi's EM strategists and economists are not predicting default in any of the countries in 2014. Idiosyncratic events in Argentina, Venezuela, Turkey, Greece, and the Ukraine are possible, and to an extent expected, but the view is that potential accidents can be well contained.

Nevertheless, we see three transition mechanisms through which EM weakness could negatively impact US credit even if outright default is off the table for all but the countries where it is already priced in to current valuations.

First and foremost, an exodus of portfolio flows has the potential to expose the broader liquidity issues that plague fixed income markets. In particular, the bulk of investors that have bought USD-denominated EM corporates are not benchmarked to an index that includes them. Most investors either are benchmarked to an EM sovereign index or a US corporate index that excludes the majority of EM corporates because they are issued without registration. In light of the rapid growth in EM corporate bond markets, the lack of a captive buyer base is concerning in the

Figure 43. EM vs BBB spreads, in bp



Source: Citi Research

sense that a rush of sellers could drive the cost of liquidity sharply higher and management tools like corporate CDS are not widely used in EM.

Alternatively, wider EM valuations could create relative value headwinds for US investment-grade credit. Outflows to date have left EM corporate credit spreads comparatively cheap to triple-B spreads in the US, as Citi EM strategists note (Figure 43). At some point, we reckon that valuations could become attractive enough to attract flows back into EM at the expense of DM, either after another selloff or if concerns over the impact of tighter US monetary policy fade.

Lastly, if it is chaotic, further EM currency depreciation could introduce its own set of risks for US rates markets and by extension, credit. While a managed depreciation of an EM country's currency can help close current account deficits by bolstering exports, volatile exchange rate fluctuations could lead to interventions by central banks that hold significant reserves. To stabilize their currency, these countries would likely end up selling US Treasuries (or engaging in substitute strategies), which could exacerbate any rise in US yields and create a negative feedback loop for markets that price on a spread basis, like credit.

## ***XI. The perception of USD strength will benefit credit***

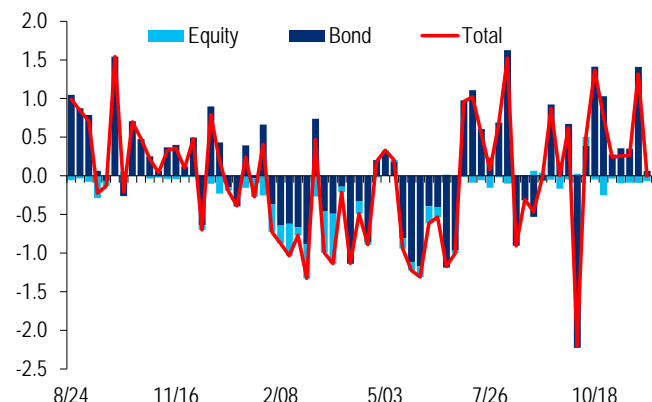
While EM currencies could weaken further in 2014, optimism that the dollar will strengthen as rates rise should provide a support for fixed income markets including investment-grade credit as foreign investors look to increase allocations to US fixed income. In particular, there tends to be a very close relationship between Japanese portfolio flows, the outright level of yields, and perceptions of a currency's strength. That *potentially* bodes well for US fixed income in 2014, where the relative attractiveness of investing in US Treasuries or single-A corporate bonds has increased markedly versus alternative destinations such as European fixed income.

Yet while Asian investors traditionally look to satisfy yield bogeys, importantly, they've also demonstrated a heightened sensitivity to volatility in the past. After all, after 'Abenomics' was announced, purchases of US fixed income by Japanese investors never amounted to what the Street expected. Indeed, there were outflows in the months that followed, which in retrospect looks like a prescient call in light of Chairman Bernanke's introduction of taper talk not too long afterward (Figure 44). As such, it's possible that future realized volatility or the perception of future volatility to come acts as a deterrent to inflows into US fixed income. For the moment though, the attractiveness of US yields after adjusting for volatility is high (Figure 45).

What's more, there's a fairly strong empirical case to be made that, contrary to intuition, the USD doesn't appreciate all that much in periods of rising rates. Indeed, as [Citi's macro strategists note](#), the USD didn't appreciate in 1994 when the Fed began raising rates. In fact, more often than not in recent history, the USD has depreciated as yields have risen. The two exceptions are 1983 and 1998, which bear little resemblance to the current economic backdrop.

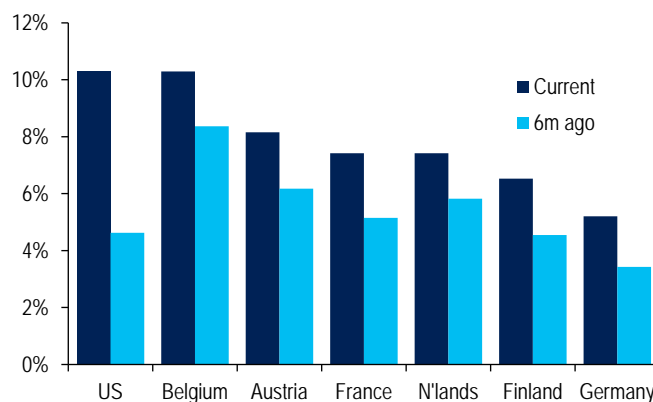
As such, while we expect the current constellation of yields and exchange rate sentiment to favor capital inflows in the short term, we're far from confident that these flows will persist for the entirety of 2014. To our minds, it's yet another reason to expect a gradual deterioration in the technical backdrop that ultimately results in wider spreads at year-end.

Figure 44. Weekly asset purchases by Japanese investors, in \$bn Yen



Source: Citi Research, Japan Ministry of Finance

Figure 45. Volatility adjusted sovereign bond yield, yield/volatility in %



Source: Citi Research, Bloomberg

\*Note: Vol adjusted yields are calculated as yields divided by 30-day historical volatility of the bond's yield.

## XII. More fiscal fights to come, but with limited impact

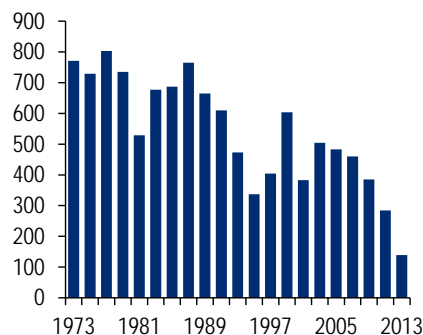
In our opinion, while it's highly unlikely that the political climate will improve much in 2014, it is also unlikely that politics interfere with markets to the degree that they did in 2013. That being said, we expect little will change to restore investor or business confidence in the political process. Measured by the amount of legislation enacted, the current Congress is the least productive in recent history (Figure 46). What's more, Congress remains a deeply polarized place where most incumbents are far more worried about a hardline challenger from within their party rather than an opponent from the other party. And that's unlikely to change anytime soon.

Midterm elections will likely be the focal point for the political year, but there really aren't all that many seats up for grabs. As [Citi's political analysts note](#), while the entire House is up for reelection, there's only about 50 truly competitive seats of which the Democrats already control half. As such, to take control of the House the Democrats would need to win 17 seats without losing any of their own "at-risk" seats—an extremely tall task. Likewise, the Republicans need 6 seats in the Senate to take control. But while a pickup of 3-4 seats looks entirely possible according to recent polling data, the remaining 2-3 seats needed will be extremely tough to win.

Yet while there's little chance of the political landscape changing by the end of 2014, there's also reason to think that gridlock in Washington will be less disruptive. The fact is that 2013 was a bruising year for all politicians. The President's approval rating and influence is as low as it has ever been as a result of the botched healthcare rollout, limited progress on gun control, the failed Summers nomination, the handling of Syria's chemical weapons use, and the NSA spying revelations (Figure 47). Likewise, Congressional approval ratings are in the single digits after the government shutdown and debt ceiling standoff (Figure 48). As a result, it seems few should be angling for a repeat of the brinksmanship that defined 2013.

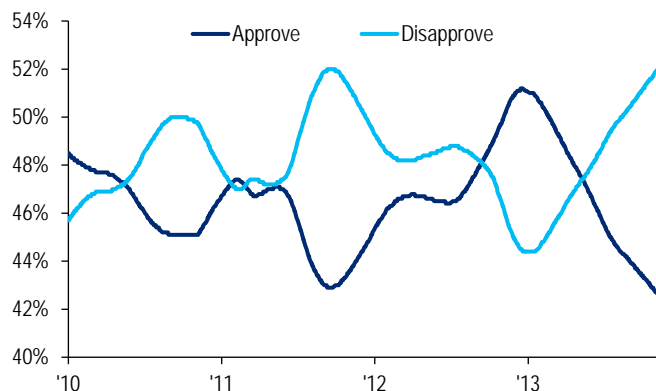
Nevertheless, 2014 is likely to bring its share of budget standoffs, even if we're skeptical that the necessary motivation or political capital is available to bring the country to the precipice of default. To our minds, it's far more likely that the parties agree to disagree in 2014 and that limited deals (of the sort that is currently being negotiated between Paul Ryan and Patty Murray) are the norm for the immediate future. Indeed, who wants to shut down the government during tax rebate season in an election year?

Figure 46. Legislation passed by Congress



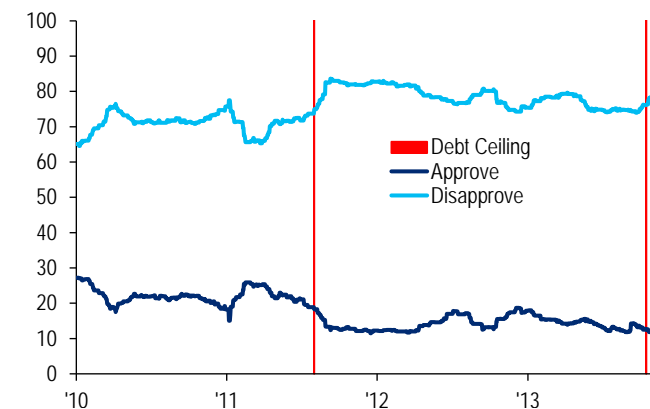
Source: Citi Research, National Archives

Figure 47. Presidential job approval rating, in %



Source: Citi Research, Political Analyst Team, Huffington Post/Pollster.com

Figure 48. Congressional job approval rating, 2mo rolling avg in %

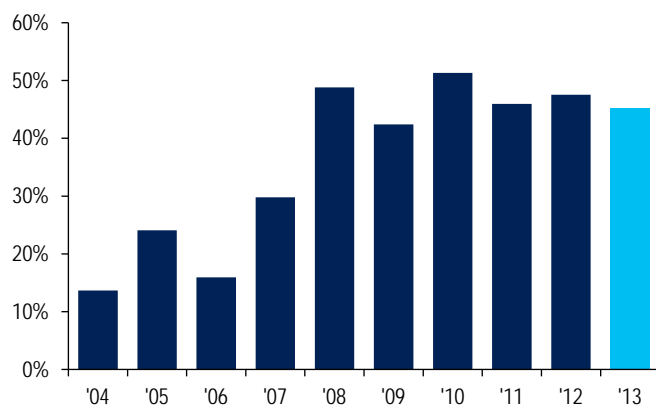


Source: Citi Research, Real clear politics

### XIII. Alpha opportunities will finally increase

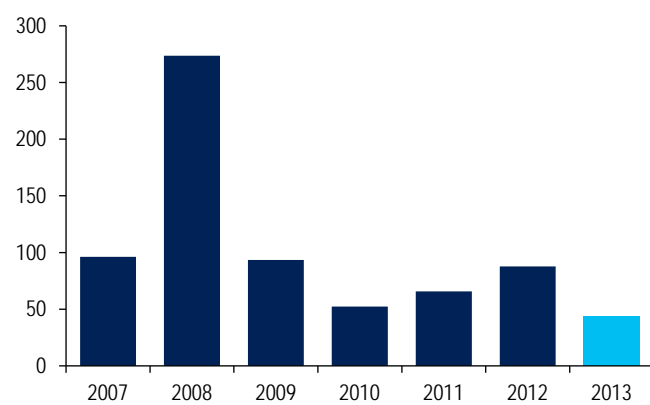
For all the volatility introduced by Congress, the Fed, and corporate releveraging events, 2013 was a terrible year for generating alpha. For much of the year, intra-credit correlations remained high, meaning that credits tended to move together more often than not (Figure 49). And the distribution of beta-adjusted spreads over the full year wasn't particularly wide either. Indeed, the difference between the spread performance of a credit in the 75<sup>th</sup> percentile versus the 25<sup>th</sup> percentile was less than 50bp, the lowest level in seven years (Figure 50). As such, even if one was able to identify an uncorrelated opportunity, it likely didn't move all that much. In other words, situations like Verizon were very much the exception.

Figure 49. Average intra-credit correlation for IG CDS, in %



Source: Citi Research

Figure 50. Beta-adj. performance dispersion, 75<sup>th</sup> less 25<sup>th</sup> %-ile in bp



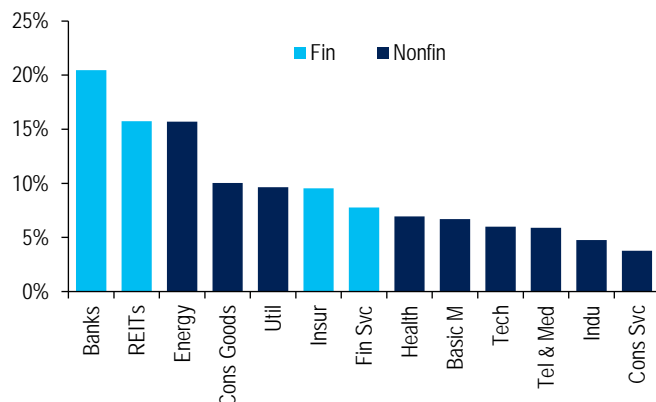
Source: Citi Research, Yieldbook

Note: the wider the distribution, the more varying the beta-adj. spread performance.

We are hopeful that the year ahead will be far more fruitful for those looking to actively trade the market. Intra-credit correlations have fallen dramatically in the fourth quarter and the removal of quantitative easing should allow for more dispersion in performance as M&A and share buybacks accelerate, especially at the 10-year part of the curve where investor sponsorship is weakest.

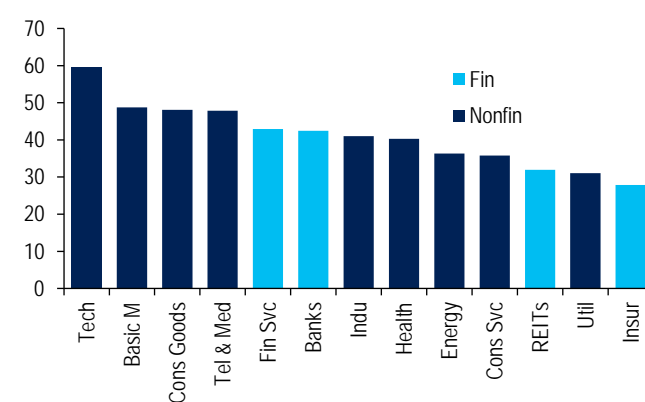
If past history is an accurate guide to the immediate future, investors would be best served by focusing on tech, telecom & media, and basic materials for alpha generation. These sectors have been some of the least correlated (Figure 51) and have experienced the widest distribution of performance (Figure 52).

Figure 51. Intra-sector bond spread correlations, for 10yr bonds in %



Source: Citi Research  
Note: average pairwise correlation of index-eligible bonds, 30-day window.

Figure 52. Beta-adj. performance dispersion, 75<sup>th</sup> less 25<sup>th</sup> %-ile in bp



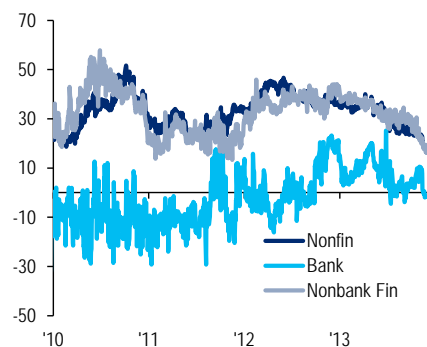
Source: Citi Research, Yieldbook  
Note: the wider the distribution, the more varying the beta-adj. spread performance.

#### XIV. Nonbank 10s30s will invert; bank curves will steepen

Credit curves are likely to continue to reshape throughout the course of 2014 as yields rise and the marginal buyer of investment-grade credit shifts from mutual funds to liability-driven investors. In fact, we see no catalysts to reverse the considerable flattening that has already occurred in nonfinancial 10s30s curves throughout 2013. Pension and insurance demand for the long end will likely grow. Dollar prices of high-coupon long bonds will continue to drop along with the dollar price discount the market applies to such bonds owing to their relatively poor liquidity and added jump risk. And mutual funds are likely to continue selling their holdings of 5-10 year bonds as they experience outflows from their intermediate and long-term funds.

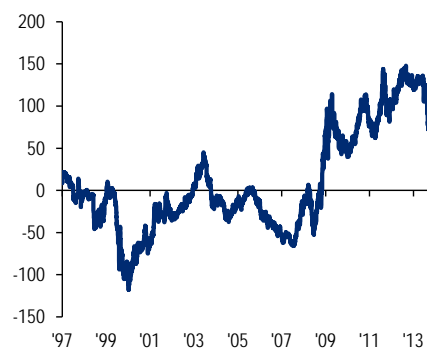
If anything, we expect nonfinancial 10s30s curves to continue to flatten in 2014 and invert. Indeed, our index of on-the-run 10s30s curves suggests that nonfinancial steepness is currently hovering below 20bp after starting the year near 40bp (Figure 53). As such, it would only take another year like 2013 for the remaining steepness in 10s30s curves to evaporate.

Figure 53. On-the-run 10s30s OAS, in bp



Source: Citi Research

Figure 54. Gilt 10s30s curve, in bp



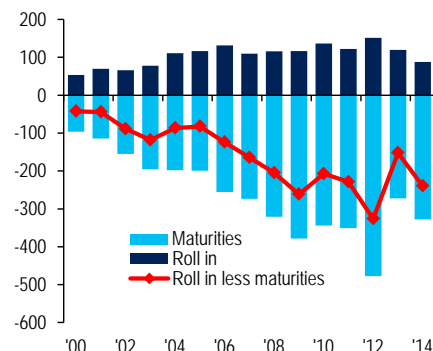
Source: Citi Research, Bloomberg

What's more, there's no good reason why credit curves can't invert. Indeed, the experience of Gilts from 1997-2005 provides some context as to how powerful the ALM/LDI technical could become (Figure 54). During that time period, the 10s30s yield curve for UK government bonds was inverted by anywhere from 0 to 100bp, primarily for two reasons: (1) the Pension Act of 1997 instituted the Minimum Funding Requirement (MFR) that required pension funds to discount their liabilities using long-term (15+) Gilts, and (2) the supply of 30y Gilts declined significantly as the government deficit went into surplus. Corporate spreads did not invert in the UK, but they were not included in the discount rate for pension funds (as they are in the US for corporate pension plans).

Likewise, there's a similar dynamic at play in the US corporate space as corporates aren't particularly keen on issuing 30y debt with yields climbing, but demand for the long-end is increasing from investors looking to match liabilities. Only in cases, like Verizon, where supply outstrips demand, is there likely to be enough long-end issuance to go around. Otherwise, we expect companies will try and make use of a steep yield curve and issue as much as possible inside of 10-years.

No doubt, if credit curves were to invert in the US, we'd expect pension and insurance funds to take a much harder look at overlay strategies to explicitly

Figure 55. Financial debt rolling down to 5yr vs debt maturing, in \$bn



Source: Citi Research, Dealogic

separate credit risk from duration risk. In our opinion, surprisingly few liability-driven managers do this currently, but with time this could certainly change and help to normalize curves.

Indeed, there should be limits to how flat-to-inverted credit curves can become as we think the banks will demonstrate in 2014. Bank curves are already flat-to-inverted, but the supply-demand dynamics are notably different there than in nonbanks, and as such, 10s30s could actually steepen. For a start, there is so much front-end financial paper maturing in 2014, that we suspect that there will not be enough short duration issuance to keep the portfolios of short-term investors flat (Figure 55). As such, we expect to see short-term investors incrementally reaching out the curve. In addition, we reckon one of the reasons bank curves are so flat is that investors are willing to “overpay” for what limited beta remains in the market. But at some point, investors are likely to right-size their overweights, and that should drive some amount of steepening.

## Summary

For many reasons, 2014 is likely to be one characterized by a number of transitions for the credit markets, the shift to a post-taper world being the foremost one. Yet as we’ve detailed, there are other related cross currents that investors will need to navigate in the year ahead. Nevertheless, it strikes us that the credit markets are entering a period of slack water—the moment the tidal current ceases and reverses. It’s difficult to determine exactly how long this period will last, but as we’ve advocated, we doubt that we reach December 2014 without some indication that the tide is on its way out.

For credit that should mean marginally wider spreads with the weakness concentrated in the second half of the year. But then again, there’s considerable risk that just as a rising tide lifts all boats, the opposite is true and a broader fixed income rout should be in the forecast. That’s not our base case, but investors should be guarding against such an outcome, in our opinion.

Indeed, how investors should position and what strategies are worth pursuing is the subject of part 2 of our investment-grade outlook series. And if you’ve made it this far, we hope you won’t be disappointed with the second installment.



## Appendix A-1

### Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

### IMPORTANT DISCLOSURES

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures). Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

### NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Inc

Jason Shoup; Sonam T Pokwal; Lina Lavitsky; Erin Lyons; Swati Verma

### OTHER DISCLOSURES

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in Australia through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is



made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A. Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank

Singapore Ltd ("CSL") to selected Citigroup/Citigroup Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigroup/Citigroup Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC Branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures).

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. Citi Research generally disseminates its research to the Firm's global institutional and retail clients via both proprietary (e.g., Citi Velocity and Citi Personal Wealth Management) and non-proprietary electronic distribution platforms. Certain research may be disseminated only via Citi's proprietary distribution platforms; however such research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author's previously published research. Certain research is made available only to institutional investors to satisfy regulatory requirements. Individual Citi Research analysts may also opt to circulate published research to one or more clients by email; such email distribution is discretionary and is done only after the research has been disseminated.

The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints. Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

© 2013 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced

information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

---