

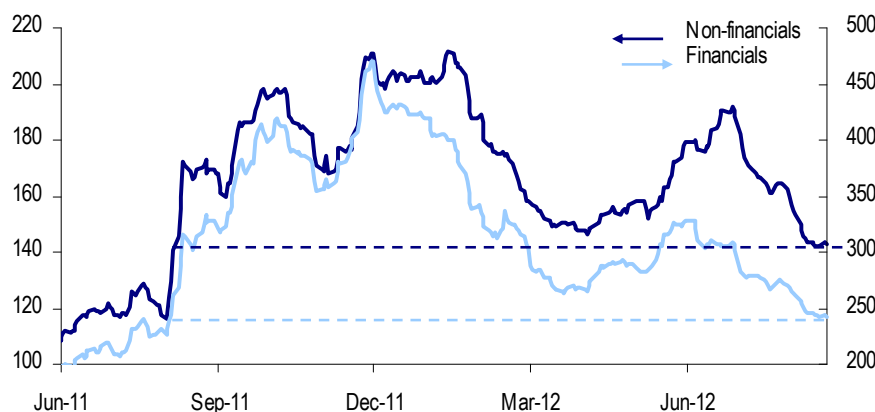
European Credit Outlook

Hanging on his every word

- **Thank you, Mario!** – Draghi's verbal interventions ensured credit markets were able to get through the summer turmoil that had been widely anticipated. But now a lot more is priced in. We'd be surprised if 'headline coordination' between Frankfurt, Berlin, Brussels, Madrid, Rome and Athens can occur in September without disappointing the consensus that has now built up.
- **Near-term technicals look stretched** – While the long-term technical picture remains very supportive and valuations are not unattractive, we think opportunistic longs built up in August make the market more vulnerable here. Spreads are at 1yr tights, supply is set to increase, many funds have little incentive to take risk and the ECB has already attempted subtle expectations management.
- **A pullback, not a major correction** – While we expect spreads to come under a bit of pressure in September, it is unlikely to be the kind of market rout seen so many times over the last couple of years. The prospect of policy intervention will likely keep a firm lid on the desire to be underweight or outright short in most places. Turns in sentiment come too quickly these days.
- **Focus on the opportunities left by the rally** – The seesawing in spreads makes for a difficult directional trading environment for most funds. But we believe current level make decent entry points for a number of RV trades – we recommend adding exposure in the US over Europe, shifting from the softer core to the core, adding in IG over HY, moving from unsecured to secured and further out the maturity curve.

Hans Lorenzen
+44-20-7986-3568
hans.lorenzen@citi.com

Figure 1. iBoxx Financial & Non-financial spreads at 1yr tights, bp



Source: Citi Research

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.

Hanging on his every word

For all the kerfuffle, the summer turned out a lot less volatile and a lot better in terms of asset price performance than most, we included, had anticipated. The market was very defensively positioned – our survey in June showed the smallest longs in almost three years and cash levels have kept building up over the summer. A tentative stabilization in some of the key economic data¹ has also helped.

But Draghi was the real game changer in our opinion. His reassurances that the ECB would be prepared to "do whatever it takes to preserve the euro" at a speech in London on July 26 coincides with a decisive shift in the performance of many risk assets. While the subsequent ECB council meeting didn't produce any tangible steps, to the market's initial disappointment, Draghi cleverly managed to keep the market in suspense through August by indicating that the ECB would be "designing the appropriate modalities" over the coming weeks.

Now the time to spell out what these imply is nigh. Quite literally, markets are hanging on the implementation of those words.

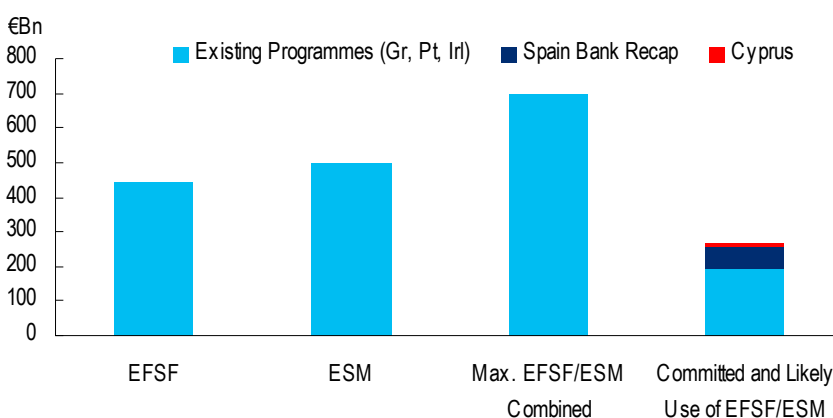
We believe the market may be somewhat overoptimistic about the flow of headlines in September. While the long-term technical picture remains very supportive, we think opportunistic longs in August make the credit market susceptible to a bit of a pullback near term.

Many questions left unanswered

So what is it that Draghi has to spell out to satisfy the market? We'd argue there are at least four issues that need to be addressed²:

Size & duration: How big would the 'Conditional Government Bond Purchase Programme' (CGBPP – another acronym to get used to) need to be and how long would it need to be in place?

Figure 2. EFSF & ESM resources and commitments



Source: Citi Research

¹ Our US economic surprises index has recovered from the July low of -65 to about -10 currently – indeed if it were not for the influence of historic figures, the current reading would be higher still. Even the broader G10 index appears to have turned around tentatively in recent weeks – the data is still surprising the consensus on the downside, but not by as much as a month ago.

² Our economists have made similar arguments in more detail in ['Euro Weekly: Eventful September Ahead'](#), Jürgen Michels, 23 August.

Our [economists calculate](#) that the maximum amount of funding available in the current EFSF and ESM facilities is about €433bn, when existing commitments to Greece, Portugal and Ireland, the Spanish bank recap and the likely funding for Cyprus are subtracted. In reality, the available amount will likely be somewhat smaller when a second bailout has been organized for Portugal and / or Ireland. That firepower has to be weighed against a gross funding requirement of about €373bn over the next year and €703bn over the next two years for Italy and Spain combined (Figure 2).

So to ensure there is enough funding for two years, the ECB would have to commit to buying at least €330bn in the secondary market if it worked fully in tandem with the EFSF/ESM. For comparison, the outstanding on the existing SMP facility is currently €211bn. However, if the ECB wants to ensure funding for two years without EFSF/ESM support (to safeguard its independence or to retain firepower in the rescue facilities), that commitment would obviously grow considerably.³

Evidently, the actual amount the ECB would have to buy depends on the pace of foreign net selling and the willingness of domestic investors to roll maturing debts. From that perspective, the bigger the commitment the less the ECB would likely end up having to buy.

It is certainly debatable whether two years will be enough for Italy and Spain to allay investors' fears permanently. But for credit markets an explicit commitment from the ECB would in our view remove the issue from the immediate agenda, allowing credit to trade much more idiosyncratically again (the 'bargaining' and the 'depression' phases in our 'Five stages of grief' framework').

Specificity: How explicit will the ECB be about the details of CGBPP? Draghi will probably provide additional guidance on the conditions for ECB support. For instance, beyond Eurogroup approval for an EFSF/ESM programme, the ECB will probably require countries to meet the targets of the associated MoUs. He may also specify that the target maturities will be up to 1 to 2 years.

However, what the market really wants is a confirmation of size and monthly purchase targets or specific yield targets – as *Der Spiegel* recently reported was being discussed.

If the Council can agree on a number large enough to engender a positive reception in markets, then Draghi may announce the size – as the ECB did with the covered bond purchase programme.

However, last week's press reports that key details may not be disclosed at the next council meeting, citing anonymous 'ECB officials', seem like an exercise in managing market expectations. Even if the decisions are made behind closed doors we see several reasons why the ECB will not be too explicit publicly about the CGBPP, especially early in September.

First, Spain and Italy haven't yet applied for support from the EFSF/ESM and probably won't have done so in time for the ECB Council meeting. Making too many specific commitments before they do so would reduce the ECB's bargaining power in subsequent negotiations.

³ Note also that these figures just cover the sovereigns, not their banks. We are becoming more concerned about the "base case" – in which the banks continue to be able to fund themselves via the ECB – given the pace of deposit outflows, notably in Spain. For that case to continue to hold, we are starting to think a relaxation of collateral requirements may become necessary.

Second, the issue of ECB intervention is obviously a delicate matter in Germany, and the ECB will probably want to avoid providing too much ammunition to antagonists just ahead of the ruling on the ESM and the fiscal compact by the German Constitutional Court on 12 September⁴. While our economists ultimately expect a favourable ruling, it is quite likely that the Court will seek to confer even greater influence on the Bundestag on future matters relating to sovereign bailouts. That may further reduce the political wiggle room in Germany going forward. Similarly, the ECB probably doesn't want to influence Dutch elections on the same day, which are likely to see a shift away from the centrist pro-euro, pro-austerity parties⁵, either.

Thirdly, the ECB may not want to be very explicit generically. Granted, the CGBPP is different from the SMP which ECB regarded it as a temporary programme, intended to 'bridge' the implementation of or changes to the EFSF. And this time, Draghi has indicated that interventions would be done in a transparent manner.

However, even beyond the Constitutional Court, very specific commitments might create internal problems for the ECB, not least with the Bundesbank. Moreover, there is an argument that it would reduce the incentive to reform in the recipient countries – by not pre-committing and retaining considerable flexibility in its interventions, the ECB would retain a 'stick' with which to add pressure.

Also in a strategic sense there is arguably good reason to remain comparatively vague. Over the last couple of years, policy announcements have often proven more effective when the market was left guessing, than when actually implemented. One reason is obviously that the bazooka has tended to be smaller than what the market had come to expect. If Draghi finds it difficult to find support for a programme of the size outlined above, then we believe he would likely prefer to sustain the illusion of a big bazooka for as long as possible.

Seniority: A lot has been made of the issue of ECB seniority in the media. At the last ECB press conference Draghi indicated that this would be addressed. However, we remain skeptical. Bonds bought by the ECB through the SMP were never senior to other bond holders *de jure*. It was only with the consent of the Greek government that the ECB avoided participating in PSI at the least minute by exchanging its bonds into new bonds that were not included in the exercise.

The ECB could publicly commit not to exchange any bonds purchased as part of the CGBPP, but it is debatable how credible such a statement would be and it would likely draw criticism in core countries. In fact, the decision to focus on the front end of the curve invariably implies that the ECB will gain seniority in terms of the repayment schedule compared to most other bondholders. We believe the market will continue to believe that it is *de facto* subordinated to ECB purchases.

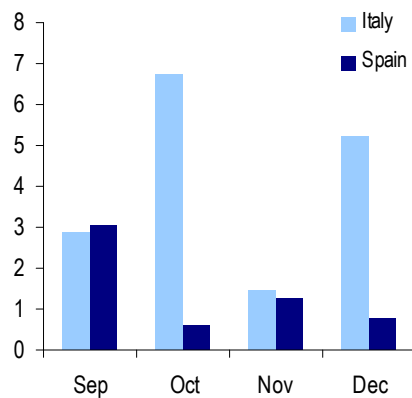
If you set your expectations low...

We have gone through all these aspects in some detail to make the case that the credit market may well end up somewhat disappointed with the outcome of the Council meeting. The ECB may extend its collateral framework further and our economists believe rates will be cut by another 25bp, but the predominant concern in the market remains the funding situation for Spain and Italy.

⁴ If the decision is not deferred beyond that.

⁵ See Tina Fordham '[Global Political Insights: Glorious 12th?](#)', 20 August.

Figure 3. Remaining Spanish & Italian corporate bond redemptions in 2012, €bn



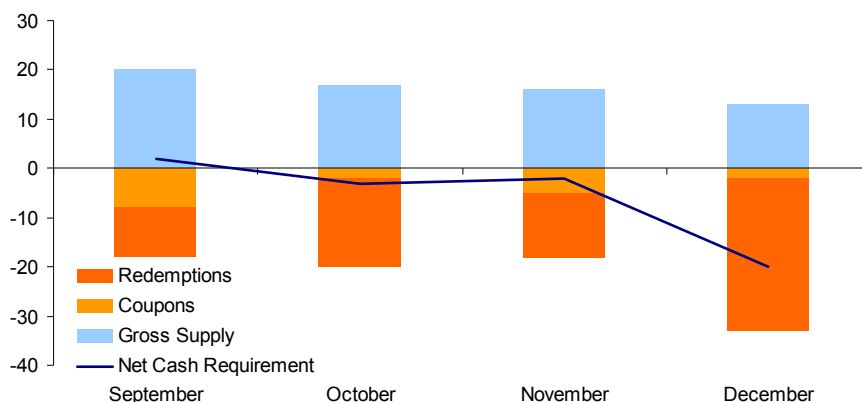
Source: Citi Research

Considering that most credit investors have been very reluctant to face markets from a short/underweight position, this creates downside risks if the council meeting turns out to be a bit of a damp squib on addressing that issue. Indeed, the lack of detail might prove to be the catalyst for the market to return more forcefully for a resolution.

For the remainder of 2012, redemptions for Italian and Spanish corporates look comparatively light (**Error! Reference source not found.**). We expect opportunistic issuance, if market conditions are favourable, but we don't believe that these redemptions create forced issuance.

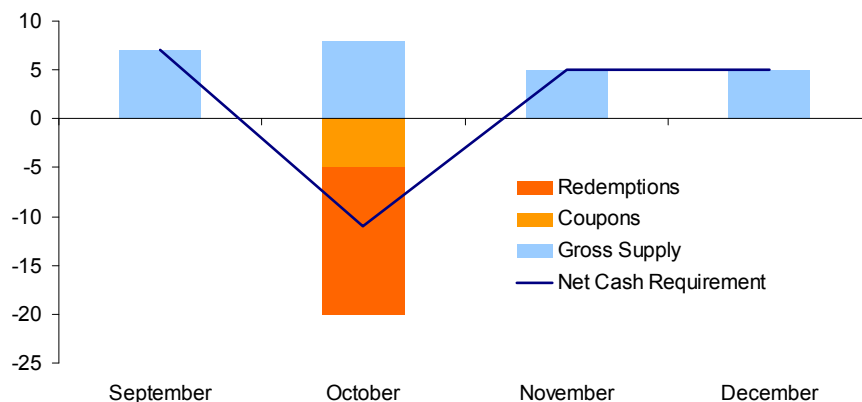
The gross sovereign funding schedule looks heavier – our rates strategists are expecting €66bn of Italian debt to be auctioned and €25bn of Spanish debt.

Figure 4. Italian Sovereign Funding Requirement Until Year-end, €bn



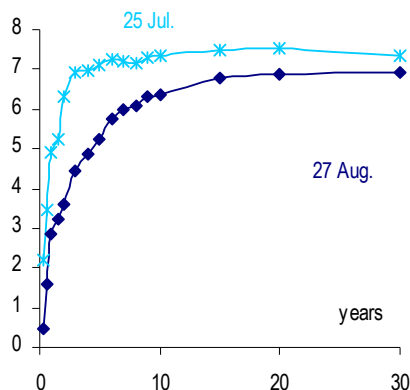
Source: Citi Research

Figure 5. Spanish Sovereign Funding Requirement Until Year-end, €bn



Source: Citi Research

Figure 6. Spanish sovereign yield curve, July & August 2012, %



Source: Citi Research

Obviously, the issuance should be supported by significant redemptions and coupon payments, which imply that the net funding requirements are much smaller – if not negative. However, the question remains how willing investors, foreign in particular, will be to roll these redemptions. Citi Research believes that both countries will have to request support. Is that going to be a smooth process?

Until recently, the Spanish government in particular was rather cold to the idea of applying for support. But we sense that the tone has changed markedly over the summer – not least in response to Draghi's plan. Recent comments that Spain is waiting to see what Draghi's modalities entail, and that the government will do 'what is best for Spain', certainly sound much more open ended than previous rhetoric. However, with front end yields now as much as 250bp lower than in late July, the immediate pressure on Spain has subsided considerably (Figure 6).

A period with a sovereign market in 'no man's land' would invariably weigh on sentiment in the credit market in our view. If the perception that 'nothing happens without market pressure' builds again, a combination of reductions in long positions and leveraged accounts resetting shorts would likely see credit spreads widen further.

A heavy agenda

Of course, it's not all about Draghi, Monti and Rajoy. There are a many other events on the agenda that can influence the outlook for the next few months. September is going to be a busy month.

Figure 7. Visible calendar for September 2012

31-Aug	Jackson Hole Symposium (Bernanke, Draghi)
~01-Sep	Troika returns to Athens
03-Sep	Eurogroup meeting on Italy & Spain (not confirmed)
06-Sep	ECB Governing Council meeting (likely details on the CGBPP)
06-Sep	BoE MPC meeting
11-Sep	Deadline for EU Commission detailed proposal on banking union
12-Sep	German Constitutional Court ruling on ESM & fiscal compact
	Dutch General election
13-Sep	FOMC rate decision
	G20 Finance ministers and central bank governors meeting
14-Sep	Eurogroup meeting on banking union
	Greek government to outline further budget cuts
20-Sep	Rajoy & Monti meet
20-Sep	ECB Governing & General Council meeting (no press conference)
22-Sep	Holland/Merkel meeting

During the month

- Troika assessment on Greece
- Troika assessment on Portugal
- EC expert report (Liikanen Group) on banking sector reform
- Independent assessment of Spanish banks (2nd half of September)

Source: Citi Research

On 31 August, leading central bankers will speak at the Jackson Hole symposium, where although Draghi speaks, the focus is likely to be on Bernanke. The latest minutes from the latest FOMC meeting suggests the committee was closer to acting than the consensus had appreciated – 'many' members judged additional stimulus would likely be warranted unless there is a 'substantial and sustainable strengthening' in the data.

The data has improved subsequently, so Bernanke's comments will likely signal whether the Fed's has become less inclined to intervene further at its 13 September meeting. Our US economists believe the Fed will want to more data before committing to further easing. If correct, that would add another reason why credit market might be in for a bit of a disappointment early on in September.

As if this isn't enough to keep the market pre-occupied, the initial plans for a European banking union are due in the middle of the month. It is almost inevitable in our opinion that this will prompt a vocal debate and lobbying of national interests.

Last, but by no means least, the next troika assessments of Portugal and Greece are taking place in the first half of the month. Our economists expect a second bailout will be necessary later in the year, but the report on Portugal is likely to remain comparatively favourable. However, the assessment of Greece is more finely posed.

Citi's central scenario is that the assessment and concurring negotiations will eventually lead to a compromise that allows Greece to remain in monetary union until the next assessment in December. From recent comments out of Greece and out of Germany the outline of a possible deal is just about visible: Greece gets a modest extension on the delivery of conditionality, but no extra funding. However, even in the best of worlds it is unlikely to give the market confidence that Greece will left in a position where it is able to cope with the required adjustment over time. As such, it is unlikely to provide much support for credit spreads.

Conversely, should the Troika conclude that the programme is off-track, leading to a breakdown in negotiations, there could still be an early departure from EMU. That is not priced into current expectations in our view.

Arguably, clarity on the Spanish/Italian question early on in September would make this outcome more likely, as it would reduce some of the political concerns about associated contagion. Regardless, we'd still anticipate a negative market reaction given that the issue of potential deposit flight remains unresolved.

Just how defensive is the credit market?

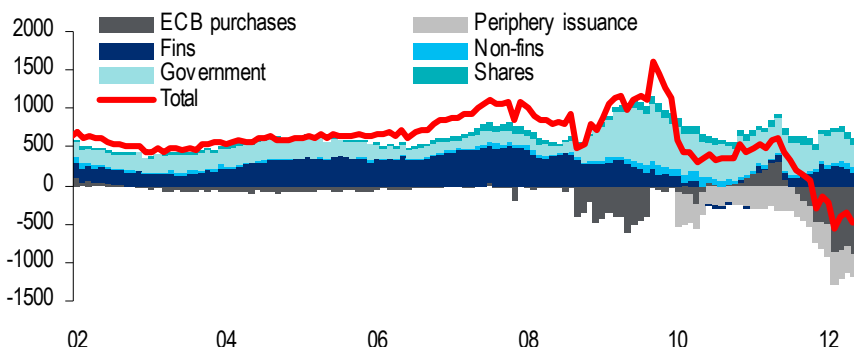
Long-term picture remains supportive

If you buy into the argument that flow of headlines next month may have a slightly more negative bias than the market is currently anticipating, then the natural question is whether that is also reflected in positioning and valuations.

On the brighter side, to our minds there is little doubt that the long-term technical picture remains very supportive – conceivably even more so than we had appreciated previously.

Figure 8 shows the 12-month rolling net issuance (before revaluation effects) of securities, split between shares, corporate securities and government bonds in various shades of blue. At first glance, not a lot has actually happened – net issuance of securities (the sum of the blue areas) is close to its long-term average.

Figure 8. Net issuance of securities by issuer, Euro Zone markets, €bn, 12-month rolling sum



Source: Citi Research, Haver Analytics, ECB

However, for an increasing number of investors in the core, periphery assets are no longer really in their investable universe. In addition, the non-conventional policies of the ECB have drained securities from the market, most obviously through the SMP, but also through the expansion of open market operations.

Subtracting these out, the implication is that for many investors 2012 has been highly abnormal. Rather than the normal €500bn or so increase per annum, the investable universe has arguably shrunk by about €500bn over the last year⁶. There has been no corresponding shrinkage in the net savings that are being ploughed into financial markets. With similar forces at work in the US, we think this shrinkage goes a long way to explain market performance this year despite the pervasive bearishness.

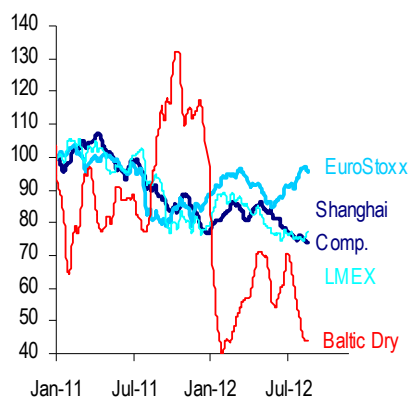
From a valuation perspective, the top-down picture is also comparatively supportive long-term – albeit much less so than a couple of months ago. Our new [Credit Valuation Report](#) shows that credit spreads are still between fair value and moderately wide to most fundamental relationships

Short-term the market looks rich

Yet we think the short-term technicals are less supportive. Positions have been creeping longer, and recent price action suggests to us that many opportunistic longs have been built up over the summer. Perhaps more seriously, spreads are the tightest they have been in more than a year in the cash market (Figure 1).

⁶ To the extent that Spanish and Italian securities have been pledged as collateral with the ECB there is clearly some double-counting in the number we subtract from net issuance. However, we don't believe this changes the broader conclusion.

Figure 9. EuroStoxx 600 vs Shanghai Comp., LME index & Baltic Dry rate, Jan-11 = 100



Source: Citi Research, Bloomberg

Credit is not unique in that respect. Equity indices in Europe and the US are in a similar position, and implied equity vol is also not far from three-year lows. However, the term structure is still steep, implying that the equity market is pricing in increasing volatility during the autumn.

Moreover, from a global perspective the discrepancy in performance with asset performance in what were supposedly the growth markets is increasingly striking. There is surely a message in the fact that the stock market of the economy dubbed 'the growth engine of the world', China, is at its lowest levels since early 2009 (Figure 9). Base metals are down almost 30% from their peak last year and 15% since February. Freight rates (Baltic Dirty Tanker) have fallen by more than a third this year.

Admittedly, we'd be the first to argue that it is not the 'good or bad' that matters, but the 'better or worse than expected'. And Europe has not fared worse, economically or politically, than was anticipated at the beginning of the year, while China clearly has. So it is not surprising, perhaps, that Europe has done comparatively better while the adjustment to expectations was unfolding.

But at some stage you have to take a step back and consider whether the process can continue. At a time where the domestic economy is in recession, can European asset prices continue to ignore the signal such key indicators are sending about the global outlook and, in turn, corporate earnings?

Seesawing set to continue

We don't take issue with the argument that the outlook has improved considerably now that the ECB appears to have accepted that it needs to play a bigger role in the European sovereign crisis – we highlighted as much in the June outlook. At a minimum, the downside risks have diminished. That invariably made a defensive market liable to squeeze, as it has done over the summer.

We also concur that the chance of further credit spread tightening longer term has increased substantially.

Regardless, however, the market looks decidedly overbought to us in the near term. Cash levels may be high, but with many funds already above their full-year targets, their incentive to take risk in the remainder of 2012 is low. Faced with the slight policy disappointment we expect, we suspect opportunistic longs get scaled back, given a combination of continuing lack of clarity about Spanish and/or Italian funding, much less attractive valuations, and a likely pickup in supply ahead of the Q3 earnings season.

What we are arguing for is not a big correction, but a pullback over the next few weeks. Risk/reward in € cash, in particular, looks poor with spreads at one-year lows, having outperformed US peers and spreads in the CDS market.

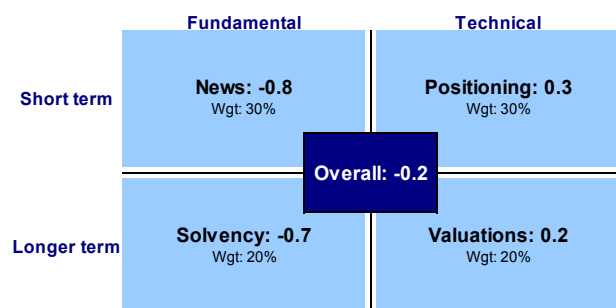
Evidently, the picture can change very rapidly if and when more visibility on the policy front emerges. If potential funding issues for Italy and Spain are been addressed and the prospect of a Greek exit is pushed beyond the immediate horizon, then the tightening in credit spreads is likely to resume. The speed of transition from one state to the next will almost invariably make the outlook very difficult to trade for funds with large portfolios.

If you can't be nimble, then look at some of the opportunities the rally has opened up instead:

- **Switch exposure from Europe to the US** – The outperformance of European credit over the last couple of months make it more attractive to move exposure to the US, especially in financials. For all the long-term risks associated with fiscal tightening in the US, for the time being the economic outlook is considerably better and the sovereign risk far, far lower.

- **Reset shorts in softer-core corporates** – corporates in the softer core (France, Austria and Belgium) have outperformed over the summer. We reckon this reflects the shortage of 'investable assets' – if you have cash, you need yield and you don't want periphery risk, then it's tempting to look at the cheaper assets that still remain in your universe. Having underperformed in Q2, 'softer core' corporates fitted the bill in July and August. Yet we reckon the spread to German peers is now again too low again.
- **Overweight IG to HY** – While high yield has benefited from the low-interest rate environment, a deteriorating economic outlook - coupled with the negative effects of potential benchmark changes medium-term - to our minds favours IG, especially in Europe.
- **Long covered/ABS and hybrid debt selectively versus underweight senior** – The effective subordination of unsecured bank debt makes investment in bank bonds more binary. We'd rather take more risk in assets with security.
- **Reduce systemic risk by moving out the curve** – there is a strong consensus long at the front end, which has left many curves very steep. We still think this crowded trade is susceptible to an increase in systemic risk – especially in banks.

Figure 10. Citi Investment Matrix, Overview



Source: Citi Research. Scale: -2: Very credit negative, 0: Neutral, 2: Very positive. News and Solvency scores are relative to consensus.

Figure 11. Citi Investment Views

Bp, As of 18/07/12	Current	1mth	3-6mth	Long-term
iBoxx € Corp	185	200	165	140
iTraxx Main	145	170	130	115
Crossover	595	660	550	500
3s5s IG CDS curve	39	35	30	20
5s10s IG CDS curve	28	25	20	10
Basis*	9	10	20	-10
IG vs HY**		IG outperf.	IG outperf.	IG outperf.
€ vs \$ IG cash credit		\$ outperf.	\$ outperf.	€ outperf.
€ vs £ IG cash credit		€ outperf.	£ outperf.	€ outperf.

Source: Citi Research. * As reported in Citi's daily Basis Report. ** Risk adjusted

Figure 12. Citi Investment Matrix, Detailed Scores

Category	Score	Weight	Comment / view
News	-0.8	30%	
Visible agenda	-1.1	14%	Prospect of policy support encouraging, but consensus. Scope for near-term disappointment
Greek renegotiation	-2	5%	Agreement on extension likely in September, but our economists still put Grexit probability @90% >> consensus
Spanish / Italian funding	-1	4%	Large gross funding need in Q4. Market pressure likely required for either country to seek support
Dutch election / German Constitutional Court	-1	1%	Unlikely to post immediate obstacles, but may increase perception of long-term bailout paralysis
US fiscal deficit / debt ceiling	0	1%	Likely to be last minute again and subject to market pressure, but not immediately
Bottom-up review of Spanish banks	-0.5	2%	May well uncover further shortfalls. However, bailins likely limited to a few small banks for now
2nd Portuguese bailout	0	1%	Probably won't include PSI given fragile market conditions
Potential agenda	-0.4	9%	
ECB intervention (CGBPP/LTRO)	-0.25	5%	Consensus now; vague outline of measures likely at next meeting, but action only after a request for support
Federal reserve QE	-0.25	2%	Our economists are not expecting QE in Sep., but consensus also seems to have scaled back that expectation
Middle East tension	-0.75	2%	Doesn't seem priced in beyond the oil market. Recent rhetoric suggests there are downside risks
Micro event risk	0	0%	Very small
Macro event risk	-0.5	4%	Large and growing - in Europe, but also elsewhere
Economic surprises	-0.5	3%	Converging on 0 in the US & off lows in EZ. Citi forecasts suggest eco. surprises will remain neg.
Positioning	0.3	30%	
Credit survey positions	0.5	12%	Positions still defensive, but less so than earlier in the summer
Credit survey inflows/outflows	1	8%	Inflows holding up well; funds still cash rich
Market trading patterns	-0.5	6%	Recent demand mostly real money, but Street not trading short either.
Primary market issuance	-0.5	3%	Issuance likely to pick up in September. First deals likely fine, but expect some indigestion later
Liquidity	-0.5	1%	Poor. Volumes likely to improve in September but the exit remains far too small for comfort
Solvency factors	-0.7	20%	
Systemic / idiosyncratic risk environment	-1	7%	Market trading more idiosyncratically, though systemic risks abound.
Economic cycle	-0.75	7%	Europe is in recession. Global cycle deteriorating faster than consensus
Leverage trends	0	2%	Leverage is low, but bottom-up earnings estimates are too optimistic for H2
Policy environment	-0.5	4%	Progress has been made, but compromises have disappointed before in the delivery
Valuations	0.2	20%	
Relative to fundamental relationships	0.75	7%	Our valuations report suggests credit is moderately wide to long-term fundamentals
Relative to history	-1	7%	Wide to long-term range but cash is at 1yr tight
Relative to equities	0.75	2%	Credit is moderately wide to equity relationships
Relative to rates / sovereigns	1	4%	Low rates & yields likely pushing more money into credit over time

Source: Citi Research. Scale: -2: Very credit negative, 0: Neutral, 2: Very positive. News and Solvency scores are relative to consensus.

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. 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 Ltd

Hans Lorenzen

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.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Research research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to Citi Research research reports.

Important disclosure regarding the relationship between the companies that are the subject of this Citi Research research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

This Citi Research research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of Citi Research. This could create a conflict of interest.

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?companyCd=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 Comisión Nacional Bancaria y de Valores. Reforma 398, Col. Juárez, 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 Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold 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 ("DFS") 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.

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. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution.

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.

© 2012 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
