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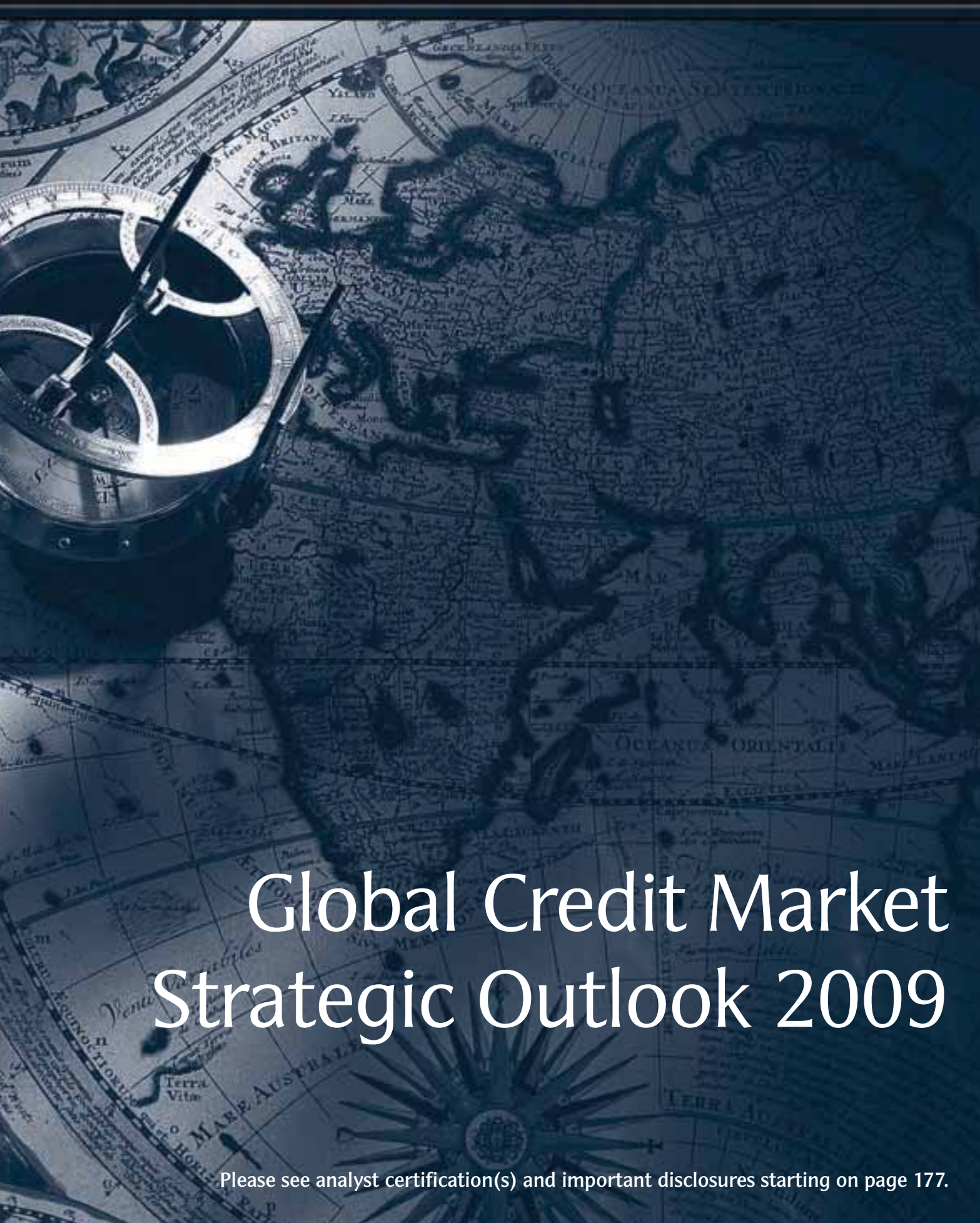

Global Credit Market Strategic Outlook 2009

Please see analyst certification(s) and important disclosures starting on page 177.

Foreword

Navigating through the current storm in credit markets is particularly difficult given the massive dislocations in asset pricing, liquidity and funding. The playing field is being permanently altered, with many players both on the sell-side and the buy-side falling by the wayside. We are currently paying for the excesses of the past 10 years, where wealth accumulation was built on a single premise: leverage. No one is immune from the current deleveraging spiral, which we believe in its totality will be felt over a number of years. That said as with any dislocated market, as the playing field changes and asset pricing readjusts, opportunities arise.

In this 2009 *Global Credit Market Strategic Outlook* we aim to explore these opportunities and to chart the waters of risk and reward that confront investors in the current unprecedented environment.

Furthermore, this 2009 outlook is the first combined global outlook of the merged Lehman Brothers US strategy team and the Barclays Capital strategy team. The strength of the new combined Barclays Capital team should enable us to deliver the best in class strategic views on credit markets across the globe.

Robert McAdie
Global Head of Credit Strategy
December 2008

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Date of publication, 10 December 2008.

Global credit market outlook

Robert McAdie

Unprecedented times

The value destruction driven by the largest deleveraging since the 1930s is now impinging on every part of our economy

We are living through unprecedented times. The value destruction driven by the largest deleveraging since the 1930s is now impinging on every part of our economy. The lack of clarity on the size and potential for further losses within the financial system has led to a significant deterioration in confidence and a substantial withdrawal of funding and liquidity across the board. Post the Lehman Brothers collapse, with collateral being seized by the bankruptcy courts, collateral markets have effectively seized up. Counterparty risk is at the fore, which, in turn, continues to make the cost of funding more expensive and further contracts liquidity. Government intervention through forced liquidity provisioning, guarantees, bailouts, monetary and quantitative easing, combined with various fiscal stimulus programmes, is keeping the financial system on life support.

Growing interventions are shifting pressure from the financials to the sovereigns

Government interventions are having some positive effects, especially on the liquidity front. However, funding and liquidity levels are a long way from anything even resembling normality. Moreover, if it starts to become increasingly obvious that governments will have to intervene to an even larger extent, this will start to shift pressure from the financials to the sovereigns, especially if financial balance sheets continue to erode as corporate and consumer defaults increase. The private sector is fast becoming the public sector. To fund this, government deficits will need to increase markedly. The key question on many investors' minds is will these sovereigns be able to finance themselves.

Rising sovereign risk

Failure of the financial system, coupled with economic deterioration, is raising the risk of sovereign default

Already, investors are becoming concerned about sovereign risk, as budget deficits balloon and countries find it difficult to place their sovereign paper. Yields in secondary government bond curves are already breaking all "normal historical" levels. This is especially the case for some of those countries where it is becoming obvious that the pressure of their banking systems, coupled with the ongoing economic deterioration, is putting significant strain on their finances. Furthermore, sovereign CDS levels are also breaking all historical ranges, highlighting that the risk of sovereign default has increased markedly. This is the case not only for some of the riskier emerging market countries but also for some key European and western economies.

Rapidly changing investment and investor landscape

As the contraction in credit deepens, leveraged strategies are being destroyed. The investment landscape and the players in it are changing radically

As the contraction in credit deepens, any strategy that previously involved leverage is being destroyed and, as a result, the investment landscape and the players in it are changing radically. Given the levels of leverage that had built up over the years in investment products, the investors, the corporates and the consumers, it will take an extended period of time (years not months, we believe) for the full deleveraging to unravel. The effects of the deleveraging have been felt mainly by banks and, to some degree, by hedge funds. 2009 will see the continuation of this trend, though we also expect deleveraging to extend to the insurers, corporates and consumers. Default rates are set to rise sharply and equity valuations to decline substantially further. We believe unlevered strategies will be the only strategies that will succeed.

If lending remains at current tight levels, corporate and consumer bankruptcies will climb to unprecedented levels

As the deleveraging bites deeper, banks' balance sheets will remain constrained. As a result, they will struggle to ease their lending standards, and if constriction on lending remains at current historical tight levels, the rate of corporate and consumer bankruptcies will climb to unprecedented levels. Moreover, in spite of quantitative easing, which is likely to aid the US mortgage market and overall cost of borrowing in the interim, the inability of banks to extend balance sheets to consumers (ie, via mortgages and consumer loans) and corporates will continue to drive an asset price deflationary spiral and a severe slowdown.

Shoring up banks' balance sheets is key

The core problem remains an ongoing erosion of asset quality on banks' balance sheets, which impedes their ability to lend

In spite of all the key government initiatives, the core problem remains an ongoing erosion of asset quality on banks' balance sheets, which impedes their ability to lend.

Bank capital will continue to be eroded as the quality of the assets on balance sheets keeps deteriorating. Thus, the increased regulatory capital requirements as a result of ever-growing risk-weighted assets will remain a weight on banks' balance sheets. As a consequence, banks will not be able to extend their balance sheets to new lending, let alone refinance existing borrowers. As we have seen, bank lending standards have tightened to levels not seen since the 1970s. This, in turn, drives up the risk of home foreclosures, and consumer and corporate defaults, leading to a protracted economic slowdown. It is imperative that a system is put in place that effectively frees up bank balance sheets to allow them lend.

Ring-fencing the so called "toxic assets" on banks' balance sheets is key to freeing up balance sheet, so that banks can lend

Governments, regulators and banks need to come up with some practical methods of ring-fencing the so called "toxic assets" on banks' balance sheets. A ring-fencing would effectively immunise the remaining balance sheet from ongoing MTM losses and regulatory capital erosion. If it is done in a transparent fashion, where banks are able to write-down the losses on their impaired assets over a protracted period, confidence would return to the market and banks could earn their way out of the losses over time. Moreover, funding pressure will recede and the need for greater government intervention would swiftly drop, reducing pressure on the entire system.

Key market and investment dynamics for 2009

Given this backdrop, market conditions are set to remain difficult in 2009. The investment landscape is changing, distinctly altering investment processes and decisions. There are a number of key themes/dynamics that, in our view, will drive a recalibration in investment thinking and positioning in 2009. Some of these key dynamics are:

- We expect a substantial reduction in the size of the hedge fund industry, in the order of 70-80%. We believe only those funds with models that operate on near-zero leverage (eg, distressed funds) will be those left standing. Bank prop trading will effectively cease as capital will be channelled more towards bank dealer desks.
- Unlevered strategies will dominate the style of investing in credit markets for 2009 and into 2010. Traditional real money, ie, pension funds, insurance funds and long-only asset managers, will continue to play a big role in spite of taking large hits in the current environment. We expect their main focus to be on new issue. That said, once some form of liquidity returns to the corporate bond markets, we expect real money to dominate flows in cash credit product.
- Secondary market liquidity will remain low until repo funding costs start to abate and dealer desk Var appetite improves. Most activity in cash product will be driven by new issuance. However, new issues will be somewhat impeded by the reduced number of

dealers (due to collapses and mergers) and the fact that many dealers' balance sheets remain constrained. We expect most non-government primary issuance to be in the higher-quality names, where banks are comfortable to lend balance sheets to support deals.

- The deleveraging spiral will continue into 2009, especially for banks and insurers. Ironically, as equity valuations continue to decline, the leverage in many financial institutions will rise. This will put further pressure on asset disposals and funding.
- We expect to see little to no demand for new CDO and CLO product. Most of the focus for 2009 in structured product will focused on restructurings and unwinds.
- Reliance of state guarantees and central bank liquidity provisioning will remain the key source of funding for the banking sector. This will create new relative value dynamics between government bonds, government guaranteed bank paper and other implicit government guaranteed securities.
- Given the amount of bank guaranteed paper that is expected to be issued and ongoing pressure on governments to extend further bailouts/guarantees, we expect spreads of bank guaranteed paper to widen relative to government paper.
- Sovereign risk is likely to become a key focus, as governments have to increase their guarantees to the financial sector and bail out more financial institutions. This, along with fiscal packages to stimulate growth and a weakening global economic backdrop, will balloon budget deficits and raise the cost of borrowing for sovereigns. We see heightened risk of sovereign downgrades, and we see a rising threat of bankruptcy for some smaller economies in 2009.
- With sovereign risk rising, the appetite for government paper and government-backed paper is likely to wane. This, in turn, will drive up risk premiums for financials and some corporates within the respective country. Moreover, substantial currency and commodity fluctuations will exert further pressure on commodity/resource-intensive corporates and corporates with large import-export programmes.
- In 2009, we expect CDS clearing houses to be set up in the US and UK, thereby introducing a greater level of standardisation with respect to collateral posting, pricing, name selection, etc. These houses would serve as a central counterparty for CDS dealers. For the first time, dealers will be required to post initial margin based on the risk of their positions (including short credit positions) facing the Clearing Corp. This amount will be in addition to the variance margin they were already posting. Having a central counterparty will meaningfully reduce the operational and counterparty risks in the system and should help improve the liquidity in the CDS markets. We expect the on-the-run indices to be the key initial focus, leading to the clearing of single-name CDS some time in the first half of 2009. This is discussed in detail in our US section.

How do we position in credit for 2009?

Cash credit markets are pricing in risk premiums at 1930 levels; in IG and HY, bonds and loans. While a key reason for this drop in value is the expected deterioration in credit quality, a large proportion of this repricing is due to exorbitant funding levels, forced unwinds and the inability of dealer desks to provide secondary liquidity due to lower risk limits.

- Our high yield analysts in the US expect high yield defaults to rise to 10% and in Europe to rise to 6.5% in 2009. That said depending on the depth of the downturn these actual default rates could well rise above these estimates. Assuming a zero recovery rate at yields of 20%, US high yield is pricing in a 20% implied annualised default rate. Using even our most pessimistic forecast – extrapolating the relationship between bank lending standards and corporate default rates – it would imply that US HY default rates should hit 20% by the end of 2009. Either way, it points to the fact that risk premiums are paying you for the downside in 2009.
- Similarly, in IG, with bond spread levels around the 500bp mark in the US and at 450bp in Europe, levels are paying you for the downgrade and potential default risk.
- We believe that the intrinsic fundamental value of loans is attractive relative to other asset classes at current levels. However, we expect loans will find it difficult to rally materially as fundamentals deteriorate, especially as realised recovery rates for some of the leveraged loans come in significantly lower. Moreover, as more structured vehicles unwind, the technical pressure on loan pricing will continue as further loan portfolios need to find a new home. That said, current loan pricing provides an excellent opportunity for equity investors to step up the capital structure.
- Recoveries in HY and leveraged finance are set to be very low, as opposed to previous cycles, and in the case of some of the highly leverage names, we expect bond recoveries to be near zero.
- Unlike bonds and loans, we believe that CDS risk premiums are not fully pricing in the impact of rising sovereign default risk of financials and large corporates: this is clearly more of an issue for the iTraxx Europe and iTraxx Asia than for the CDX indices.
- Although CDO tranche deltas to Main and CDX IG have dropped by half due to the ongoing spread widening, we believe that continued CDO downgrades will lead to more synthetic CDO unwinds, resulting in ongoing demand for protection by correlation books and, hence, will keep pressure on CDS spreads and CDS curves flat. That said, the pressure on spreads will be 50% lower than six months ago due to the fact that the ongoing buying of protection by correlation books over this period has effectively led to a partial CDO unwind.
- We believe that the cash-CDS basis will remain negative and very dislocated, with bonds trading significantly wider than cash as long as repo funding costs remain high along with high haircuts. That said, in HY where the basis is the most negative we believe that buying the basis on some names where default risk is not that front loaded is very attractive. As actual defaults increase, the basis will narrow. In the case of heightened default risk for any corporate or financial, the basis will invert, with CDS trading wider than cash, thus resulting in a profit for long basis positions. This could be very lucrative on a significant jump-to-default basis for distressed basis packages at current levels.

It is important to note that although spreads look attractive at these levels, we could well see IG and HY corporate bond spreads staying at these levels if financial institutions continue to struggle to delever, thus keeping funding costs similarly elevated. Clearly, once the pressure of funding abates, cash credit could present some attractive upside for those credits where fundamentals remain strong.

We remain more pessimistic on European IG than US IG given the heightened sovereign risk in Europe, which will have distinct bearing on senior financial spreads and in turn corporate spreads. Furthermore, tighter valuations, tight money markets and fragmented policy actions will weigh on European credit. Moreover, in cash bonds, the large presence of subordinated financial paper in European IG indices will continue to weigh on cash index product versus the US.

We continue to favour an overall defensive investment positioning in credit for 2009. Although cash bonds and loans look attractive at these levels, investors need to pick their spots as downgrade and default risk are set to rise rapidly in 2009. Funding is key for liquidity to return to the secondary market. In the meantime, primary issuance will set the tone.

Summary of views on each regional market and product

US investment grade

Investment grade cash credit has reached spread levels not seen since the Great Depression. We expect the unprecedented levels of market intervention on the part of the regulators to begin to take hold. However, we also think the real economic slowdown that has become apparent over the past several months will continue to weigh on fundamentals. We thus expect the dynamic of improving liquidity, offset by real economic weakness, to be one of the prevalent themes in the near to medium term. Despite these broader concerns, based on our fundamental leveraged buy-and-hold analysis, we believe investment grade credit on a macro level in cash and derivatives is now at attractive valuations overall, levels at which buy-and-hold investors can expect to achieve attractive risk-adjusted leveraged returns. For the full-year 2009, we expect excess returns of at least 4-5% for cash investment grade corporate credit.

US high yield

With yields at all-time highs, HY investors can expect to generate solid returns over the next few years. We believe, however, that the recovery will take a long time and two things will need to occur before the market can sustain a true rally: 1) higher-quality issuers need to regain access to the primary market; and 2) the default cycle needs to begin to play out, so investors are able to determine the cycle's survivors. We expect 2009 to be the beginning of the healing process for high yield credit and therefore forecast an 8-10% total return.

US leveraged finance

The loan market experienced unprecedented volatility in 2008 as a result of technical pressure from market-wide deleveraging. With the average loan now trading close to historical recovery rates of $70 and robust Sharpe ratios turning negative, we believe it is time for traditional buyers to reassess the market. In our view, the intrinsic fundamental value of loans is attractive relative to other asset classes at current levels. The prospect of double-digit unleveraged returns is finally attracting the interest of non-traditional yield-

seeking investors. However, as more structured vehicles unwind, the amount of loans needing a new home continues to increase. Put simply, without leverage, it is impossible for a market to grow 140%, as the loan market has done over the past three years. In 2009, we expect loans will find it difficult to rally materially as fundamentals deteriorate and market participants continue to deleverage.

European investment grade credit

We retain an Underweight stance on European IG credit and would not recommend long positions unless spreads reach 250bp or we see more visibility of a turnaround. We recommend using any rallies to reset shorts at levels below 150bp on the iTraxx Main index. Despite significant cheapening of valuations and policymaker initiatives, real credit deterioration is set to now take hold in 2009 – earnings will fall amid a deteriorating macro economy and a weakened banking sector. We believe that European high grade credit deterioration could be worse than historical precedents. In our view, the key risks not priced into European IG spreads are rising sovereign spreads and potential CDO unwinds. We would recommend a long when Main hits 250bp, but would place shorts at 150bp or below.

European high yield

2009 will be an interesting year for high-yield (HY) and leveraged finance. The year is likely to see a combination of deteriorating fundamentals and cheap valuations. We expect the substantial slowing in Eurozone economic growth to hurt earnings. Given the high leverage levels that have built up in HY corporates, this slowdown in earnings will hurt credit metrics. Many companies will be pressurised and defaults will tick up as more covenants could be breached – the reaction of banks to waiver requests will be key. We believe that defaults will rise from the current 1% to hit 6.5-12% on HY bonds.

We firmly believe that HY valuations have overshot on the downside. HY now trades at a c.50 price, 26% yield and a coupon yield of more than c.14%. This clearly compensates for the expected default rates or even twice that even after assuming near-zero recovery and no capital gain. As such, we strongly believe that total returns in high yield for this year will be positive, although not sizeable (7-10%). Hence, we move to a Neutral stance for 2009 from the Underweight stance we have held for the past 18 months. We expect the crossover to peak at 1,100-1,200bp and then trade tighter post the March roll.

European leveraged finance

Loans, as noted, will remain technical and given the CLO concentration in 2006 and 2007 issues (where defaults will be concentrated), we expect further technical fallout in 2009. We also expect loan defaults to be higher and more rapid than HY defaults as the universe is more levered and lower-rated at the issuer level. Expect loan recoveries to be lower than usual, but deals with a mezzanine tranche or HY bond underneath are likely to see good recoveries. Given that the coupon yield is only 9.5% and the potential CLO technical, we recommend a neutral stance on loans but with a substantial allocation to loans with subordination underneath. We retain an Underweight recommendation on loans with no subordination below.

Asian investment grade and high yield

We have held a bearish stance on Asian credit throughout 2008. Today, valuations have corrected significantly. In cash credit space, for example, spreads look optically to be pricing in a depression. At the same time, there have been a number of policymaker initiatives – both in Asia and globally – that have attempted to alleviate the economic downturn.

However, despite cheaper valuations and policy initiatives, real credit deterioration is set to take hold in 2009, with rising negative rating migrations and defaults, which would be accompanied by large swings in credit spreads. We retain our fair value forecasts of 400bp on the Asian IG/Australian indices (barring any sovereign credit deterioration) and 1200-1400bp on the Asian HY index. We would wait for a significant overshoot above these levels or a clearer outlook on the turnaround before turning bullish on the Asian CDS space. In the meantime, we would use any substantial spread tightening to reset shorts. Sovereign credit volatility could in fact lead to higher levels than our targets on the Asian IG CDS index.

Structured credit

What began with problems in sub-prime CDOs soon spilled over to the entire structured credit space and resulted in the worst year in history for structured credit products. Because of the notable disarray in the market and the state of many market participants, we feel it is now legitimate to ask whether the asset class will survive. We believe parts of it will and that a natural supply and demand will eventually surface. However, the process will be slow and partial at best. Products and investment strategies are likely to be limited to their simplest forms in 2009.

Convertibles

The convertible bond market is currently dislocated and illiquid, following the cheapening and deleveraging during 2008. We believe the market now offers opportunities to credit investors, including distressed high yielding convertibles, basis trades and switches out of comparable straight bonds. Although the market is off its late-October lows, we expect weak technicals to persist in the short term. However, the outlook for the medium term is less clear; we attribute a low but significant probability to some sharply positive returns for convertible investors in the early to middle part of 2009.

Regional positioning for 2009

US investment grade

We project excess returns will be 400-500bp, effectively equal to current spreads reduced by default losses (with a 1-2% default rate similar to the worst years on record). There is substantial additional upside from any spread tightening.

- From a sector perspective, we recommend a largely defensive posture, with overweights in healthcare, media cable, consumer products, distributors, and food & beverage, as well as high quality banks and communications. We recommend underweights in integrated E&P, refining, and tobacco.
- Along the curve we recommend a barbelled position. We believe the long end now represents the most attractive relative value in cash, as the high duration of long end paper should generate strong performance if spreads tighten and low prices limit the downside in a widening scenario. In addition, with significantly inverted cash curves, we believe very short-dated paper in credits, where investors have positive credit views, is compelling.
- In CDS, with much of the investment grade corporate market trading with similarly flat curves, we believe the opportunities vary by spread level. Generically, we believe investors should look to trade tight spread names from the short side through notional neutral steepeners and trade wide spread names from the long side through notional neutral flatteners.

US high yield

- We project an 8-10% total return in 2009. As we have detailed in the past, we believe high yield's fundamental bottom is in the upper $50s, or right about where the market is currently priced.
- We expect the pace of issuance to pick up from that of the past few months but it should only total $50-55bn, roughly equalling 2008.
- We project a 9-10% default rate in 2009. The default cycle has been slow in developing due to the flexibility issuers created for themselves when times were good. Therefore, we expect the cycle's default peak to occur in 2010.
- High yield should present the best opportunities for basis trades. While we believe the basis will generally become somewhat less negative, the biggest moves should be for names closer to default as investors benefit from the significant positive jump-to-default on distressed basis packages at current levels

US leveraged finance

- We expect unleveraged loan returns to be 6-8% in 2009, assuming the asset class bottoms in the mid- to high 60s. This takes into account the boost from more covenant amendment fees and loan coupon step-ups, offset by expectations for lower Libor rates, lower repayments rates, higher default rates and depressed recoveries.
- We believe that loan issuance will resemble the tepid supply of 2008. With little need to term out maturities, we expect about $75bn in supply from new issuance, approximately $50bn in supply from CLO/TRS unwinds, and small supply from loan mutual fund redemptions.
- We expect the slack in loan demand caused by the evaporation of the natural CLO buyer to be replaced by non-traditional yield-seeking investors, analogous to the incremental private equity bid in early 2008. Since many of these investors are only interested in mid-teens unleveraged returns, this bid may fade if the market rallies.
- The introduction of the non-cancellable bullet LCDS contract in early 2009 should improve derivative market liquidity. The use of LCDS should also help support liquidity in the traditionally thinly traded secondary loan market. Until the new contract is rolled out and used for a new LCDX series, liquidity in single name LCDS will remain poor.

European investment grade credit

- We would recommend a long when Main hits 250bp, but would place shorts at 150bp or below.
- We think curves could flatten further in cyclicals but recommend short forwards at the index level.
- We maintain our macro index trades: short Hi-Vol versus Main, short Hi-Vol or Main versus Financials.
- We also believe trades to go short rich cyclical names versus Sovereign CDS look attractive.
- Basis trades are also attractive, but only where the basis exceeds -300bp (given funding costs, -200bp is not an attractive level).
- At the sector level, we like telecoms, utilities, and senior financials. We remain bearish on media, consumers, autos and industrials.

European high yield and leveraged finance

- We shift to neutral in high yield for 2009 as we expect positive returns (7-10%) largely driven by coupon yield. Our reason for not going overweight is that fundamentals will continue to deteriorate and cap the upside this year.
- We recommend a Neutral position on leveraged loans but concentrated in senior loans with subordination below and an Underweight position on loans with none underneath.
- Distressed basis packages costing less than par offer substantial capital gain if the name defaults or stays until maturity. MTM risk on the package is to be noted.
- We prefer to be in the more stable top-line industries (cable, telecoms) or those industries/companies where severe price/margin declines are less likely to occur (packaging, specialty chemicals and gaming).
- Buy names/bonds offering c.15% coupon yields with good fundamentals, eg, Virgin Media, Cognis, KDG, Unity Media, NTC, Eircom, UPC.
- Selling front-end CDS protection on names not expected to default in 2009, eg, Virgin Media, Cognis, Unity Media, NTC.

Asian investment grade and high yield

- Australia versus Asian IG is a cheap way to take a bearish position on sovereign credit risk.
- Asian HY versus European Crossover is likely to perform.
- In sectoral terms, industrials would be a high conviction short for 2009, while we consider the energy sector has widened excessively.
- We also like non-cyclical sectors such as gas utilities and telecoms, as well as senior financials.
- We remain bearish on sectors exposed to a weakening global economy such as industrials, refining & petrochemicals and shipping.

Structured credit

- In rated synthetic CDOs, valuations may be close to bottoming, but no relief is in sight yet for fundamentals and ratings. Investors may decide to hold on, sell or restructure based on the specifics of the trade.
- For long-term investors searching for superior risk-adjusted returns, we prefer the 10-15% in CDX IG or the 9-12% in iTraxx Main (or equivalent if customised).
- We like the option-like payoff of equity steepeners in 5s10s at current levels.
- In CLOs, we find AAs have a free option on OC trigger valuation.
- For CLO investors with a higher risk appetite, we like triggerless equity by selling protection on a portfolio of LCDS names and by protection on the 8-100% tranche.
- In HY tranches, equity steepeners 3s7s are attractive at current levels.

Projecting the credit cycle in 2009-10

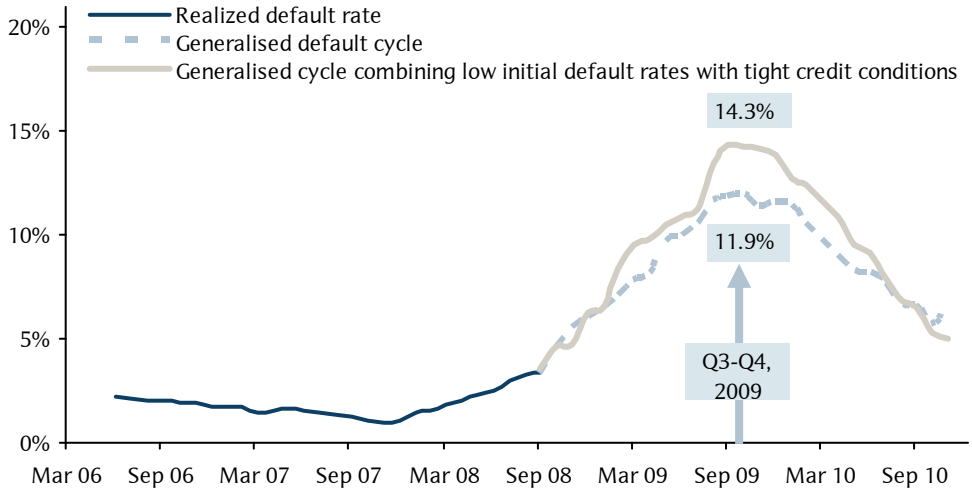
Ulf Erlandsson, Graham Rennison

The credit and growth cycle downturns exhibit surprising regularity across time. We observe relatively consistent behaviour of macro aggregates such as defaults, credit conditions or growth rates in the year before and after the cyclical trough. Once we have established that we are in a downturn cycle, these regularities can be used to forecast dynamics up to two years out. We use the general dynamics of downturns together with particulars of the current downturn to make projections of credit cycle dynamics over 2009-2010.

Key results

- We forecast a peak of 12mth US speculative grade default rates of 14.3% in Q3-Q4 09 with continued elevated levels into 2010 (Figure 1). This projection is based on a combination of a generalised default cycle with tight credit conditions and current default rate dynamics.
- This downturn looks clearly more severe compared to 1990-91 or 2001-02. The closest resemblance is with the recession in 1974-75, when credit conditions were at the extremely tight levels seen today. This suggests defaults will rise above the 10-12% peak levels seen in either 1991 or 2002.
- We find that current growth projections are significantly more negative compared to growth rates in a typical downturn cycle. We create generalised downturn cycle dynamics in terms growth, defaults and credit conditions by matching up growth trajectories through the cycle (see Figure 2).
- We show a strong lead-lag dynamic between credit conditions and defaults. This suggests the effect of the thawing of the current credit freeze may not be fully felt until H2 09. There would be further downside potential resulting from a failure to do so. The Swedish experience of the early 1990s provides an illustration of both these points.
- Early warning indicators, such as incremental tightening of credit conditions and an inversion of the Treasury curve, were efficient in predicting the turn of the cycle in 2007-08, which is similar to the experience of the previous 40 years.

Figure 1: Speculative grade default cycle trajectory forecast



Source: Moody's, Barclays Capital

This is a top-down approach to default rate forecasting and we refer to the respective US/Europe HY strategy sections of this publication for the bottom-up approach. Empirical methods proved remarkably effective in mapping out the first part of the credit crunch, and should, we believe, be a core element in formulating views on the remaining evolution of this cycle.

A familiar experience, after all

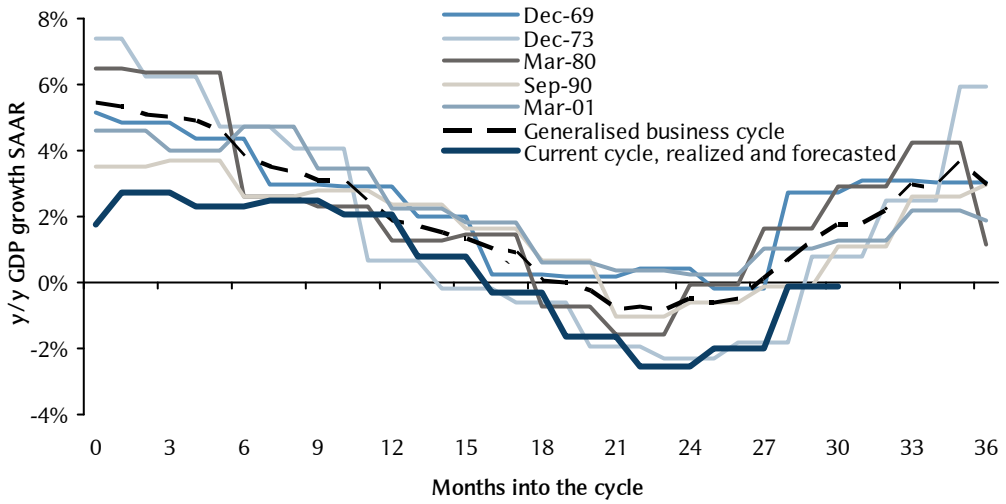
Cyclical downturns exhibit surprising regularity…

When sentiment is at all-time lows, it may be worth remembering that cyclical downturns are generally relatively short. In fact, the economic cycle exhibits surprising regularity in downturns, with growth trajectories following a fairly similar path, as illustrated in Figure 2. The variation of year-on-year real GDP growth over the five recessions that we track in the graph is small. The timing of when the actual turn of the cycle occurs is also surprisingly regular. What this suggests is that once we have established that we are in a cyclical downturn, and have identified its starting point, we can have a fairly good take on the trajectory of growth throughout this part of the cycle. It is also noteworthy that the current (December 2008) projection of growth, taken from the Barclays Capital economics team, is well below the generalized cycle, and close to the trajectory of the 1974-75 recession. Prior to Q4 08, the 1974-75 recession had been preceded by the tightest credit conditions on record according to Federal Reserve's surveys.

… something we use to project the shape of the credit cycle in 2009-10

Economic growth is a core component of the credit cycle, something we discuss at length in *The tale of two cycles*, 8 October 2008. In the following sections, we create a framework where we use the regularity of downturn growth cycles to make projections on the credit cycle. To pre-empt questions of where this will eventually lead us, please refer to Figure 1, where we graph our projections of US speculative grade default rates based on our generalised cycle framework. Our approach indicates that following the trajectory of previous downturns, credit should take the brunt of pain in the second half of 2009, in term of defaults. Comparing this with the experience of the two past decades, we look likely to suffer a relatively severe downturn, unless there is a faster-than-usual relief in terms of bank credit provisioning.

Figure 2: Not unique – Economic downturns, 1967-2008



Note: In the graph, we have used an econometric procedure to create attachment points of each downturn cycle, and then plotted how y/y real GDP growth has moved from that attachment point. Further detail on the procedure is provided below. Source: Bloomberg, Barclays Capital

Our generalised cycle framework provides a baseline forecast – variations can be overlaid

The usefulness of the generalised cycle framework sits not only in its potential for providing empirically robust predictions of default rates over time, but also in that it allows a benchmark cycle on which you can overlay other cyclical dynamics, or qualitative views on how the cycle should progress. For example, our cyclical projections in Figure 1, combines the generalised default cycle with the conflicting forces of initially very low default rates and but also extremely tight credit conditions.

The downturn that started in 2007/08 was remarkably predictable from a quantitative standpoint…

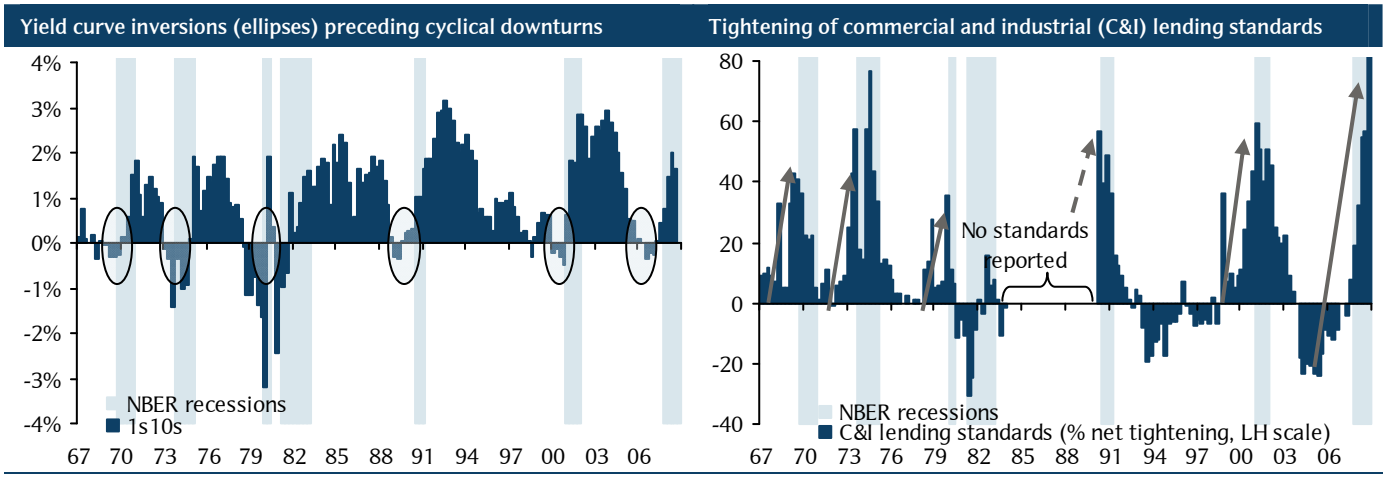
But isn't this downturn something out of the ordinary and cannot be viewed in light of previous downturns? If anything has been proven by the credit cycle downturn in 2007-08, it is actually that old lessons do apply. For example, in November 2006, we saw a significant inversion of the Treasury curve, which traditionally has been a bearish signal, but at a four- to five-quarter lag (see "Approaching the turning point?", *Global Credit Market Strategic Outlook 2007*, December 2006). This happened at a point where there were almost uniform projections of benign conditions for the foreseeable future. In the same article we noted that credit conditions, as measured by banks' willingness to lend, had started to turn their cycle (see right hand panel of Figure 3). Historically, this has been a reliable indicator of entering more volatile credit valuation regimes. These indicators did flag that the probability to enter a higher volatility regime in 2007 was on the rise and correctly anticipate the valuation deterioration that began in Q4 07.

… with the yield curve and credit conditions deterioration playing a similar part as in each downturn over the past 40 years

Another lesson we derived from studying historical data is that deterioration in credit conditions precedes a pick-up in default rates[1] by around four to five quarters. At the cyclical trough of US speculative grade default rates (1%) in November 2007, bank surveys indicated a fivefold increase in default rates one year ahead (see *Lending standards and default rates: Some numbers*, 5 October 2007, and "Default rate" outlook, *Global Credit Market Strategic Outlook 2008*, December 2007). Again, as illustrated in the right-hand panel of Figure 3, the dynamics of credit conditions appear to have had a bearing on a cyclical downturn. For a more detailed study on these early warning indicators, please refer to *Yield curve inversions, bank credit tightening and the credit cycle*, 8 February 2007.

Consequently, we assert that the historical experience, carefully framed in quantitative frameworks, was indeed very relevant in order to project the cyclical downturn that we are currently in the midst of. It would appear more likely, rather than not, to have a continued proficiency of empirically based approaches to understand cyclical dynamics.

Figure 3: Could we see it coming? Downturn early warning indicators, 1967-2008



Note: In the chart we overlay the NBER recession that started in December 2007 to have continued throughout all of 2008.This latest recession, or to be more correct "peak in economic activity" dating was announced in December 2008.
Source: Federal Reserve, National Bureau of Economic Research (NBER), Barclays Capital

[1] *For the following analysis, where we mention the generic term 'default rate', we are referring to Moody's 12-month rolling, issuer-weighted US speculative grade default rates.*

Benchmarking the current cycle to the 1990-91 and 2001-02 downturns

The first stage of this analysis will be to collect stylised facts on how the current cycle compares with more recent cycles, such as the downturns in 1990-91 and 2001-02. This recent history provides us with more granular data sets, as well as lesser structural economic differences compared with earlier history.

Comparing default rates in the current cycle versus 1990/2001

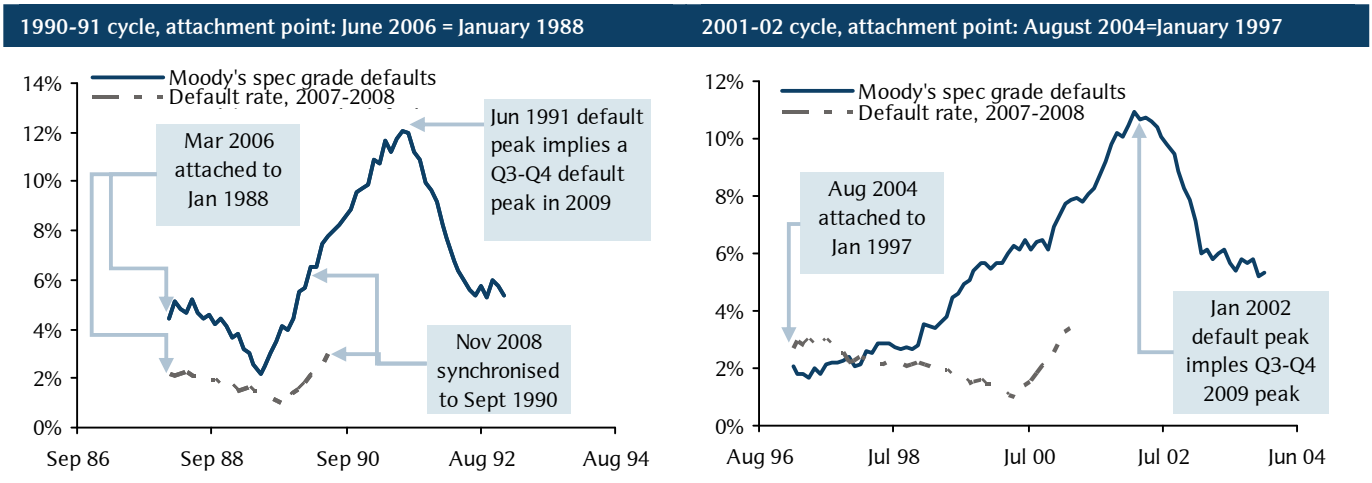
In Figure 4, we compare the default dynamics as they stand today versus the two previous cycles. If the default cycle exhibits similarities over time, we should be able to overlay the current cycle to previous cycles, and by connecting the shape of the cycle seen so far, we can estimate where we are in the cycle currently. Figure 4 illustrates how to go about this in practice: we rebase the current cycle according to the indicated "attachment points" so that, for example, August 2004 gets rebased to January 1997.

In the current cycle, defaults hit a cyclical trough in November 2007, at a rate of 1%. We have since witnessed a rapid increase in defaults – as indicated by the dotted line in Figure 2. Comparing this to the 1990-91 cycle, we note that the uptick in default rates today has a similar, but slightly lower pace than seen in 1990-91. We saw the cyclical trough of a 2.1% default rate in May 1989 followed by defaults increasing substantially to peak at 12.1% in June 1991.

Turning to the 2001-02 cycle comparison, the issue becomes somewhat thornier. We could argue, not least on the back of the evidence in the right-hand panel of Figure 4, that the default cycle hit its cyclical low in 1997, when default rates were temporarily below 2%. However, we argue that the cyclical downturn really did not take effect until 2000, as growth was quite strong up until then: for example, default rates remained in a fairly tight interval of around 6% between mid-1999 and mid-2000. As long as default rates remain relatively constant, such as in the 1999-2000 cyclical interlude, we would conclude that that period is not associated with a turn in the cycle.

Hence, we attach our current cycle so that the connection point between the two cycles sits at August 2004 = January 1997 as shown in Figure 4. This makes the offset in absolute default rates between 2000 and 2007 fairly large (6% in 2000, 1% in 2007), but captures the moves/deltas of the cycles much better.

Figure 4: Benchmarking speculative grade defaults through the cycle

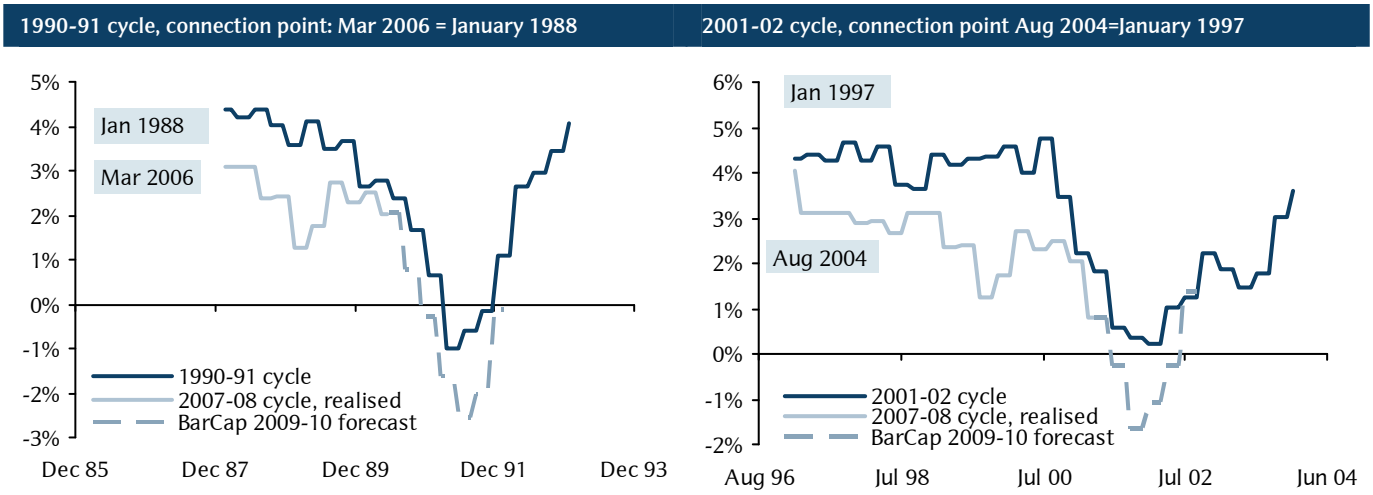


Note: the x-axes refer to the historical cycle, and we then overlay the current cycle's number using the attachment points indicated in the headings. In this way, we match the shape of the current cycle with that of the historical cycles. Source: Moody's, Barclays Capital

Comparing real GDP growth in the 1990/2001 cycles to today: current projections look similar to 1990-91

We discussed the relationship between the credit and the growth cycle at length in *The tale of two cycles*, 8 October 2008. We believe it makes sense to triangulate some of the credit cycle dynamics with default and growth data alike. In Figure 5, we plot GDP evolution with the same connection points between the cycles as for the default cycle. GDP numbers are on a y/y basis and seasonally adjusted. Like the default-cycle analysis, we find greater similarities comparing 1990-91 to current data than comparing it to 2001-02. In 1990-91, there was a gradual decrease in growth similar to the current cycle (left-hand panel of Figure 5). In contrast, the 2001-02 cycle exhibited much higher growth in the run-up to the downturn, and then a much quicker reduction in growth rates as the economy went into recession. Growth remained, on a year-by-year basis, positive throughout the 2001-02 period. We note that the current growth projections for 2009-10 anticipate a steeper drop in real GDP at the trough than seen in either 1990-91 or 2001-02.

Figure 5: Benchmarking 2007-08 growth numbers to previous cycles (real GDP, y/y SAAR)



Source: Bloomberg, Barclays Capital

Creating a generalised business cycle from growth data

Real GDP data give many more downturns to observe dynamics in

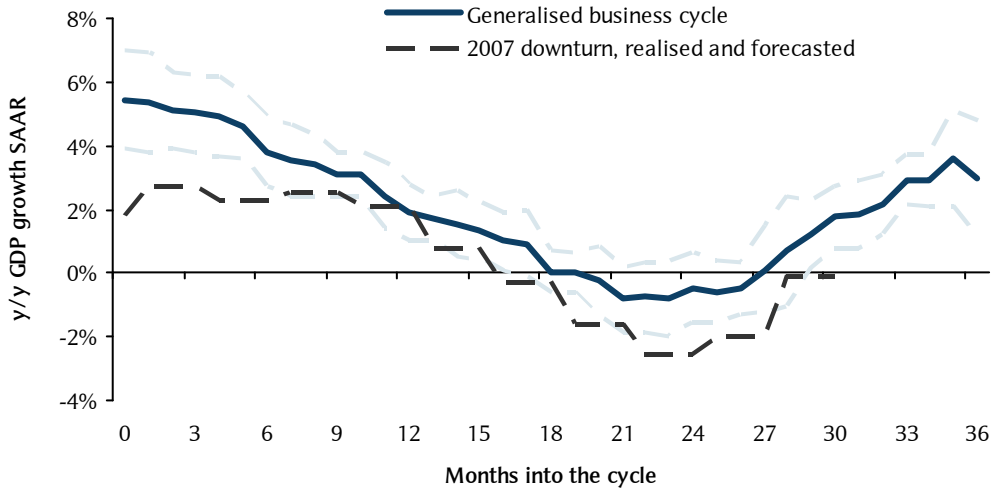
The 1990/2001 experiences are valuable in terms of synchronizing with the current cycle, but we actually have a much large number of cyclical downturns than we can use, in order to make more general statements around downturn cycles. We already mentioned that a lack of good default data prior to the 1990-91 and 2001-02 cyclical downturns impair the inference we can draw from these isolated cycles. The problem becomes one of overfitting to these two data points. These default cycles look well correlated with GDP growth, and we have a much larger sample size in terms of cyclical downturns in GDP data, so can the business cycle dynamics not be used in some way? We argue that it can, under the assumption that there is a fairly high correlation between growth and defaults.

For a more general default cycle, we first create a generalised contractionary economic cycle. Uncorrelated analysis, such as the BarCap Economics team forecast of GDP growth (Figure 5), as well as our own analysis (*The tale of two cycles*, 8 October 2008), makes the statement that we are going into a contractionary growth stage less than controversial.

A statistical procedure to find the best attachment points for the downturn growth cycles

We look at previous recessions, as defined by the National Bureau of Economic Research (NBER), and look to find the optimal connection points for each of those cycles in order to get a generalised cycle. Our optimisation criteria involve minimising deviations from individual cycles around the generalised cycle line plotted in Figure 2, where we allow our algorithm to vary the attachment points in order to reach an optimal cycle.

Figure 6: Generalising the business cycle, average y/y GDP growth with 1 standard deviation confidence interval.



Source: Barclays Capital

The results indicate what we already said in the introduction: the cycle appears surprisingly similar over the past 40 years, with a fairly tight confidence interval around the generalised business cycle line as seen in Figure 6. Starting two years before the trough of the cycle, the growth rate decreases at a ratio of 0.28% per month. At the trough of the cycle, the growth rate is negative by about -0.8% y/y, and the trough has lasted on average three quarters. Overlaying the current (December 2008) growth projections with the generalised cycle, we note that we are on much more negative trajectory. Indeed, the current projections appear to fairly closely track the 1 standard deviation confidence interval on the downside, but with even more negative trough growth rates 21-24 months into the cycle.

Contrasting the growth downturn with official recessions

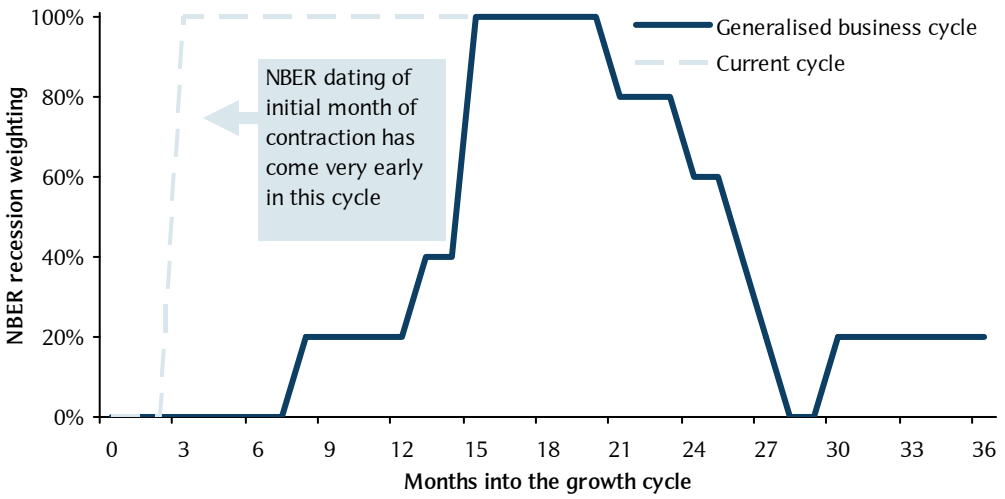
Checking the generalised business cycle to NBER recession timing

As a check, we can see how well our stylised business cycle matches the National Bureau of Economic Research (NBER) Business Cycle Committee's dating of contractionary growth periods. Using the attachment points we obtained from synchronising the growth cycle, we match up previous NBER contractionary periods to form the graph in Figure 7. The line simply shows the average value of a set of variables that take on the value 1 when it is a month that the NBER has defined as a contractionary month, and 0 otherwise. We see that all cycles where NBER contractionary periods between 15-21 months into the cycle, fairly similar to where we also saw the trough growth rate for the generalised cycle.

The really interesting point in matching the NBER cycles is actually with regards to how early the NBER recession inception date came for the current downturn. In December 2008, NBER announced that the peak of economic activity came in December 2007, which also implies a contraction since then. A few notes on this:

- Combining the early date of inception of the contraction and what the generalised cycle analysis suggest will be the future growth path, this cycle looks much more protracted (from an NBER contractionary regime standpoint) at around 20-24 months compared with the average post-war recession duration of about 10 months. This goes together, as seen in Figure 6, a deeper trough than expected in a "normal" cycle.
- However, the first nine months in 2008 will probably turn out to be a less clear-cut contraction than is usually the case, not least as indicated by the otherwise close tracking of the generalised growth cycle in Figure 6 above.

Figure 7: How far into the generalized growth downturn does an NBER recession get called?



Source: NBER, Barclays Capital

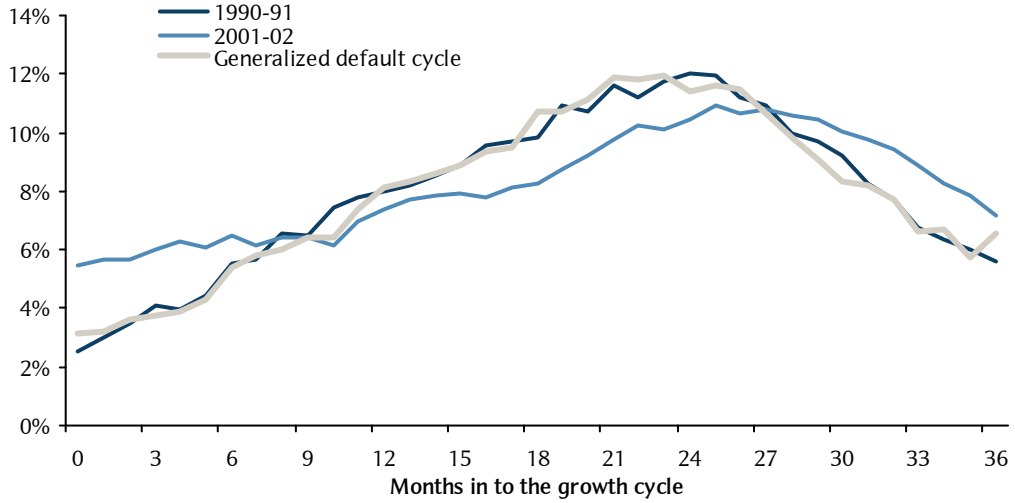
Using the generalised cycle for defaults and credit conditions

Translating the generalised downturn cycle in growth into a default trajectory

Having attained a stylised business cycle, we now convert our linkages between growth and default rates into a generalised default cycle. This cycle is less robust than the generalised business cycle as it will still be dependent on only two real default cycles, but the qualitative argument for these two to correlate is very strong. What may differ most across cycles is the outright level of defaults: as we noted previously, there are considerable differences between the 1990-91, 2001-02 and 2007-08 cycles in terms of the levels of defaults both at the onset and end of a downturn. It is also hard to gauge outright what the maximum level of defaults may be, as this can be highly dependent on structural factors – such as legislation for bankruptcy protection, leverage and covenant structures at the peak of the cycle and so on. Still, the growth-based default rate projection may offer the baseline default level from which to deviate on the basis of such structural factors.

Using a regression approach where we connect growth and defaults in the 1990-91 and 2001-02 downturn, we obtain a set of regressors that allow us to link the generalised business cycle into a generalised default cycle (Figure 8). At inception (the trough) in this cycle, average default rates stand at around 2.5%, increasing at a rate of roughly 0.4% per month for approximately 20 months, to reach a peak of just below 12%.

Figure 8: Generalising the default cycle

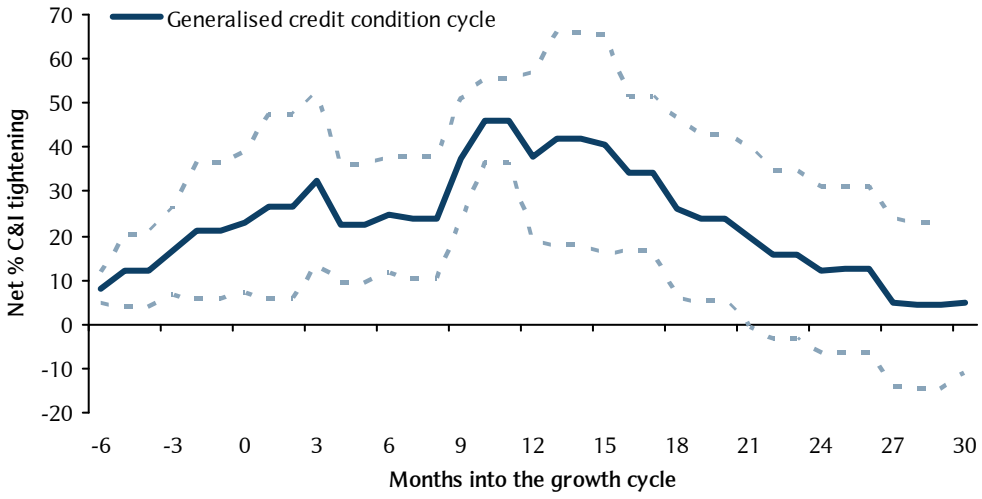


Source: Moody's, Barclays Capital

Credit conditions through the generalised cycle

Can we undertake a similar generalisation of the credit conditions cycle? We use the GDP-based attachment points to compute how C&I tightening has evolved over the cycle (Figure 9). The C&I cycle is more idiosyncratic compared with the GDP cycle, which is not surprising – it is, after all, survey data, which is why we choose to illustrate variations around the generalised cycle with a 1 standard deviation confidence band rather than plot all individual cycles. We note that this cycle peaks much earlier than either the default or growth cycles, even after we adjust the x-axis by lagging it six months.

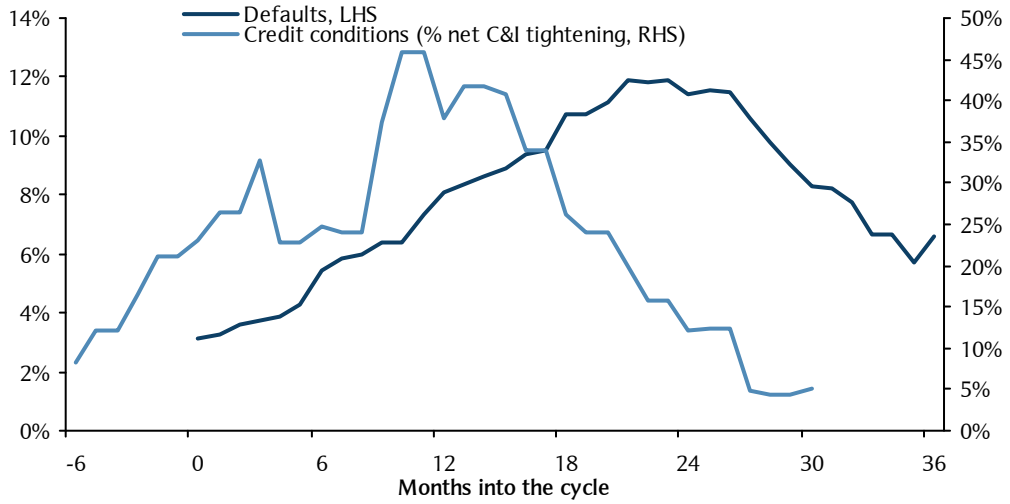
Figure 9: The generalised C&I tightening cycle



Source: Barclays Capital

We have previously found compelling evidence of credit conditions, as measured by C&I tightening, being a leading indicator of the default and business cycles (see *The tale of two cycles*, 5 October 2008). We can confirm those conclusions in the generalised cycle framework too. In Figure 10, we plot the generalised cycles; they appear almost side-by-side, with the default cycle clearly lagging the C&I cycle. Using a battery of statistical tests, we confirm the lead-lag dependency to be strongest at the 10-12mth horizon.

Figure 10: Lead/lag relationships in the generalised credit condition/default cycles



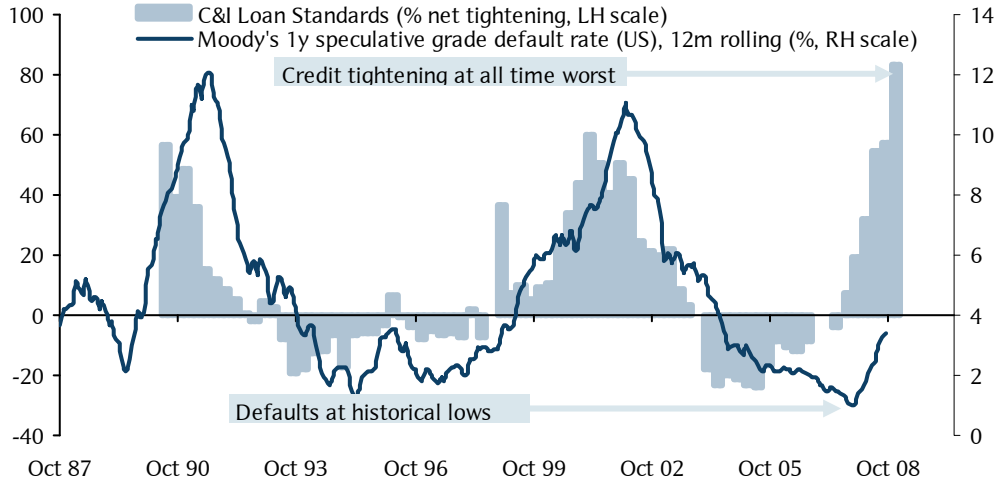
Source: Barclays Capital

The 2008-10 cycle: Reconciling low default rates but tight credit conditions

A generalized cycle gives us a strong baseline case upon which we can overlay other factors that we believe will impact a cycle.

It is interesting, and important, to note the historically unique combination of all-time low default rates over the past few years combined with all-time high levels of credit restriction, highlighted in Figure 11. The trough of defaults was recorded at 1%, compared with 2.5% in the generalised cycle. This could potentially reflect structural changes in the market that may lead to generally lower default rates throughout this coming cycle than in previous ones. However, when accompanied by the extreme pace of lending standards tightening, a more plausible explanation is that the low default rates were due to an excessively lax lending regime which is being abruptly brought back in line. In this case we might anticipate higher-than-normal peak default rates. We consider both these possibilities in the scenarios below.

Figure 11: A unique combination in the current cycle



Source: Federal Reserve, Moody's

In Figure 12 we plot a number of scenarios for the default cycle based on some of this information. The scenarios are as follows:

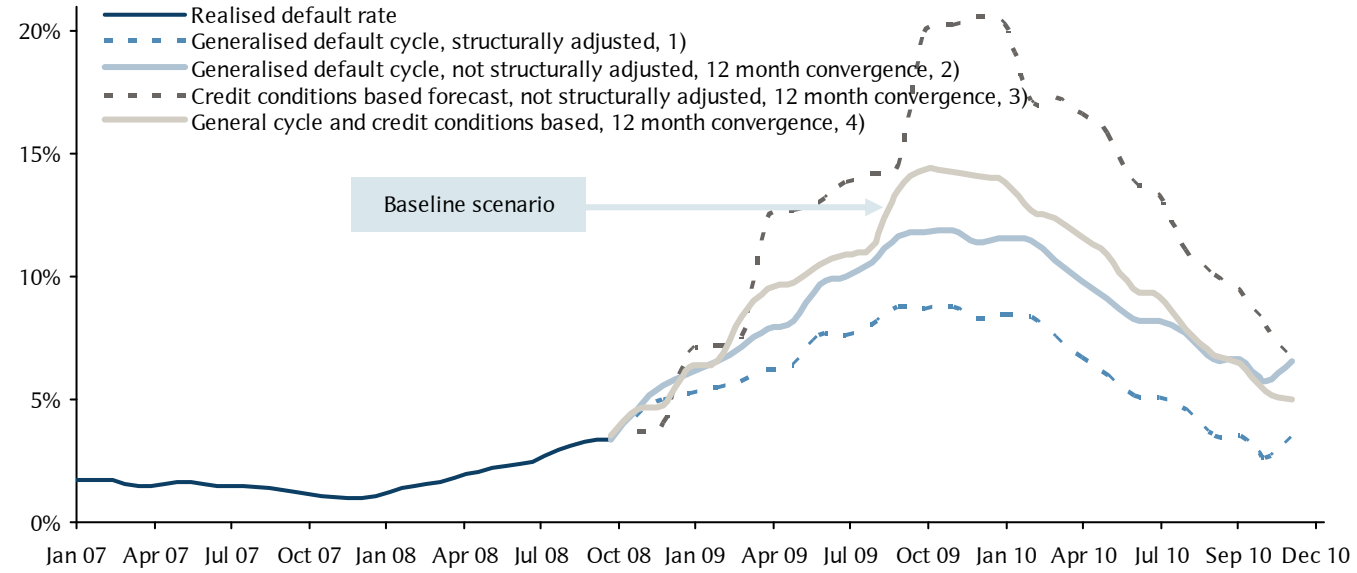
- We follow the generalised default cycle (blue, dashed line) but with a structural adjustment of -3% to account for potential structural changes, pushing down our default expectation in this cycle.
- The next scenario (solid light blue line) follows the generalised default cycle, but with a convergence from currently low default rates into the standard default cycle spread out over the next 12 months.
- The non-structurally adjusted credit conditions-based forecast (dashed dark grey line) uses the relationship between C&I lending standards and forward default rates, as highlighted in Figure 10. In order to extend the C&I tightening series, we assume that the credit conditions cycle will start to converge to the generalised credit conditions cycle from Q1 09.
- The final scenario is a straight average between scenarios (1) and (3), and allowing for a 12-month convergence period between current low default rates and the projected one.

Please note that the structural adjustments that we apply are not necessarily our preferred method to model this, but are shown as an alternative way to approach the cycle.

The figure outlines substantial differences across these approaches in terms of how elevated the peak of default rates go, but on the other side they have fairly similar shapes, with the peaks centred around Q3/Q4 09. Based solely on the all-time high C&I tightening seen in our latest (Q4) Loan Officer survey, we would project HY default rates to come close to 20% at that point in time. Using the generalised default cycle, but adjusting for potential structural differences, gives us a peak of default rates at 8.8%. These two scenarios reflect the possibilities referred to above, of coming out of an extremely low default period but with credit condition deterioration at an all-time high.

We suggest using a straight average of these, as was done in case (4). We can see that the resulting trajectory resembles the generalised default cycle (non-adjusted), with the difference being that the peak is higher (14.3% in (4), versus 11.9% in (2)). Following the higher peak, however, the two trajectories are very close.

Figure 12: Default projections



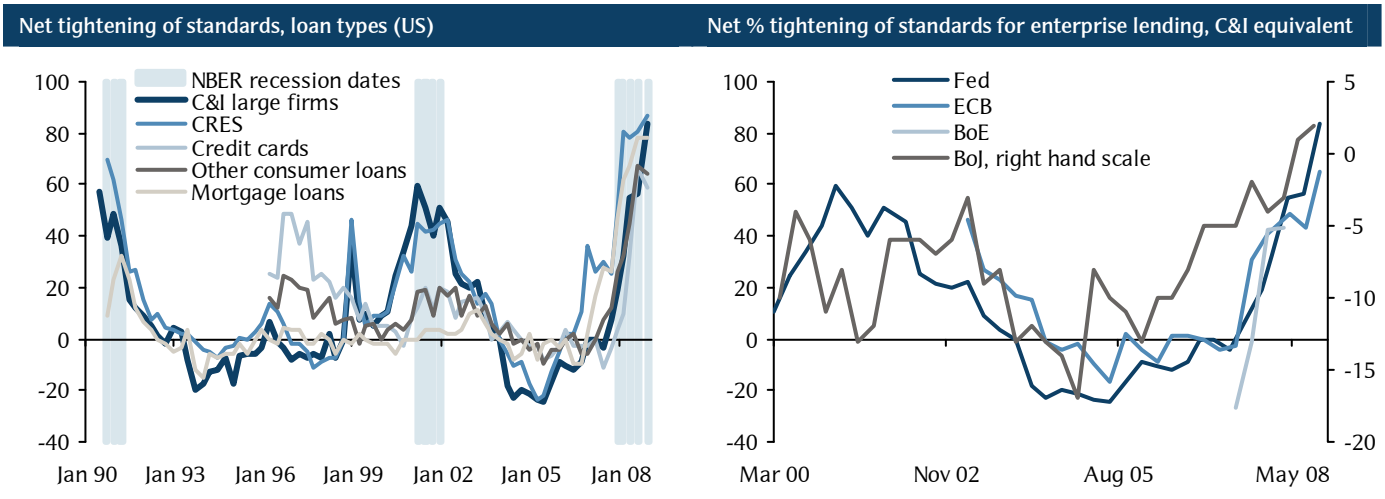
Source: Moody's, Barclays Capital

A special focus on credit conditions

A primary focus going into 2009 will be the evolution of credit conditions. From the policymakers' perspective, reinvigorating credit provisioning is seen as a crucial hurdle in order to mitigate the downturn, as evidenced by the Term-Auction Lending Facility (TALF) introduced in November 2008. In the framework presented above, the currently extremely tight credit conditions made us turn onto a more negative path compared with the generalised cycle. Hence, it is worthwhile dedicating a bit more attention to how credit conditions are evolving.

Credit conditions, as we prefer to measure them via the Federal Reserve's Senior Loan Officer Opinion Survey (SLOOS), for commercial and industrial lending have been tightening at record pace, see Figure 3 and Figure 11. This process of constraining credit is neither limited to C&I lending nor to the US alone, as we illustrate in Figure 13.

Figure 13: Credit tightening across loan types and geographies.



Source: Federal Reserve, ECB, Bank of England, Bank of Japan, Barclays Capital

It is illustrative to imply growth scenarios on the back of these extreme credit tightening levels. Using the correlations between the generalised credit condition cycle and the generalised growth cycle, we can look at an implied growth cycle just based on current credit conditions. This exercise should have a caveat in the sense that we have not been at such extreme conditions before, and the empirical correlations have never been calibrated to such a scenario.

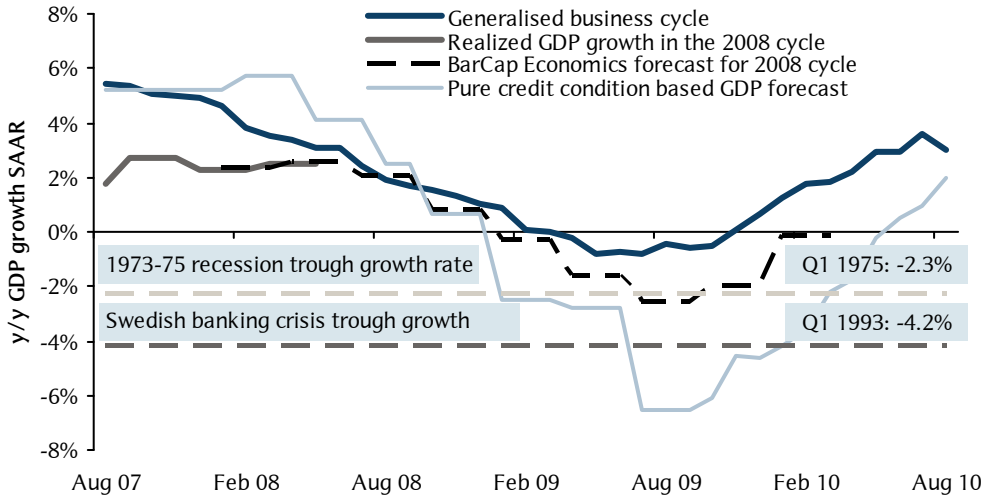
In Figure 14, we can see that similarly to the very large 20% default rate number that we arrived at in terms of forecasting default rates solely based on current C&I number, we arrive at fairly extreme numbers in terms of a growth trajectory. The unconstrained (with caveats) model points to a 6% year-on-year decline in real GDP. In order to contrast this number to other data, we overlay the following:

- The trough growth rate of the 1973-75 recession, which saw a maximum C&I tightening rate of 76% versus today's 84%. During this recession, growth troughed at a rate of -2.4% y/y. We see that the current growth projections are close to that period of time in terms of trough y/y growth, with the current forecasted trough rate being -2.6% in Q3 09.
- Swedish banking crisis in 1990-93: The Swedish experience was similar in that there was a very substantial contraction in credit availability due to a similar poor asset problem in the banking system as is currently seen on a global scale. Year-on-year Swedish real GDP growth was -4.2% in Q1 93, just after the krona was devalued, and the positive effects from that started to come through in macroeconomic aggregates.

The conclusions we draw from these points are that: 1) it looks likely that the empirical growth and default correlations with the credit conditions cycle are not well calibrated (they overshoot) for extreme values; 2) the relative direction given by the credit conditions correlations are valid: where we historically, or by foreign analogy, have seen similar tightness, growth has tended to be well below the generalised cycle.

The downside risk of a protracted freeze in credit availability thus becomes clear, and the efforts on policy maker's behalf to start easing credit standards and get a free flow of credit again are both understandable and laudable.

Figure 14: Potential effects of extremely tight credit conditions



Source: Barclays Capital

US trading environment and strategies

Ashish Shah, Krishna Hegde

Where will the wild ride take us next?

2008 has been a period of unprecedented volatility for credit markets. There has been a massive global deleveraging cycle, failures of multiple major financial institutions, break-downs in the basic functioning of the financial markets, and the emergence of the worst global recessionary environment in at least twenty years. In response, there has been an unprecedented level of regulatory intervention in the financial markets, with trillions of dollars of liquidity flooding the market. In the context of this macro and fundamental backdrop, the market has experienced a variety of dislocations. Current valuations across sub-asset classes in credit have been influenced by a combination of fundamental deterioration and forced deleveraging.

In the near to medium term, we expect sentiment to be influenced by the interplay between improving liquidity and real economic weakness. Across sub-asset classes, our recommendations are driven by the themes of following the liquidity while being mindful of the deterioration in credit fundamentals.

- Based on our fundamental leveraged analysis, we believe investment grade credit now sits at levels at which buy-and-hold investors can expect to achieve attractive risk-adjusted leveraged returns. From a sector perspective, given our bearish macroeconomic view, we would generally continue to favor a largely defensive posture.
- Within speculative grade bonds, despite record high yields, there are arguably better risk-return opportunities in other higher-quality asset classes. Deterioration in credit fundamentals, coupled with severe credit rationing, is likely to create formidable headwinds for high-yield companies, and we project a 9-10% default rate for 2009.
- The loan market experienced unprecedented volatility in 2008 as a result of technical pressure from market-wide deleveraging. We believe that the intrinsic fundamental value of loans is attractive relative to other asset classes at current levels. However, we expect loans will find it difficult to rally materially as fundamentals deteriorate. As market participants continue to deleverage, the focus will likely remain on distributing the risk to a new set of investors.
- The structured credit market has been in a state of disarray with legitimate questions about its survival prospects. We believe that parts of the market will survive. However, products and investment strategies are likely to be limited to their simplest forms in 2009.

Certain key changes to the trading environment will require investors to modify the way they think about credit market microstructure. In the next section, we analyze these changes and provide a roadmap of investment strategies for deploying capital in a deleveraging environment.

Figure 15: Target asset class returns

Asset class	Current level	Target total returns : 2009
Investment Grade Credit	Px: $90.8, OAS: 544bp, YTW: 7.48%	7-10%
High Yield	Px: $56.5, OAS: 1903 bp, YTW: 22.17%	8-10%
Leveraged Loans	Px: $66.9, Coupon: 260 bp	6-8%

Source: Barclays Capital

2009's trading environment & investment strategies

Continuing to adapt to a dramatically different credit market will be critical to successful investing in 2009. The landscape will be meaningfully different – from major structural changes in the CDS market, to a shift in credit market participants and dramatic moves in supply demand technicals.

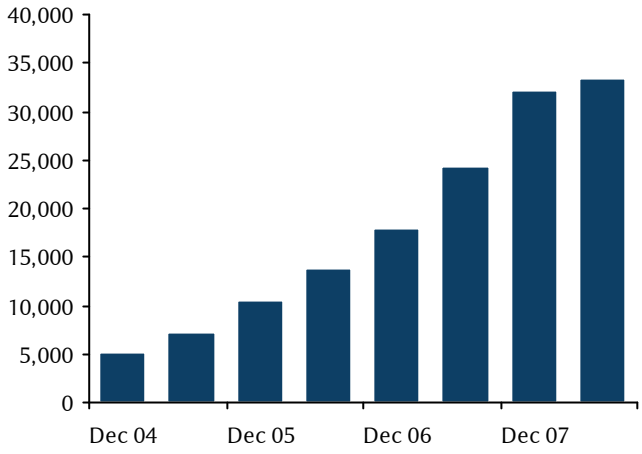
CDS grows up

Central clearinghouse will reduce counterparty risk

As we highlighted in our piece, *State of the CDS Market*, the coming months will bring meaningful changes to the CDS markets. While the CDS market grew from $5 trillion notional in 2004 to $33 trillion in mid-2008,[2] it was pretty clear that the core infrastructure of the market was not keeping up. In response to the past year's volatility and ensuing regulatory scrutiny, the dealer community has responded with a clearinghouse proposal they hope to have up and running before year end. This clearinghouse, a joint venture between Clearing Corp and ICE, will serve as a central counterparty for CDS dealers. For the first time, dealers will be required to post initial margin based on the risk of their positions (including short credit positions) facing the Clearing Corp. This amount will be in addition to the variance margin they were already posting. Having a central counterparty will meaningfully reduce the operational and counterparty risks in the system as over two-thirds of the trades are dealer to dealer.

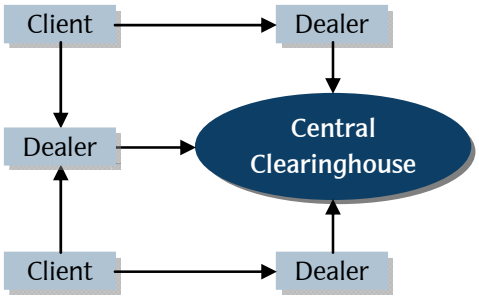
We expect on-the-run CDX IG, the most highly traded contract, to migrate over the next two months, with single names likely to migrate towards the end of Q1 09. While there has been discussion of CDS exchanges and clients being able to directly face the clearinghouse, we feel that without meaningful support from the dealer community, neither is likely to happen on a large scale anytime soon. We would note, however, that the push for transparency in the CDS market is likely to have some success, especially as we have seen DTCC disclosing weekly volume/outstandings data, which have been helpful in dispelling misconceptions about the size of the market.

Figure 16: Growth of CDS market ($bn)



Note: Notional amounts of global single name CDS.
Source: Bank of International Settlements, Barclays Capital

Figure 17: Clearing house mechanism



Source: Barclays Capital

[2] *Notional amounts of global single name CDS. Source: Bank of International Settlements.*

Changes in the CDS contract and the way we trade it will increase fungibility and liquidity: To help facilitate some of the pricing transparencies and operational efficiencies that go along with a central clearinghouse, CDS contracts will be migrated to standard coupons of 100bp and 500bp, making them much more homogenous and easier to net. Just like with CDX IG contracts (which currently trade with fixed running coupons), this will make tear ups and assignments much easier operationally, while dealers will be able to continue to quote on a spread running basis for higher quality names. This will be helpful to clients who have found it difficult to get competitive bids on the unwind of off-market contracts.

Another change likely to take place is the shift in standard contract terms to exclude restructuring as a credit event. CDS for investment-grade credits (and fallen angels) have so far been traded with modified restructuring as a credit event. If restructuring does occur as a credit event, hardwiring the auction is a challenge since the deliverable pool for 3yr CDS is different from that of 10yr CDS.

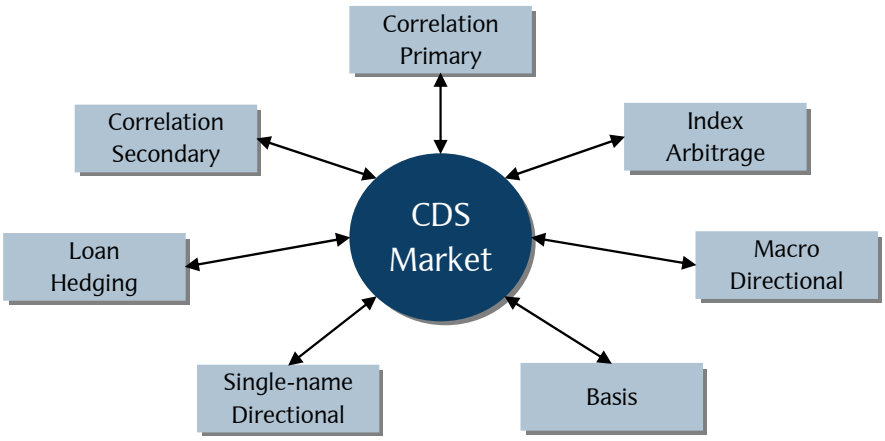
Finally, we should at long last see a move to non-cancelable contracts for LCDS, which will hopefully lead to greater volumes in a market where the inherent leverage in the LCDS contract would normally have made it a much more attractive trading vehicle given funding and liquidity constraints.

Deleveraging will continue to dominate CDS flows

The growth in the CDS market over the past seven years benefited meaningfully from the interaction of flows from different parts of the market:

- One of the most memorable parts of the credit bull market was incessant CDS bid lists pushing spreads tighter. While there has been an absence of these flows over the past year as new issue synthetic volumes disappeared, secondary correlation flows have been quite meaningful, as correlation desks attempted to manage their short gamma and single name risks. We expect correlation flows to be lower in the coming year, as overall deltas have declined and we see more distressed sales of rated tranches – essentially allowing dealers to flatten out their risks. Correlation and macro players were huge users of indices to hedge their positions and express directional views. Given the continued volatility, we would expect this to be the case in 2009.

Figure 18: CDS market participants



Source: Barclays Capital

- Index arb has been one of the ways that index levels have translated into single names and vice versa. We expect that while relative value oriented trading is not going to be as prevalent in 2009, the potential elimination of the NR/R basis between single name and cash, as well as less couponing risk, will lead to an increase in this type of activity and greater efficiency in the index market.
- Margin requirements on CDS have steadily increased over the past year, decreasing the amount of leverage investors can obtain by selling CDS. Following the introduction of a clearing corporation, dealers will also need to post initial margin. As a result, protection sellers are likely to need higher spread to compensate for the lower leverage. Wider CDS spreads should lead to a slight narrowing of the basis (though some of this effect is offset by the need for protection buyers to also post margin).
- Finally, we would expect that unwinding of old positions as credit stories play out will lead most of the volumes in CDS to stay inside of five years – with short-dated positions being taken on as a result of credit stories (survival bets), hedging needs (in the case of banks) and unwinds of existing positions.

The greater transparency and lower counterparty risk that will come with new CDS market practices will help mitigate many concerns about the product, but not enough to drive higher absolute volumes. However, these changes are likely to result in non-dedicated investors feeling more comfortable with the process, which ultimately will be a positive for the product.

Market participants: directional strategies dominate, hedge funds will not

While much has been made of the demise of hedge funds over the past year, money managers and insurance companies have been hurt as well. While we expect that all market participants will continue to find their volumes affected, **the real shift we expect to see will be away from relative value strategies and toward directional strategies.**

We expect one of the biggest declines of activity to come from the proprietary desk area of the market, where the combination of capital and balance sheet constraints, along with lower run rate earnings at those institutions, will lead to smaller prop footprints. We would expect to see a continuation of the same dynamic when it comes to hedge funds, which have been bringing down leverage and turnover given the high volatility in the market. Having said that, we do expect new capital to be deployed to take advantage of distressed markets with an expectation that unleveraged returns should be attractive given current market pricing, especially with a bit of credit picking skill. We also expect to see the continued growth of flows from non-dedicated (ie, multi-strat) funds that may have dabbled in credit on the short side and find it to be a better risk/return asset class in the current environment than equities.

The dealer community will be smaller given the rapid consolidation/exits we have experienced over the past year. The combinations of Bear Stearns, Lehman Brothers and Merrill Lynch into JPMorgan Chase, Barclays Capital and Bank of America, respectively, will shrink balance sheets available to provide liquidity, not to mention the number of traders available to execute. In many ways, this will be a return to the days in the early 1990s where order-based business was more the norm than the “WICs” of the bull market. We expect that dealer back book prop trading will also be more limited, as dealers will conserve capital to facilitate client flows.

Many traditional "real money" players in credit have had difficult performance years given the poor performance of credit markets and financials in particular. Having said that, their buying power from cash flows alone is quite substantial. Demand from pension funds looking to hedge their liability rates is likely to drive demand for high-quality, long-dated product. We expect their heavy participation in new issue and opportunistic purchases of high quality secondary positions to continue into the new year.

Investor segments focussed on the front end of the market (including SIVs and security lenders) have seen structural changes. As a result, they are no longer buyers of short-dated term paper. Material underperformance in mutual fund segments that aimed to combine liquidity with enhanced yield has led to broad-based risk aversion, further decreasing the demand for credit product. In 2009, we expect risk appetite in these segments to remain subdued.

We believe the major swing factor in market participation will be rising participation from non-traditional credit investors, including retail, equity investors, and interestingly, the government. The past year has demonstrated increasing participation from equity investors (both traditional and hedge funds) as yields on fixed income rose to equity-like returns. There has also been a recent pickup in the participation of closed-end funds and ETFs that are linked to high grade credit (albeit, with limited absolute size). Our expectation is that these will continue as investors who have been disappointed by historical equity performance can generate income from credit comparable to their yield hurdles. The shift towards a yield-focused rather than a spread-focused investment environment will need to be considered when hedging interest rate risk. We also feel that given the meaningful dislocation in basis and balance sheet constraints, basis trading will either need to be employed as a long-term strategy or one which focuses on credits with potential catalysts to realize the basis.

The rising participation of government in the credit markets is a final point worth noting. The government has emerged as a larger absorber of credit risk. While the government took on short-dated credit risk in facilities like the CPFF, recent announcements involving ABS indicate its willingness to provide term funding and underwrite tail risk. In addition, the government has taken various approaches to situations such as Citigroup to AIG. This rising involvement will ensure much greater event risk for stressed credits where traditional credit analysis may fail. It also raises the possibility that CDS may not trigger as expected. It is critical that investors consider this when evaluating the relative value across capital structure.

Investing in a deleveraging/deleveraged environment

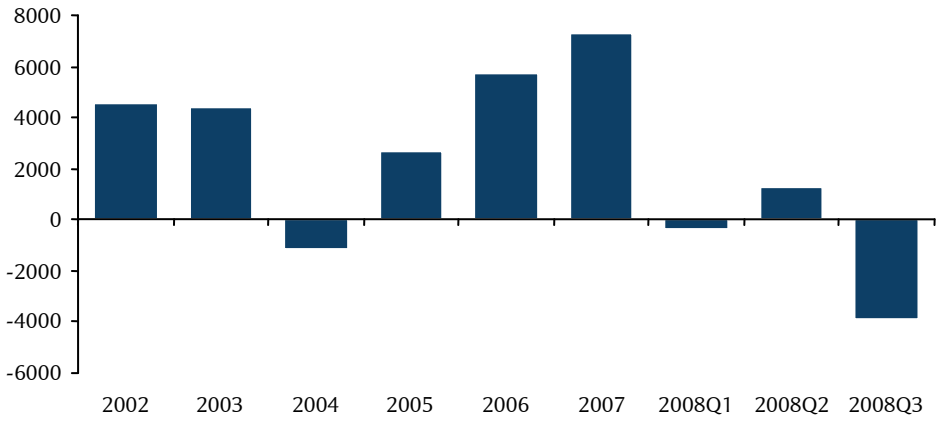
One of the critical questions when investing in a deleveraging environment is how much deleveraging is left. Unfortunately, the answer is far from easy and, in fact, differs among products, markets and participants. We explore how each product/investor base has been affected by the ongoing deleveraging.

Hedge funds

Hedge funds across the spectrum have seen large redemptions. While the data for Q4 will not be known until early next year, anecdotal evidence suggests that withdrawals likely accelerated. The data for relative value corporate credit funds echoes the trend for the broader markets. In addition to outflows, significant deleveraging has occurred as a result of an increase in haircuts for funding corporate bonds and CDS. For investment grade bond collateral, in January 2008, funding was relatively easy to obtain and haircuts were 3-5%. In contrast, lenders today are very selective about providing funding and, when available, haircuts are in the 15-25% context. In other words, leverage has declined from 20-30x to 4-6x. In addition, funding costs are about 200-400bp higher than in January 2008.

We believe that credit markets have already witnessed a significant portion of the deleveraging caused by increased haircuts. While we expect further pressure as a result of investor redemptions, we believe the worst is behind us. We would like to highlight that redemption pressures are not uniform across the credit hedge fund space and some segments (eg, hedge funds investing in distressed debt) could even see inflows. Any such inflows are likely to help put a floor to a segment of the market, but it is too premature to assess their effect.

Figure 19: Estimated net asset flow: Fixed income hedge funds: Relative value corporate credit ($mn)



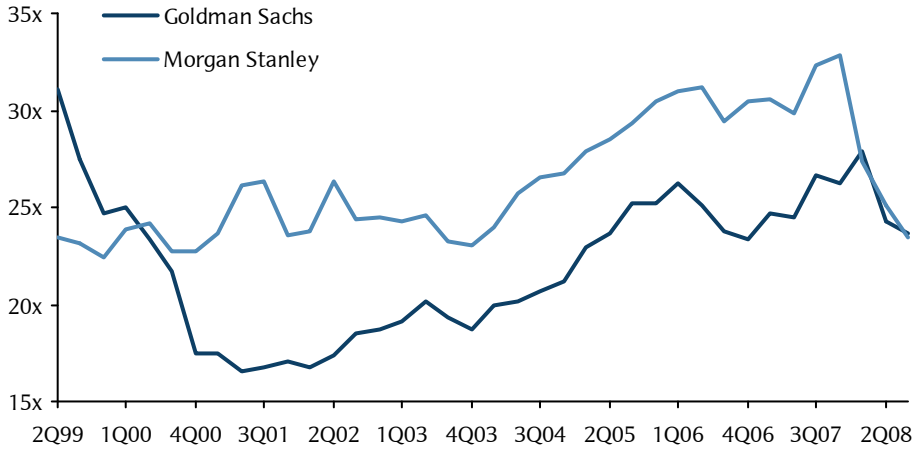
Source: HFR Hedge Fund Research, Barclays Capital

Financials

Banks, brokers and insurance companies have been a major participant in the credit markets. The degree of deleveraging varies substantially across different entities. Erstwhile brokers have brought down leverage quite sharply. Banks have also taken steps to raise capital and bolster their Tier-I ratios. However, with our expectations of realized asset losses exceeding reserves, leverage would creep up as a result of capital erosion. Considering this, we believe there is risk of further deleveraging from the banks/brokers, absent further government action.

Despite their structural differences from banks/brokers, insurance companies also represent a buyer segment with embedded leverage. The steep decline in the value of their investments has resulted in significant losses depleting their excess reserves. While many insurers have taken steps to raise capital/access capital from the TARP, we believe that the underlying trend of risk-reduction and deleveraging is likely to continue.

Figure 20: Gross leverage of brokers



Source: Barclays Capital

Leveraged loans

Within credit, leveraged loans had the highest proportion of leveraged investors. This leverage came in a variety of formats, including total return swaps and market value CLOs. As discussed in detail in the loan section, we believe further deleveraging could occur, and the associated negative technicals likely continue to affect the asset class. As a result of different instruments/structures unwinding, we expect to see a shadow supply of about $50bn.

Short-term financial paper

SIVs and security lenders were large buyers of front-end financial paper (mainly in the floating format). As SIVs shrank considerably over the past eighteen months, front-end financial paper came under significant stress. With a majority of the SIVs unwound or taken onto bank balance sheets, the deleveraging from that investor base is largely complete.

Investment strategies

Asset/liability matching will be critical

While investing in a deleveraging environment, a key challenge is the ability to hold on to positions in the face of adverse market movements. Investors must ensure that the liquidity profile and risk profile of their liabilities (including capital) match the trades they are focusing on. For liquid/shorter-dated liability profiles, we believe the focus should remain on instruments that are liquid and tradable, including new issue, benchmark issues and CDS. For those investors with longer-term capital and funding mechanisms somewhat insulated from mark-to-market volatility, the opportunity to get paid for providing liquidity has never been higher: Such investors can utilize a variety of trade constructs, ranging from basis to relative value. In the backdrop of high volatility, investors will need to set ranges and be disciplined about entry and exit points. Secondary flow provides better opportunities for those with shorter investment horizons because the convexity profiles are tough to replicate through new issues. Similarly, given that we are entering an environment in which defaults are expected to increase, investors focused on new issue will do well to ensure that they receive a discount (on spread terms) that compensates for the par pricing.

Corporate deleveraging creates opportunities and risk

The rapid decline in bond prices, combined with declining fundamentals, has led to a dramatic rise in IG and HY exchange offers. These exchanges (or buybacks) are a way for companies to use poor market conditions and structural features of bonds to realize

some of the decline in the value of their liabilities. Exchange offers can meaningfully change the relative value matrix. In cases where debt-for-equity swaps are executed, eliminating a class of securities, it can lead to outperformance of CDS versus cash. Having said that, in most cases, bond exchanges and tenders will cause the basis to perform well as bonds offered better-than-market consideration and CDS continue to reference more subordinated debt. Since basis holders have an incentive for the company to default and trigger CDS, negotiations around capital structure adjustments are unlikely to be straightforward. With rising corporate actions, the fine print matters when it comes to investing.

Follow the liquidity

Beyond evaluating traditional fundamentals or technicals, one of the most important things to focus on in a deleveraging environment is new sources of leverage/capital. In the US, the dramatic policy response on the part of the Fed, FDIC and Treasury has been a major driver of credit over the past three months. The Fed has begun successfully pursuing a strategy to finance (and in some cases purchase) different types of credit assets. We feel they will expand this policy in 2009 to include other forms of corporate credit, having been so successful with their CP program. In addition, the ability to access TARP capital has lowered the market-implied default probability for many financial issuers. In each case, it has been profitable to anticipate/follow policy liquidity provisions. With the economy continuing to slow, the focus on cushioning the effects of the slowdown by supporting a variety of issuers/asset classes is likely to continue. Investors should incorporate both the direct effects as well as any unintended consequences of such interventions into their investment process.

US investment grade

Jeff Meli, Sherif Hamid, Shobhit Gupta, Hari Manappattil

Follow the liquidity

2008 has been a period of unprecedented volatility for the investment grade credit markets. We have seen a mass global deleveraging cycle across asset classes, the failures of multiple major financial institutions, breakdowns in the basic functioning of the financial markets, and the emergence of the worst global recessionary environment in at least 20 years. In response, there has been an unprecedented level of regulatory intervention in the financial markets, with literally trillions of dollars of liquidity flooding the market amid a veritable alphabet soup of new programs, including the TAFs, TALF, AMLF, PDCF, CPP, and many others. In the context of this macro and fundamental backdrop, we have seen a variety of dislocations across the market.

Investment grade cash credit has reached spread levels not seen since the Great Depression. During the downdraft, long duration paper has experienced particular underperformance and now trades at record low prices. Reflecting the broad deleveraging, the convertible bond market has experienced unprecedented volatility. In addition, the cash/CDS basis has exploded, reflecting the extraordinarily challenging funding conditions currently prevalent in the cash market.

We expect the unprecedented levels of market intervention on the part of the regulators to begin to take hold. However, we also think the real economic slowing that has become apparent over the past several months will continue to weigh on fundamentals. Our Economics colleagues now expect US GDP to continue to contract in Q4 08 and H1 09, with a slow recovery during the remainder of 2009. We thus expect the dynamic of improving liquidity offset by real economic weakness to be one of the prevalent themes in the near to medium term. Despite these broader concerns, as we wrote in our piece, *Cover Your Shorts As The Time To Get Long Approaches*, based on our fundamental leveraged buy-and-hold analysis, we believe investment grade credit on a macro level in cash and derivatives is now at attractive valuations overall, levels at which buy-and-hold investors can expect to achieve attractive risk-adjusted leveraged returns.

While we believe buy-and-hold fundamental levels are attractive, on a shorter-term basis considerable volatility will likely continue. For the full year 2009, we expect excess returns of at least 4-5% for cash investment grade corporate credit. This is based on overall corporate index spreads in the range of 600bp, a stressed 1-2% investment grade default rate in 2009 (reflecting the "worst observed" one-year investment grade issuer-weighted default rates seen during the 1930s), and our view that investment grade spreads will likely end 2009 at tighter levels. In addition, there is considerable return potential over and above the baseline levels if spreads return to some semblance of normalcy. It is also worth noting that assuming the 1-2% default rates mentioned above, the index would generate positive excess returns even after up to approximately 75-90 bp of further spread widening over the course of the year, which further bolsters our generally positive view on cash investment grade credit. That said, we believe investors will need to carefully navigate the current environment to find the most attractive risk/ reward opportunities.

Figure 21: Summary US investment grade credit views

Key theme	Summary view	Summary comments
Overall Barclays Capital Credit Index	Positive	At historically wide spreads, investors should be selectively long.
CDX IG	Positive	While we believe cash is a better value, at current levels, index provides attractive returns to leveraged investors.
Sector positioning	Defensive in the near term	Remain defensive from a macro perspective. Selected best relative values include Healthcare, Media Cable, Consumer Products, Distributors, Food & Beverage, high quality Banks, Communications. More conservative with respect to consumer discretionary and cyclical credits generally, and Integrated E&P, Refining, and Tobacco in particular.
Cash curves	Favor barbell approach	Long end is attractive given higher duration, convexity benefits due to low price, and very short-dated paper in high conviction credits.
CDS curves	Notional steepeners in tight spread names, notional flatteners in wide spread names	Trade tight spread names from the short side through notional neutral steepeners and trade wide spread names from the long side through notional neutral flatteners.
Quality	Favor single-A, select low price BBB	We believe the best relative value lies in the single-A category. This represents in part a sector call, as banking represents approximately 27% of the single-A index. We also like select lower-quality paper trading at material price discounts.
Supply outlook	Net supply into credit down significantly	Expect ~$750bn combined FDIC guaranteed and non-FDIC guaranteed debt, including $350-450bn of FDIC guaranteed, only $300-400bn of traditional supply. Net supply to credit expected to be down significantly from prior years as a result.
Cash/CDS basis	Should tighten, but will take time	We expect an eventual normalization in the cash/CDS basis as liquidity conditions improve and the relative funding differences between cash and CDS narrow.

Source: Barclays Capital

In summary, we echo the sentiment espoused in the overview – follow the liquidity. Credits that are immediate beneficiaries of the various regulatory interventions, including high quality banks, for example, are attractive investments. We also note that after the introduction of the new FDIC-guaranteed debt program for banks, the expected supply/demand balance in 2009 has become considerably more favorable for credit investors. This should be a material positive for the market overall.

Reflecting the liquidity view, we again note that the cash/CDS basis remains at historic wides. While it could take some time to begin to see the basis normalize, we believe that once we get through the potentially challenging year-end technicals, we will likely have seen the worst of the liquidity difficulties. Thus, we expect the basis to begin to slowly move back toward "normal" levels as liquidity improves and funding costs/haircuts come back down, though this correction process could take several quarters, and in the medium term we believe the basis will remain substantially wider than its levels prior to the credit crisis. From a trading perspective, we think investors with longer buy-and-hold timeframes, the ability to absorb mark-to-market volatility if necessary, and relatively cheap funding costs should consider selectively taking advantage of the dislocated cash/CDS basis. For the majority of investors who do not fall into the above category, we believe cash/CDS basis trades should be used judiciously to position for significant volatility in a credit and/or position for defaults, with an eye toward specific catalysts that could drive a correction in the basis.

From a sector perspective, given our bearish macroeconomic view, we generally continue to favor a largely defensive posture. That said, we believe investors should take into account not only the fundamental outlooks by sector, but also relative pricing/spread levels in determining their over/underweights. Later in this report, we

provide a framework to do so. In summary, we believe several defensive sectors, including healthcare, media cable, consumer products, distributors, and food & beverage continue to provide attractive relative value on the long side in cash. We also see compelling value in the previously mentioned high quality banks, as well as communications, where relatively defensive fundamentals have been offset by heavy issuance. Conversely, we also think more cyclical sectors including integrated E&P, refining, and tobacco continue to represent less attractive relative value and remain underweight those sectors.

With respect to quality, we believe the best relative value lies in the single-A category. This represents in part a sector call, as banking represents approximately 27% of the single-A index. While the banking sector led significant underperformance earlier this year on the back of the various liquidity facilities, we think there is currently good value in the sector and, thus, in the single-A quality bucket. We also note that a significant amount of lower quality paper now trades at material price discounts. Many of these situations are now beginning to represent interesting risk/reward, particularly as bonds trade toward recovery levels.

With respect to maturity, for similar convexity reasons, we believe the long end now represents the most attractive relative value in cash. In scenarios where the market experiences strong rallies, the high duration of long-end paper should generate the strongest performance. In addition, in scenarios where the market faces further weakness, the lower price on long bonds, on average, should help bolster long-end paper. In addition, given the significantly inverted curves in cash, we think very short-dated paper, particularly in credits where investors have high conviction positive views, represents compelling relative value. In CDS, with much of the investment grade corporate market trading with similarly flat curves, we believe the opportunities vary by spread level. Generically, we think investors should look to trade tight spread names from the short side through notional neutral steepeners and trade wide spread names from the long side through notional neutral flatteners.

Please see the following sections for further discussion of the various views discussed above.

2008 recap

Year-to-date, the Barclays Capital Credit Index widened 353bp and underperformed duration-matched Treasuries by 1,968bp (as of November 28) in 2008. This compares with 464bp of underperformance in 2007, and is the worst annual performance for investment grade credit since our data series began in 1973. The CDX IG also had its worst year on record, widening by 158bp (as of November 28).

Financials clearly led the underperformance – the worst-performing sectors were life insurance (-4,181bp of excess returns, with Genworth, Lincoln National, and AIG the major underperformers), REITS (-3,597bp), and brokerage (-3,544bp). Among industrial sectors, building materials (-3,336bp), lodging (-3,202bp), and metals and mining (-2,884bp) were the most affected.

Among individual credits, worst performers in 2008 were Lehman Brothers (-95.4%), Washington Mutual (-81.2%), MBIA (-74.7%), and Genworth (-72.5%). The best-performing credits were Countrywide Financial (+32.0%), Finland Republic (+472bp), and Bear Stearns (+325bp).

Given the lack of term floating rate issuance, 2008 is also poised for the heaviest fixed-rate issuance on record (even after excluding FDIC guaranteed debt). Total fixed rate issuance reached $585bn on December 2, close to the previous annual high of $587bn in 2001.

In the context of this recent performance, we provide further detail on our key views and recommendations in the following sections, including an outline of expected supply and demand for investment grade credit, and our views with respect to relative value across sectors, quality, and maturity.

Figure 22: 2008 YTD performance summary

Sector
Industrial: -1,986
Utility: -2,060
Finance: -2,438 bp
Non-corporate: -806 bp

Top 5 Credit Index Borrowers[1]
General Electric: -1,409 bp
European Inv. Bank: -240 bp
JP Morgan: -1,176 bp
Citigroup: -1,861 bp
KFW: -185 bp

Quality
Aa+: -1,034 bp
Single-A: -2,272 bp
BBB: -2,484 bp
X-Over: -3,311 bp

Maturity
1-4 yr: -1,049 bp
4-8 yr: -1,838 bp
8-15 yr: -2,296 bp
15+ yr: -3,019 bp

Best Sectors
Supranationals: -236
Foreign Agency: -463
Foreign Local Govt: -737
Aerospace/Defense: -1,174
Diversified Manufacturing: -1,192

Worst Sectors
Life Insurance: -4,181
REITS:-3,597
Brokerage: -3,544
Building Materials: -3,336
Lodging: -3,202

Best $1bn+ Issuers[3]
Countrywide Financial: +3,203 bp
Province of Sasktchewan: +132 bp
Canada Housing and Mortgage: +103 bp
Province of Manitoba: +64 bp
Development Bank of Japan: +9 bp

Worst $1bn+ Issuers[1]
Genworth Financial: -7,251 bp
Prologis: -6,460 bp
XL Capital: -5,494 bp
HCP Inc.:-4,980 bp
LTD:-4,864 bp

Supply and demand

Summary

- In our base case, we expect financials to issue $350-450bn of FDIC-guaranteed paper. In addition, we also forecast an additional $50-150bn of non-FDIC financial issuance, for a total of approximately $500bn of financial issuance.
- With respect to non-financial corporate issuance, in our base case, we expect in the range of $250bn of gross issuance in 2009. From a sector perspective, we forecast heavy issuance from the communications sector, driven by significant M&A and capex spending, and the energy and utilities sectors, again driven by heavy cap ex.
- We, thus, forecast approximately $750bn of total term issuance, including FDIC paper. With about 50% of the gross supply predicted to be FDIC guaranteed, we expect $300-400 billion of non-guaranteed gross issuance (in the base case). This would amount to net issuance into the term credit markets of -$300-450bn, which is significantly lower than the net issuance in the past few years. **This positive technical picture should provide a much needed boost to the market overall amid a challenging fundamental backdrop.**

[3] By market value on November 30, 2008.

Financials issuance – Alphabet soup

Financials have had limited access to the capital markets over the past several months – in fact, there has been no senior unsecured non-guaranteed issuance from a large bank or broker since September. Several of the government programs introduced in the past few months have been designed to help alleviate these funding constraints, including the FDIC Temporary Liquidity Guarantee Program (TLGP), the Commercial Paper Funding Facility (CPFF), and the Term Auction Facility (TAF). Some of these initiatives apply to a broad array of institutions and some only to bank holding companies – although several financials have been restructured into bank holding companies to qualify for the new programs, and we expect this trend to continue. To estimate financials issuance, we must incorporate the effects of these programs as well as more customary factors, such as maturities and balance sheet expansion.

The most important program affecting financials issuance is the TLGP. The final version of the plan was released on November 21. A number of uncertainties were resolved, and we believe the major hurdles to widespread participation have been overcome, as evidenced by almost $40bn of issuance since the program became effective. The key changes included:

- Full faith and credit: The FDIC guarantee carries the full faith and credit of the US government. We note that the initial transactions have cleared the market at spreads in the range of L+85bp, about 25bp back of comparable agencies.
- Timely interest and principal: The FDIC will make timely payments of interest and principal in the event of a payment default by a guaranteed issuer.
- Fee structure: The FDIC modified the original fee structure (flat 75bp per annum on all guaranteed debt, including interbank borrowing). Senior unsecured debt with maturities less than one month (31 days) will not be guaranteed and will not be charged a fee – although this debt does count toward the maximum amount of guaranteed paper an institution can issue. Debt with a maturity between 31 and 181 days will have a 50bp annual fee. Any debt with a maturity longer than 181 days will be charged 100bp per annum. This alleviates concerns about making interbank lending overly expensive.
- Risk weight and flexibility: The risk weight of FDIC-guaranteed paper will remain at 20% (the initial proposed level). Issuers will still have limited flexibility to issue guaranteed and non-guaranteed paper.

Net, we believe the slight negatives of the high risk weight and lack of flexibility are outweighed by the positive developments, particularly laddered fees, timely payment of interest and principal, and the strong guarantee language. We expect further broad participation in the plan. At this point, the question is about the size of issuance over the next seven months, as the program should be appealing for most, if not all, large banks and the number of non-bank institutions that plan to issue guaranteed debt has increased as well.

The total potential size of the guaranteed issuance is enormous – almost $1.4trn, before scaling it up by 125%. The size is driven by the inclusion of interbank borrowing when computing the totals – despite the fact that most interbank transactions are overnight, so will not carry a guarantee. We sum the interbank, CP, and term maturities of the 30 largest banks plus MS and GS in Figure 23. This incorporates all senior unsecured debt that matures between September 30 2008 and June 30, 2009. We also include three institutions we expect to issue guaranteed debt – GE, AMEX, and CIT. Other companies that may also eventually issue are not included; for example, several insurance companies have recently acquired bank holding companies. We believe issuance from these names will be limited by

virtue of the small number of near-term maturities (the main motivation behind the acquisitions is access to TARP capital rather than to the FDIC program).

Figure 23: Financial issuer term maturities

			Term maturities		
	Interbank	CP	Q4	H1	Total
Banks	750	200	97	159	1,206
GE	--	88	16	34	138
AMEX	--	15	1	10	26
CIT	--	-	3	3	6
Total	750	303	117	206	1,376

Source: Bloomberg, Barclays Capital

Not all of this will be issued, and more importantly, not all of it will be issued as term debt. We expect actual term issuance to be materially lower than the potential for several reasons. First, we do not forecast significant substitution away from interbank borrowing into term maturities. The elimination of the fee for unsecured borrowing with a maturity less than 31 days means that banks will not pay the fee on most interbank transactions. As a result, they have less incentive to term out overnight borrowing, as it will likely be a cheaper source of funding. In addition, the interbank markets have improved dramatically as the various government programs have taken effect – evidenced by the drop in Libor.

Second, we expect limited substitution away from CP into term maturities. The combination of the lower fee (50bp as opposed to 100bp) for CP with the ability to issue directly into the CPFF reduces the near-term incentives to replace it with term debt. The CPFF has improved conditions in the CP market – if this proves temporary, we may see substitution away from CP toward the end of the FDIC program, which is scheduled to end two months after the CPFF. However, we think the government will extend the CPFF if funding in that market remains difficult, due to the effect on non-bank issuers without access to the TLGP.

Including short-term borrowing when computing the cap on guaranteed issuance, but not when computing the amount of actual guaranteed debt issued, does provide issuers the flexibility to effectively pre-fund maturities coming due in H2 09. This is particularly likely if the primary corporate bond market does not improve in Q1. Although we expect the primary market to improve somewhat, we include some substitution from H2 in our forecasts for guaranteed issuance. Non-bank issuers of guaranteed paper have less flexibility to pre-fund issuance because they do not have short-dated interbank borrowing contributing to their cap. However, CP does count, and companies could reach the 125% cap by issuing term debt rather than expanding their CP program. The totals are contained in Figure 24.

Figure 24: Potential FDIC guaranteed term issuance

	Potential term issuance	
Banks	Q4 and H1 Maturities	255.6
	Include H2 Maturities	365.6
Non-banks	Q4 and H1 Maturities	67.4
	Include H2 Maturities	118.5
Total	Q4 and H1 Maturities	323
	Include H2 Maturities	484.1

Source: Bloomberg, Barclays Capital

Our analysis implicitly assumes that bank balance sheets do not expand in 2009 – our base-case given our expectations for target Tier 1 ratios, further losses, NIM, etc. However, in a bullish scenario with lower-than-expected losses or where moral-suasion limits the increase in Tier 1 ratios, we believe banks can expand their balance sheets by 10%, or about $1trn. Assuming the funding breakdown remains unchanged from the current mix, term maturities will fund about 10% of the increase. This would add about $50bn to issuance in H1 and H2.

The TAF will also influence financial issuance. Banks are now funding $407bn of assets via the TAF. The size of the program can grow further, although participation in the auctions has fallen recently, as banks fund themselves through a variety of government programs. The most recent auction had a 70% bid cover ratio,. This is the continuation of a trend – auctions earlier in November had cover ratios around 90%, and those in October had cover ratios as high as 180%.

Assuming that the cover ratio stays at 70% through year-end (except for the forward auctions, which have had little sponsorship), this program will expand to $454bn. Given the funding options now available to banks, we expect the TAF notional to not expand materially in early 2009, and to begin decreasing in H2. Again assuming term maturities will make up 10% of the replacement funding, this could add $45bn to bank issuance in H2.

Net, we expect $350-600bn of FDIC-guaranteed issuance. The upper end of the range is likely to be met in either a very bullish or very bearish environment. In a bullish scenario, balance sheet expansion will increase issuance, and in a bearish scenario, other funding options will remain restricted – particularly interbank borrowing and CP, which could cause a rush to issue guaranteed paper in late Q2.

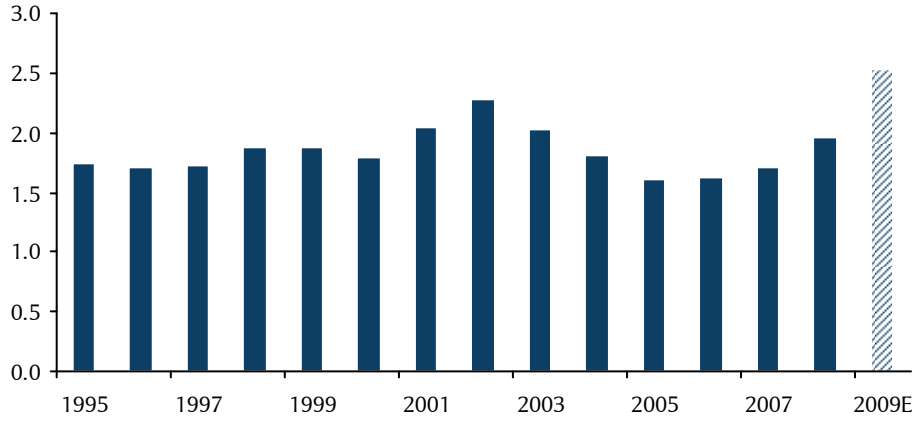
We expect term bank issuance of $0-100bn in H2, depending on how much is pre-funded with guaranteed paper and how quickly TAF funding is replaced. Additional unsecured debt will come from insurance and finance companies, which make up a much smaller percentage of total financials issuance. In 2009, there will be approximately $27bn insurance maturities and $46bn finance company maturities. However, not all of this will come as unsecured debt. First, we have seen companies with questionable access to the credit markets choose to draw revolvers in advance of upcoming maturities. Genworth is an example: it has about $1.1bn of debt maturing in 2009 and recently drew $930mn of a revolver (due 2012) to cover that maturity.

Second, some of these maturities are likely to be rolled into FDIC guaranteed paper. Several finance companies are attempting to become bank holding companies. In addition, insurance companies have been buying banks recently: eg, The Hartford agreed to acquire Federal Trust Bank and Lincoln Financial Group agreed to acquire Newton County Loan and Savings. Both companies subsequently applied to receive TARP capital, which is the main motivation behind these purchases. However, they may eventually be allowed to issue guaranteed paper as well. Guessing the exact distribution between guaranteed and non-guaranteed debt is impossible; we assume that 50% of the issuance in H1 will be under the FDIC program. This results in about $50bn of non-guaranteed term issuance to be added to the total from banks, for an overall range of $50-150bn of non-guaranteed debt.

Non-financial issuance – Filling the funding gap

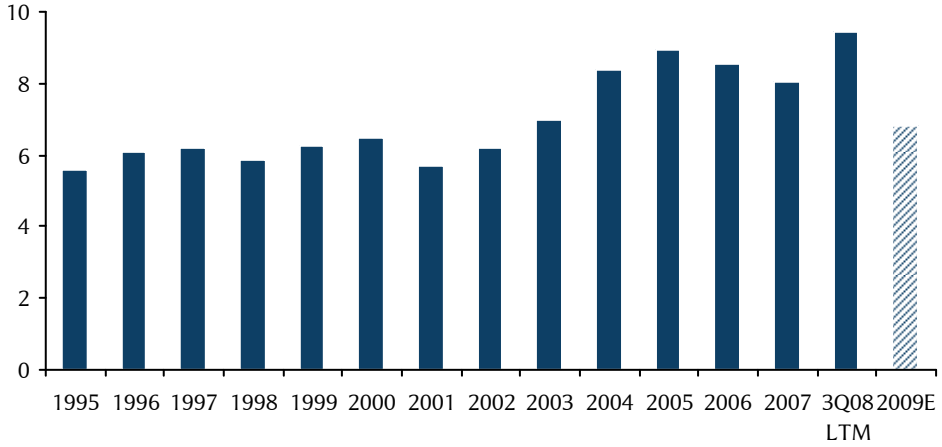
With respect to non-financial issuance, we note that despite the difficult market conditions, non-financial issuance on a YTD basis has been relatively high, led in general by large, liquid, high-quality benchmark issuers. In a historical context, this should not be surprising.

Figure 25: US investment grade non-financial leverage trends



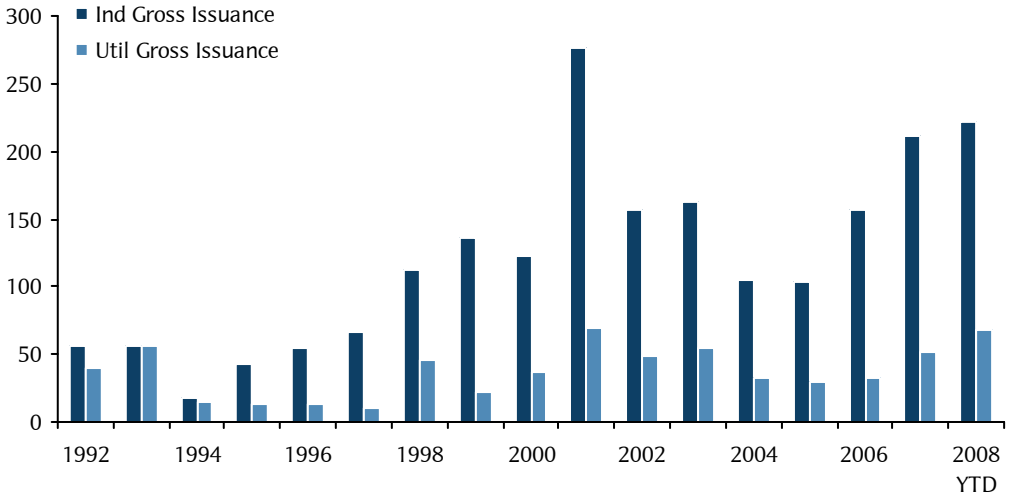
Source: Factset, Bloomberg, Barclays Capital

Figure 26: US investment grade non-financial interest coverage trends



Source: Factset, Bloomberg, Barclays Capital

Figure 27: US investment grade non-financial fixed rate corporate supply



Source: Bloomberg, Barclays Capital

Somewhat counter-intuitively, on a historical basis, we have typically seen heavy term issuance from non-financial issuers during periods of broader weakness, as issuers have had

greater funding gaps during these periods of fundamental weakness. In addition, during such periods, companies have usually placed a premium on maintaining healthy liquidity profiles, and have, thus, been incentivized to term out their funding, as occurred in 2001-03 and has been seen thus far this year. We note that combined industrial and utility fixed term issuance this year-to-date has been over $290bn, making 2008 the second heaviest non-financial corporate issuance year on record (Figure 27).

We expect 2009 to be another heavy issuance year. As shown in Figure 29, we performed a detailed top-down driven issuer-by-issuer analysis of investment grade non-financial issuer cash flow to arrive at our 2009 issuance expectations. In particular:

- In our base case, we assumed that 2009 would continue to exhibit the real economic weakness that has become apparent during H2 08. On a sector by sector basis, we assumed that revenue trends will be similar to the worst seen over the past 15 years, comparable with the negative trends seen in 2001 and 2002. This equated to an approximate 7% revenue decline and a 17% EBITDA decrease in aggregate.
- We assumed capital expenditures on an aggregate basis would be effectively unchanged y/y. While many issuers have begun to cut back their planned capital expenditures, we believe it will be difficult for issuers to cut near-term capex. In addition, we note many issuers had previously planned for material increases in capex in 2009 versus 2008.
- We assumed other investing activities ex capex (primarily M&A) would be down on the order of 65% in aggregate. This largely reflects the major previously announced cash M&A transactions that remain to be closed.
- We assumed cash dividends in the aggregate would remain similar to current levels for non-financial issuers, but assumed a generic 50% decline in share repurchase activity, reflecting the weaker expected cash flow generation.
- $112bn of non-financial bond maturities (ex GE) are redeemed through year-end 2009.
- Lastly, we assume that 80% of the resulting funding needs are financed in the term debt markets, roughly reflecting existing corporate capital structures, with the remainder funded through the CP and bank loan (primarily existing revolvers) markets.

Figure 28: US investment grade non-financial maturities by sector

($mn)	Remaining 2008 maturities	2009 maturities	2008/2009 total
Basic Materials	626	5,963	6,589
Communications	350	17,126	17,476
Consumer, Cyclical	0	11,053	11,053
Consumer, Non-cyclical	1,835	21,665	23,500
Energy	27	8,463	8,490
Industrial Ex GE	896	17,771	18,667
Technology	1	15,622	15,623
Utilities	890	10,112	11,002
Total	4,625	107,775	112,400

Source: Bloomberg, Barclays Capital

Figure 29: US investment grade non-financial aggregate cash flow analysis ($ mn)

		2009E corporate estimates		
	Q3 08 LTM	Downside	Base	Upside
Revenue	6,982,584	6,327,444	6,464,223	7,414,388
% Revenue Growth		*-9.4%*	*-7.4%*	*6.2%*
EBITDA	1,158,740	918,647	965,709	1,280,243
% EBITDA Growth		*-20.7%*	*-16.7%*	*10.5%*
Interest Expense	89,642	96,240	95,211	90,249
Cash from Ops	**855,632**	**695,026**	**725,617**	**930,064**
Capex	(455,381)	(453,849)	(453,849)	(453,849)
Other Investing (incl. M&A)	(150,159)	(49,300)	(49,300)	(49,300)
Cash from Investing	**(605,540)**	**(503,149)**	**(503,149)**	**(503,149)**
Dividends	(168,203)	(167,809)	(167,809)	(167,809)
Share Repurchases	(307,038)	(150,829)	(150,829)	(150,829)
Other Financing (inc. Net Issuance)	284,975	200,372	178,247	72,599
Cash from Financing	**(190,266)**	**(118,266)**	**(140,391)**	**(246,039)**
Total Estimated Change in Cash	**59,826**	**73,612**	**82,076**	**180,876**
Total Debt	**2,280,102**	**2,447,940**	**2,421,752**	**2,295,536**
Total Debt/EBITDA	**1.97x**	**2.66x**	**2.51x**	**1.79x**
EBITDA/Interest Expense	**12.93x**	**9.55x**	**10.14x**	**14.19x**
Estimated Funding Needs:				
Gross Funding Needs ex GE		**319,784**	**298,742**	**199,666**
% of Funding in Term Debt Markets		80%	80%	80%
Estimated Gross Supply ex GE		**255,827**	**238,994**	**159,733**
Bond Redemptions ex GE		112,400	112,400	112,400
Estimated Net Supply ex GE		**143,427**	**126,594**	**47,333**

Note: Aggregate data for ~300 non-financial US IG corporates, 2009E assumes similar capex and dividends, share repurchases reduced 50%, cash spent in Other Investing Activities down approximately 65% as well. 80% funding in term debt markets assumed based on current company capital structures. Remainder assumed funded in bank and CP markets. Source: Bloomberg, Barclays Capital

From this analysis, in our base case, we expect approximately $250bn of gross non-financial corporate issuance in 2009. Even in our optimistic case, where we assume sector revenue growth essentially at the average levels of the past 15 years, we still forecast around $200bn of issuance, and note potential upside to that number in scenarios in which corporate M&A and repurchase activity pick up along with economic activity.

From a sector perspective, we forecast heavy issuance from the communications sector, driven by significant M&A and capex spending, and the energy and utilities sectors, again driven by heavy capex (Figure 30). Notable expected large issuers include Verizon (M&A), AT&T (M&A, capex), Dow Chemical (ROH acquisition), Wal-Mart (maturities), Time Warner Cable (special dividend), Hewlett Packard (EDS acquisition), and IBM (acquisitions, maturities), among others (Figure 31).

Barclays Capital is acting as financial advisor to Centennial on the potential sale of the company to AT&T. The rating on Centennial has been temporarily suspended due to Barclays Capital's role. Barclays Capital is acting as joint financial advisor to Vodafone with respect to Verizon Wireless' agreed acquisition of Alltel Corp. Verizon Wireless is a 45% owned affiliate of Vodafone. The ratings on Verizon Communications do not incorporate this deal.

In addition to the issuers considered above, we also note the potential for Yankee issuance to continue to be significant in 2009. While many non-US issuers have tapped their home markets more aggressively during the recent market volatility, Yankee corporate issuance has remained relatively high, led by higher quality issuers (Figure 32). There could, thus, be potential upside to our issuance numbers from continued strong Yankee issuance in the US. We would, therefore, skew our supply expectations to the higher side of our estimates to account for this potential source of issuance.

Figure 30: US investment grade non-financial base case estimated supply by sector

$mn	Est gross supply	08/'09 maturities	Est net supply
Basic Materials	19,722	6,589	13,133
Communications	46,356	17,476	28,880
Consumer, Cyclical	33,781	11,053	22,728
Consumer, Non-cyclical	18,934	23,500	(4,566)
Energy	36,875	8,490	28,385
Industrials ex GE	26,049	18,667	7,382
Technology	17,181	15,623	1,558
Utilities	40,095	11,002	29,093
Total	238,994	112,400	126,594

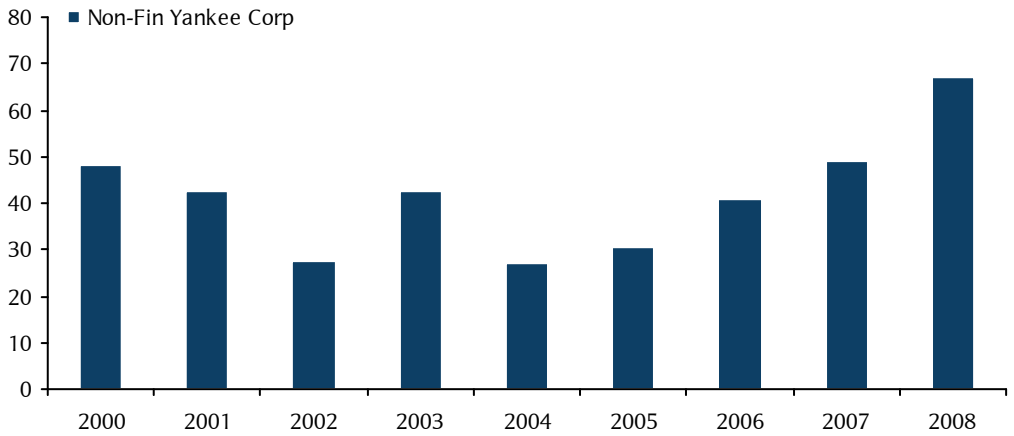
Source: Bloomberg, Barclays Capital

Figure 31: Significant expected US investment grade non-financial issuers

DOW	DUK	VZ/VZW	PG
DD	PGN	T	LLY
AA	DUK	HPQ	TXT
KMP	SO	IBM	BA
COP	AEP	TWC	M
SUG	PCG	CMCSA	HD
MRO	FPL	WHR	WMT
EEP	ED	CAT	TGT
TRP	EIX	DE	CVS

Source: Barclays Capital estimates

Figure 32: Recent non-financial Yankee issuance trends ($ bn)



Source: Barclays Capital

Corporate demand – Who'll lap it up?

Our base case estimate for gross financial issuance (including FDIC guaranteed paper) is approximately $500bn and, as noted above, we expect approximately $250bn from non-financial corporate issuers. **Thus, we expect total gross term issuance to be approximately $750bn including FDIC paper.**

Perhaps more important than the level of issuance will be determining the amount of difficulty that the market will have in absorbing this issuance. We believe this will, in large part, be determined by the composition of that supply and the resulting potential participation of less traditional investors.

Supply composition

In addition to the total issuance, one key determinant of the demand and eventually the pricing for the supply is the fraction of the paper which is FDIC guaranteed. In a scenario where financials issue guaranteed paper to replace debt rolling off in Q4 08 and H1 09 only, we estimate that the supply of this paper could be $350-450bn, or, about 50% of the gross issuance, resulting in about $300-400bn of non-guaranteed debt issuance.

FDIC-guaranteed supply

We expect $350-450bn of FDIC-guaranteed supply in the base case. While the lower yield of this paper makes it less attractive to traditional corporate investors, its strong backing (by the "full faith and credit" of the US Government) will make it appealing to agency investors. We also note that our base case estimate for net agency issuance is roughly zero, which would imply that the gross issuance will be about $235bn – the total debt rolling off in 2009 across the two agencies.

In addition, the Federal Reserve has announced that it will be buying up to $100bn in direct debt from Fannie Mae, Freddie Mac, and Federal Home Loan Banks, which would be a source of additional demand outside of the regular investor base, and combined with our expectation of zero net issuance of agency paper, would result in effective net issuance of -$100bn of agency debt. As a result, we expect at least part of the agency investor base to consider guaranteed paper. We also think guaranteed paper, especially from smaller issuers, will continue to come at relatively cheap levels versus traditional agency paper, which would make it appealing to marginal corporate investors from a risk-adjusted return perspective. The recent Goldman Sachs FDIC-guaranteed issue, for example, was priced at T+200bp.

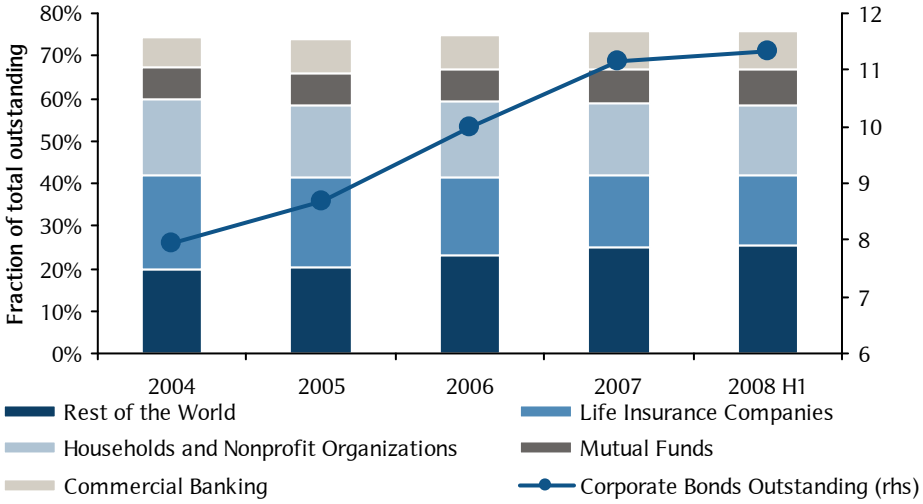
Non FDIC-guaranteed supply

As mentioned above, we expect $300-400bn of non-guaranteed gross issuance (in the base case). This would amount to net issuance of -$300bn to -$450bn, which is obviously much lower than the net issuance in the past few years. For comparison, the net supply of fixed rate IG corporate bonds was about $265bn in 2007 and $108bn in 2006. The net supply, including floating rate bonds, was higher. This significant decline in net issuance in itself would appear to be very favorable for the absorption of that issuance, but a further analysis of the expected dynamics among corporate investors is telling.

Traditional corporate investors

The investor base for traditional corporate bonds has remained fairly stable over the past few years, even as the amount of bonds outstanding has increased substantially (Figure 33). Driven by heightened demand from sovereign funds, foreign and central banks, the total share of the corporate bond market held by foreign investors has increased from 20% to 25% since 2004. The dollar allocation of life insurance companies and households to corporate bonds has risen slightly but their share of the market has decreased in the past four years.

Figure 33: Percentage of corp bonds held by top five investor types



Source: Federal Reserve, Barclays Capital

The change in corporate bond holdings (including foreign bonds) for some select investor types is specified in Figure 34. Funding corporations, including Maiden Lane LLC, the vehicle set up by the Fed to finance Bear Stearns assets acquired by JPMorgan, were major sources of demand for corporate bonds in H1 08. Foreign investors were also net investors in corporate bonds in H1 08 although they scaled back significantly compared with levels in 2006 and 2007. GSEs and households pulled back from the corporate bond market.

Figure 34: Change in corporate (including foreign) bond holdings ($bn)

Investor Class	2006	2007	H1 08
Funding Corporations*	-7	110	215
Mutual Funds	106	140	76
Rest of the World U.S.	557	470	70
Money Market Mutual Funds	105	9	15
Life Insurance Companies	-2	42	15
Private Pension Funds	9	23	10
Government-sponsored Enterprises	17	-18	-44
Households and Nonprofit Organizations	268	153	-59

*Note: *Includes loans from FR Board to Maiden Lane LLC. Source: Federal Reserve, Barclays Capital*

With their access to short-term funding limited, we expect demand from funding corporations to be significantly diminished in 2009. The pullback by GSEs and households should also continue into 2009 with the latter, in particular, being affected by the broader economic weakness.

We expect these demand reductions to be partly offset by a much reduced but still positive fund inflow from mutual funds and foreign buyers, positive inflows from pension funds and life insurance companies, and the natural cash generation on the part of existing holders due to coupon payments and maturing debt. Lastly, we could also see an increased allocation to credit by equity funds, especially in the long end, as they look to monetize the dislocations in the credit market brought about by the financial turmoil.

Overall, with lower gross issuance (and negative net issuance) of non-guaranteed paper forecasted in 2009, given the expected dynamics discussed above, we believe that there should be ample demand to cover this supply even amid reduced allocations and a broad

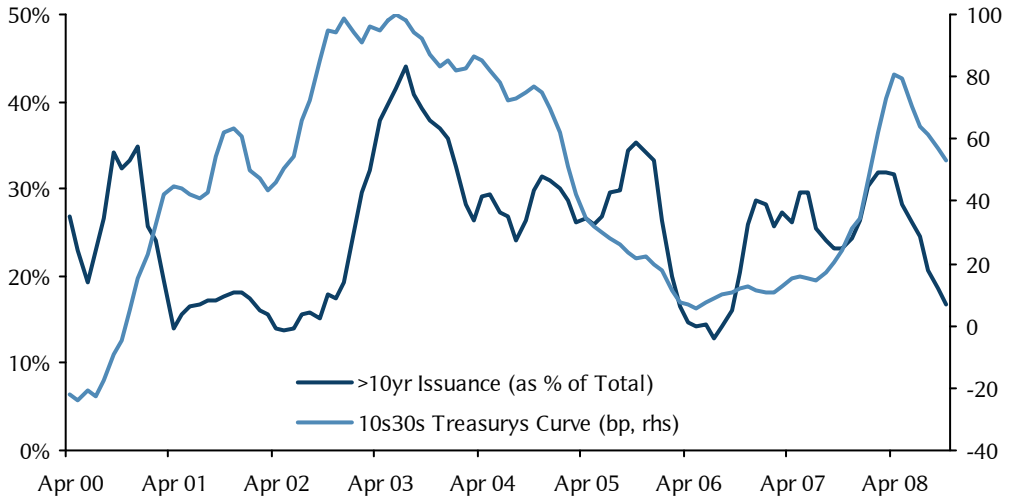
pullback from credit on the part of some investor segments. The predicted shift in the sources of demand across the investor base, with a higher fraction of the demand coming from equity, pension funds and life insurance companies could have important ramifications for demand and supply along the curve as we discuss later in this section. In addition, some fraction of the investor base in the short end could move to FDIC-guaranteed paper, given its relatively attractive yield for the credit risk.

Supply and demand across the curve

With respect to supply and demand for corporate debt across the curve, financials and non-financial issuance in 2009 should follow differing trends.

Financial supply will be likely be heavily skewed toward the front end, given the significant expected FDIC-guaranteed supply, which will generally have a maturity of three years or less. Conversely, on the non-financial front, we forecast relatively muted issuance in the front end. Issuers are more likely to term out their debt, given that we expect increased demand for longer tenor paper from pension funds and equity investors, both of whom will likely find the high all-in yields appealing. Also, environments with steeper treasury curves have historically seen increased issuance of long-dated debt as a percentage of total debt outstanding (Figure 35). While investors will likely want long-end paper, given relatively high all-in costs of capital, we believe companies, particularly higher quality issuers, will likely push a significant amount of issuance back into the 5yr to 10yr "belly" of the curve.

Figure 35: Long tenor issuance versus US Treasury curve



Source: Barclays Capital estimates

Sector recommendations

One of the key differentiated calls investors can make, particularly during periods of significant macroeconomic uncertainty, are their sector over/underweights. In this section, we provide some historical context with respect to sector fundamental trends and returns in prior cycles, relate those trends to the current environment, and provide a top-down framework for thinking about sector relative value currently. In summary:

- While we continue to favor defensive sectors in the near term, one of the key challenges will be navigating the eventual market turn.

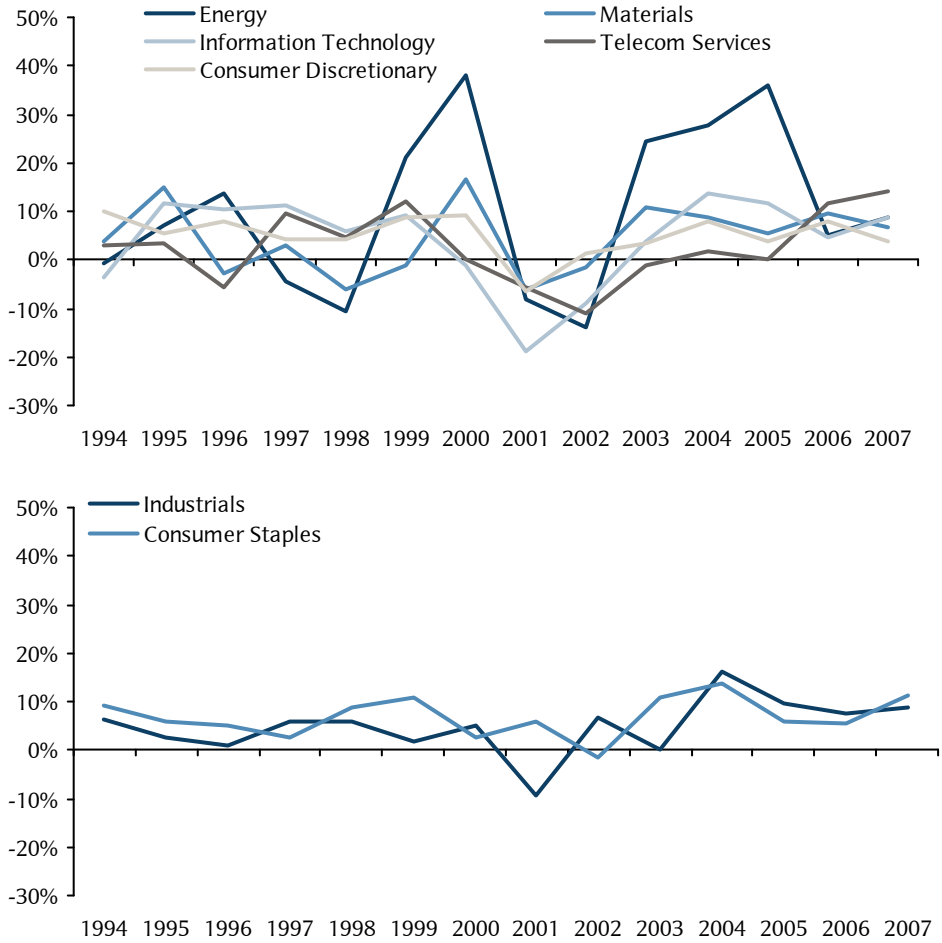
- We believe it makes sense for investors to screen for spread per unit of volatility to identify relative value across sectors and develop a view on when/at what relative levels it makes sense to become more aggressive.
- Based on our relative value screen, a mixture of defensive and less defensive sectors appears to provide attractive value. We believe this measure in combination with our fundamental analyst team's sector ratings highlight several attractive opportunities.
- Several sectors rated overweight by our analysts also show up as attractive relative values on our top-down screen. These include healthcare, media cable, consumer products, distributors, and food & beverage. We also note relatively attractive value in the banking sector, where we and our analyst teams favor the large, diversified money-centre banks, particularly given the introduction of the various new government-related funding sources for the sector, and in the communications sector, where relatively defensive fundamentals have been offset by recent heavy issuance.
- Conversely, several sectors that our analyst teams view as underweights also show up as unattractive per the relative value screen. These include integrated E&P, refining, and tobacco.
- Several sectors that appear to offer interesting relative value opportunities from a historical perspective but where our fundamental analysts maintain less constructive near-term views include REITs, finance companies, insurance, paper, building materials, home construction, and lodging. We believe these will be critical sectors to watch in the near term, and making calls around these particular sectors will likely be a material performance driver in 2009. We will continue to monitor these sectors closely and await signs of some fundamental stabilization before becoming more constructive, despite the historically wide spreads.

Defensive sectors

Over the past year, we have repeatedly highlighted that as we enter the current cyclical slowdown, investors should be positioned in "defensive" sectors. In general, we view this as meaning sectors that are relatively less sensitive to broader economic conditions.

From a fundamental perspective, in Figure 36, we note sector revenue trends (for the major non-financial subsectors of the S&P 500). Based on historical revenue sensitivity, the energy, telecom services, information technology, materials, and consumer discretionary sectors all appear to have significant cyclicality, whereas the industrials and consumer staples subsectors have been less cyclically sensitive. That said, we believe a more important way for investors to define/consider sector defensiveness is to look at return performance through cycles rather than fundamental trends. The key question is: are the fundamentals borne out in historical returns?

Figure 36: Sector historical revenue trends



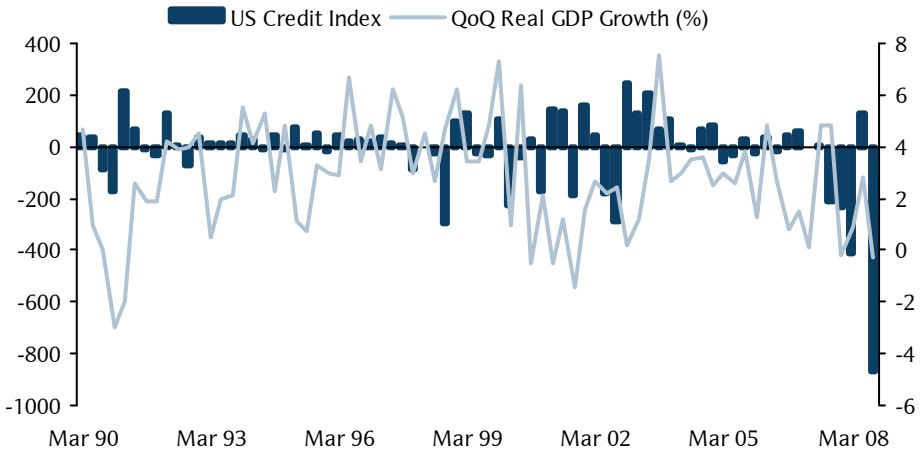
Source: Standard & Poors

As shown in Figure 37, there has appeared to be some cyclicality in overall credit excess returns (correlation ~ +0.2). On a sector by sector basis, however, there is material divergence around this overall market correlation, ranging from -0.1 to +0.38. We believe that the correlation of returns is one important indicator of sector defensiveness. The other important indicator, in our view, is sector volatility. Particularly for investment grade credit, where investors are (in most markets) inherently short volatility, we think an explicit consideration of volatility is a critical component in considering a sector's defensiveness.

In Figure 38, we lay out historical information for the major corporate sectors from January 1990 through September 2008. We included sector historical correlations with quarterly US real GDP growth, annualized average excess returns, and the annualized standard deviation of returns. We also combine a scaled version of the historical correlation with GDP growth and the standard deviation of returns into a "defensiveness indicator" for each sector.

As shown in Figure 39 and Figure 40, the subsectors identified as "most defensive" have outperformed the broader US Credit Index by a significant 480bp on average on a year-to-date basis through September. These same subsectors also considerably outperformed during previous downturns including 1990 and 2002. Conversely, the subsectors identified as "least defensive" have underperformed the broader index by over 250bp on average year-to-date through September. These same subsectors also underperformed by significant margins in 1990 and 2002.

Figure 37: US credit index excess returns (bp) vs US real GDP growth



Source: Bloomberg, Barclays Capital

Figure 38: Defensiveness rankings by sector

	Correlation w/ real GDP growth	Annualized avg excess return (bp)	Annualized SD of excess returns (bp)	Sharpe ratio	Scaled correlation w/ GDP	Defensiveness indicator
REITs	0.091	35.04	352	0.10	242	594
Consumer NonCyclical	0.156	5.10	213	0.02	418	631
Communications	0.066	-48.35	504	-0.10	176	680
Financial Other	0.162	-76.81	263	-0.29	433	696
Capital Goods	0.169	-16.64	245	-0.07	452	696
Banking	0.146	-34.07	361	-0.09	391	753
Basic Industry	0.187	8.55	271	0.03	501	772
Electrics	0.170	-59.82	335	-0.18	454	789
Insurance	0.127	-81.56	478	-0.17	341	819
Energy	0.200	-1.22	331	0.00	536	867
Natural Gas	0.165	-108.17	483	-0.22	442	925
Consumer Cyclical	0.213	-58.87	372	-0.16	571	943
Transportation	0.237	-4.13	332	-0.01	635	967
Financial Companies	0.204	-73.95	430	-0.17	547	977
Brokerage	0.179	-121.99	783	-0.16	479	1262
Technology	0.325	-145.42	405	-0.36	871	1276

Note: Defensive Indicator equals the sum of scaled correlation with GDP and annualized standard deviation. Lower scores are "more defensive", higher scores are "less defensive". Source: Bloomberg, Barclays Capital

Figure 39: Most defensive subsector historical returns (bp)

	YTD Sep 08 excess returns	1990 excess returns	2002 excess returns
US Credit Index	-1132	-177	-181
Environmental	-799	-140	380
Healthcare	-461	-84	-29
Industrial Other	-453	NA	305
Constr. Machinery	-523	-21	287
Chemicals	-468	-62	66
Consumer Products	-511	128	278
Supermarkets	-568	48	-332
REITs	-884	-142	177
Textile	-1285	-357	297
Food & Beverage	-575	26	163
Avg	**-652**	**-67**	**159**

Source: Barclays Capital

Figure 40: Least defensive subsector historical returns (bp)

	YTD Sep 08 excess returns	1990 excess returns	2002 excess returns
US Credit Index	-1132	-177	-181
Pipelines	-891	-31	-1921
Building Materials	-1111	38	133
P&C	-939	NA	-138
Lodging	-1097	-1158	678
Life	-2613	NA	-299
Airlines	-1303	-400	-871
Brokerage	-3453	121	-289
Technology	-644	-1173	-92
Restaurants	-1285	NA	NA
Automotive	-529	-180	-1172
Avg	**-1387**	**-398**	**-441**

Source: Barclays Capital

When it pays to get more aggressive

While identifying those sectors that are defensive has been and will likely continue to be beneficial for investors in the near term, we believe one of the key questions in trying to navigate the current markets is when to get more aggressive with respect to sector positioning. To help answer this question, we start by examining relative sector performance during recent prior downturns.

In Figure 41, we lay out sector performance relative to the US Credit Index around three previous downturns, in bp of out/underperformance on an excess return basis. The periods considered include September 1990 through March 1991, January 1993 through March 1993, and October 2002 through December 2002. We examined the quarter prior to the downturn listed, the downturn period, and the periods 1Q, 2Q, and 4Q following the downturn.

Unsurprisingly, we have generally seen more cyclical/less defensive sectors show up prominently as underperformers going into and during economic downturns (eg, autos, independent E&P, lodging in 1990, airlines, wireless, and restaurants in 2002). Also unsurprisingly, generally, more defensive sectors have lead performance in advance of and during downturns (consumer products and healthcare in 1990 and 2002, electric utilities and media cable in 1993).

More interestingly, coming out of downturns, we have typically seen a reversal of these trends. For example, in 1990, less defensive sectors including lodging and airlines were among the top performers relative to the overall index, and healthcare and pharma were among the worst. Similarly, in 2002, airlines, wireless, refiners, and autos, which were among the worst performers going into the downturn, were among the top performers coming out. Importantly, in examining the performance trends coming out of cycles, while timing the broad economic cycle would obviously be positive, we have typically seen enduring outperformance from many of the “best performers” over several quarters following downturns.

Figure 41: Sector relative performance versus US Credit Index during prior economic downturns (bp)

Best-performing Sectors Quarter Prior to '90 Slowdown	
Entertainment	148
Distributors	101
Paper	84
Textile	66
Refining	65
Home Construction	65

Best-performing Sectors During '90 Slowdown	
REITs	169
Consumer Products	150
Distributors	148
Railroads	140
Gaming	130
Integrated	124
Healthcare	121
Entertainment	119

Best-performing Sectors Q1 after '90 Slowdown	
Lodging	201
Aerospace/Defense	143
Home Construction	99
Airlines	80
Banking	72

Best-performing Sectors Q2 after '90 Slowdown	
Lodging	341
Aerospace/Defense	243
Home Construction	197
Textile	89
Paper	76

Best-performing Sectors Q4 after '90 Slowdown	
Lodging	368
Aerospace/Defense	298
Home Construction	261
Airlines	252
Banking	156

Worst-performing Sectors Quarter Prior to '90 Slowdown	
Industrial Other	-37
Health Insurance	-37
Financial Other	-37
REITs	-42
Pharmaceuticals	-47
Independent	-59
Automotive	-203

Worst-performing Sectors During '90 Slowdown	
Wirelines	-240
Aerospace/Defense	-279
Lodging	-380
Technology	-977
Automotive	-981
Home Construction	-1186
Packaging	-2988

Worst-performing Sectors Q1 after '90 Slowdown	
Consumer Products	-61
REITs	-63
Industrial Other	-64
Health Insurance	-64
Financial Other	-64
Pharmaceuticals	-68
Distributors	-81

Worst-performing Sectors Q2 after '90 Slowdown	
Consumer Products	-74
Constr. Machinery	-80
Brokerage	-87
Environmental	-132
Pipelines	-170

Worst-performing Sectors Q4 after '90 Slowdown	
Pharmaceuticals	-139
Industrial Other	-146
Financial Other	-146
Health Insurance	-146
Pipelines	-155

Best-performing Sectors Quarter Prior to '93 Slowdown	
Electrics	122
Media Cable	120
Telecommunication	106
Distributors	58
Refining	39
Services	28

Best-performing Sectors During '93 Slowdown	
Home Construction	123
Automotive	106
Media Cable	97
Banking	90
Transportation Services	81

Best-performing Sectors Q1 after '93 Slowdown	
Airlines	197
Media Cable	160
Home Construction	127
REITs	86
Metals	64
Pipelines	62

Best-performing Sectors Q2 after '93 Slowdown	
Airlines	178
REITs	140
Home Construction	122
Metals	104
Supermarkets	102

Best-performing Sectors Q4 after '93 Slowdown	
Airlines	256
Home Construction	237
Metals	217
Tobacco	193
Divers Manufacturing	176

Worst-performing Sectors Quarter Prior to '93 Slowdown	
Aerospace/Defense	-77
Automotive	-80
Technology	-85
Divers Manufacturing	-85
Home Construction	-168
Airlines	-169
Lodging	-1074

Worst-performing Sectors During '93 Slowdown	
Tobacco	-39
Distributors	-59
Telecommunication	-81
Electrics	-104
Airlines	-261

Worst-performing Sectors Q1 after '93 Slowdown	
Food & Beverage	-48
Tobacco	-56
Railroads	-68
Pharmaceuticals	-68
Packaging	-76

Worst-performing Sectors Q2 after '93 Slowdown	
Pharmaceuticals	-78
Technology	-98
Packaging	-100
Entertainment	-293
Tobacco	-336

Worst-performing Sectors Q4 after '93 Slowdown	
Railroads	-104
Electrics	-113
Technology	-149
Entertainment	-218
Lodging	-349

Best-performing Sectors Quarter Prior to '02 Slowdown	
Packaging	431
Consumer Products	351
Textile	338
Railroads	303
Restaurants	289
Independent	287
Health Insurance	285
Financial Other	285
Industrial Other	282
Healthcare	281

Best-performing Sectors During '02 Slowdown	
Wireless	1276
Media Cable	1022
Telecommunication	885
Wirelines	818
Entertainment	735

Best-performing Sectors Q1 after '02 Slowdown	
Wireless	539
Refining	265
Media Cable	260
Electrics	231
Telecommunication	215

Best-performing Sectors Q2 after '02 Slowdown	
Wireless	679
Media Cable	471
Services	453
Airlines	412
Refining	333
Home Construction	328

Best-performing Sectors Q4 after '02 Slowdown	
Airlines	737
Wireless	652
Services	583
Media Cable	563
Refining	498
Automotive	471

Worst-performing Sectors Quarter Prior to '02 Slowdown	
Oil Field Services	-290
Wireless	-301
Automotive	-501
Electrics	-525
Refining	-819
Airlines	-907
Natural Gas	-1135

Worst-performing Sectors During '02 Slowdown	
Health Insurance	-247
Financial Other	-247
Electrics	-248
Restaurants	-252
REITs	-279
Airlines	-479
Healthcare	-550

Worst-performing Sectors Q1 after '02 Slowdown	
Food & Beverage	-152
Supermarkets	-304
Automotive	-347
Tobacco	-367
Airlines	-735

Worst-performing Sectors Q2 after '02 Slowdown	
Automotive	-233
Financial Other	-281
Health Insurance	-333
Supermarkets	-455
Tobacco	-480

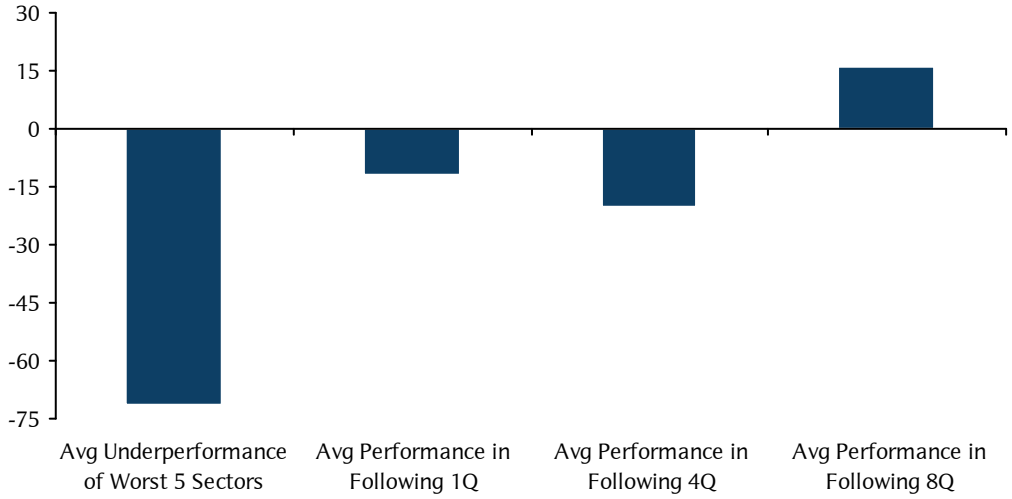
Worst-performing Sectors Q4 after '02 Slowdown	
Food & Beverage	-289
Restaurants	-319
Consumer Products	-341
Supermarkets	-383
Financial Other	-456
Health Insurance	-508

Note: Levels listed represent excess return outperformance/underperformance relative to the US Credit Index in bp. Source: Barclays Capital

This is consistent with broader momentum trends observed in the market over time. We examined quarterly performance trends for the major sectors in the US Credit Index, beginning in 1990 through the present period. In each quarter, we sorted the sectors from best to worst performance and examined performance in the following Q1 and Q4. In Figure 42 and Figure 43, we highlight the performance trends of the top and bottom five performers in each quarter.

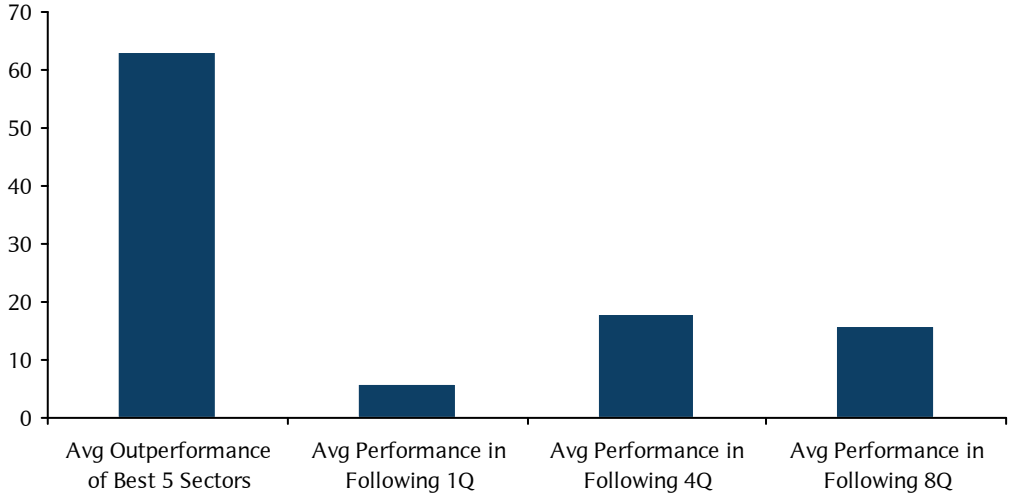
In summary, worst performers have, on average, continued to underperform in Q1 and Q4 following the initial material underperformance. However, they have typically reversed this negative performance in the period from Q4 forward to Q8 forward (Figure 42). Similar trends are borne out with the best performers as well, with enduring outperformance both Q1 and Q4 forward, and underperformance from Q4 forward to Q8 forward (Figure 43). We believe investors should keep these historical momentum trends in mind in considering when to become more aggressive with respect to sector positioning.

Figure 42: Historical worst performing sector momentum trends (bp)



Note: Levels listed represent excess return outperformance/underperformance relative to the US Credit Index in bp.
Source: Barclays Capital

Figure 43: Historical best performing sector momentum trends (bp)



Note: Levels listed represent excess return outperformance/underperformance relative to the US Credit Index in bp.
Source: Barclays Capital

A relative value framework across sectors

Taking these momentum trends into account, we believe it makes sense for investors to explicitly factor in current spread levels relative to risk to help identify relative value across sectors and develop a view on when/at what relative levels it makes sense to become more aggressive.

One approach to doing this is to examine spread levels relative to the GDP-correlation adjusted volatility measure discussed above – ie, names offering a high spread per unit of risk, as measured by the defensiveness factor previously outlined, are priced inconsistently relative to their historical risk.

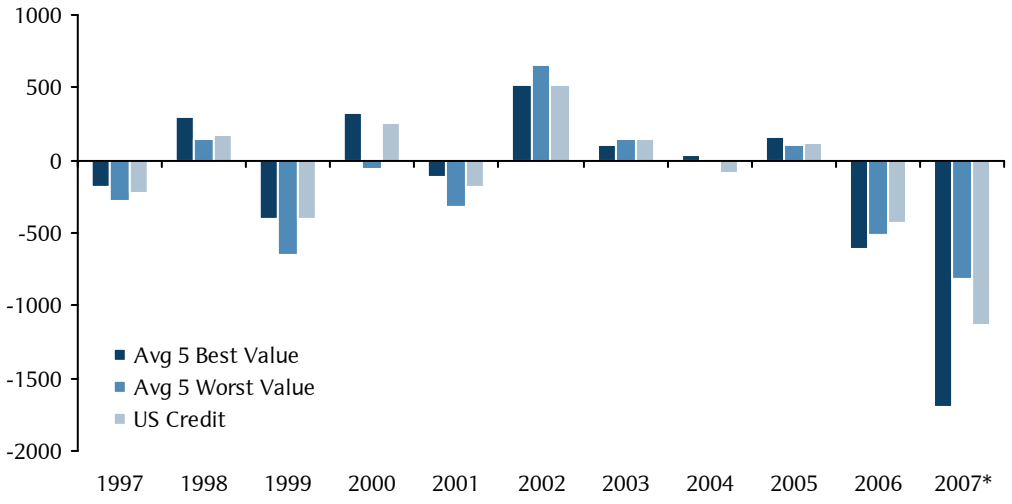
In Figure 44, we present the historical forward Q4 performance of the five best and five worst relative value major corporate subsectors in the US Credit Index as measured by this relative value metric as of December of each year listed.

In summary, over the 10-year period from 1998 through 2007, the "best value" sectors at the beginning of each year outperformed the "worst value" sectors by a cumulative 900bp of excess return. The "best value" sectors outperformed the US Credit Index by a cumulative 250bp over the period, and outperformed in eight out of ten years. Conversely, the "worst value" sectors underperformed the index by a cumulative 650bp over the same period, and underperformed the index in seven out of ten years.

Notably, this relative value metric has dramatically underperformed in 2008, driven by significant underperformance from the insurance (-1,749bp), brokerage (-3,591bp), and banking (-1,571bp) sectors. These sectors, which began the year offering historically wide spreads relative to the overall index and their historical volatility, highlight that this type of quantitative approach should be overlaid with fundamental credit views.

That said, in Figure 45, we present a relative value analysis by sector as of November 30, 2008. At the recent historically wide spread levels, a mixture of defensive and less defensive sectors appear to provide attractive relative value. We believe this measure in combination with our fundamental analyst team's sector ratings highlight several attractive opportunities (Figure 46).

Figure 44: Historical relative value indicator performance trends (bp)



Note: Best/Worst Value sectors as of December each year listed; performance represents forward twelve-month excess return performance (YTD 2008 for December 2007 Best/Worst sectors). Source: Barclays Capital

Figure 45: Current relative value indicator

	Correl w/ real GDP growth	Ann Avg excess return (bp)	Ann SD of excess returns (bp)	Sharpe Ratio	Scaled correl w/ GDP	Defensiveness indicator	OAS	Rel Val indicator
REITs	0.091	35.04	352	0.10	242	594	1219	2.05
Environmental	-0.063	-4.30	330	-0.01	0	330	619	1.88
Home Construction	-0.048	-169.77	665	-0.26	0	665	1007	1.51
Healthcare	0.064	-15.74	263	-0.06	171	434	638	1.47
Financial Other	0.162	-76.81	263	-0.29	433	696	951	1.37
Non-cap Consumer	0.122	-55.65	440	-0.13	326	766	930	1.21
Industrial Other	0.087	-51.35	228	-0.23	233	461	547	1.19
Paper	0.152	14.20	339	0.04	407	746	832	1.11
Media Non-Cable	0.148	-1.31	341	0.00	395	736	763	1.04
Insurance	0.127	-81.56	478	-0.17	341	819	843	1.03
Textile	0.071	-141.99	412	-0.34	191	603	620	1.03
Lodging	0.162	-72.24	605	-0.12	434	1039	1062	1.02
Noncaptive Finance	0.154	-67.03	420	-0.16	412	831	805	0.97
Building Materials	0.214	-103.98	418	-0.25	572	990	944	0.95
Life	0.109	-354.27	916	-0.39	291	1207	1131	0.94
Metals	0.198	31.82	271	0.12	529	801	750	0.94
Communications	0.066	-48.35	504	-0.10	176	680	631	0.93
Entertainment	0.071	48.50	478	0.10	191	669	618	0.92
Airlines	0.203	-47.69	693	-0.07	544	1236	1090	0.88
Basic Industry	0.187	8.55	271	0.03	501	772	666	0.86
Constr. Machinery	0.094	5.84	257	0.02	252	509	437	0.86
Media Cable	0.052	67.46	571	0.12	138	709	601	0.85
Financial Companies	0.204	-73.95	430	-0.17	547	977	805	0.82
Non-cap Diversified	0.177	-75.33	417	-0.18	473	890	725	0.81
Banking	0.146	-34.07	361	-0.09	391	753	608	0.81
Health Insurance	0.171	-80.97	232	-0.35	459	691	546	0.79
Consumer Products	0.138	-10.15	194	-0.05	369	563	445	0.79
Distributors	0.155	3.50	282	0.01	415	697	539	0.77
Telecommunication	0.060	-63.41	540	-0.12	162	701	534	0.76
Finance	0.181	-65.48	439	-0.15	485	924	697	0.75
Wirelines	0.026	-118.55	765	-0.15	71	836	629	0.75
Food & Beverage	0.144	11.90	219	0.05	386	604	441	0.73
Chemicals	0.156	7.27	214	0.03	418	631	457	0.72
Automotive	0.313	-91.61	489	-0.19	839	1328	953	0.72
Packaging	-0.023	-90.69	958	-0.09	0	958	679	0.71
Retailers	0.175	-43.85	316	-0.14	468	783	547	0.70
Railroads	0.160	24.54	268	0.09	430	698	481	0.69
Tobacco	0.190	64.40	329	0.20	509	839	577	0.69
Supermarkets	0.110	-18.10	283	-0.06	293	577	396	0.69
Capital Goods	0.169	-16.64	245	-0.07	452	696	478	0.69
Natural Gas	0.165	-108.17	483	-0.22	442	925	634	0.69
Refining	0.152	33.12	485	0.07	406	890	610	0.69
Services	0.212	90.72	400	0.23	568	968	662	0.68
Consumer Noncyclical	0.156	5.10	213	0.02	418	631	431	0.68
Industrial	0.183	-33.26	311	-0.11	490	801	546	0.68
Consumer Cyclical	0.213	-58.87	372	-0.16	571	943	635	0.67
Pipelines	0.160	-134.64	561	-0.24	427	989	657	0.66
Utilities	0.176	-78.11	358	-0.22	472	831	545	0.66
Electrics	0.170	-59.82	335	-0.18	454	789	512	0.65
Transport Services	0.241	41.69	292	0.14	644	936	607	0.65
P&C	0.203	-91.11	493	-0.18	542	1035	667	0.64
Wireless	0.004	-37.22	934	-0.04	10	944	588	0.62
Aerospace/Defense	0.144	50.32	253	0.20	386	639	374	0.59
Divers Manufacturing	0.164	-17.15	248	-0.07	439	687	396	0.58
Transportation	0.237	-4.13	332	-0.01	635	967	549	0.57
Energy	0.200	-1.22	331	0.00	536	867	482	0.56
Independent	0.193	-1.05	415	0.00	518	932	510	0.55
Integrated	0.193	8.77	287	0.03	516	804	430	0.54
Oil Field Services	0.229	-26.35	344	-0.08	612	956	496	0.52
Pharmaceuticals	0.181	-22.74	200	-0.11	484	684	323	0.47
Brokerage	0.179	-121.99	783	-0.16	479	1262	575	0.46
Technology	0.325	-145.42	405	-0.36	871	1276	544	0.43
Restaurants	0.379	-130.50	300	-0.43	1014	1314	500	0.38

Source: Bloomberg, Barclays Capital

Figure 46: Current analyst sector ratings

Sector	Rating	Rating Date	Rating Analyst
Metals	Marketweight	10/21/2008	Mateer
Independent E&P	Marketweight	10/21/2008	Mateer
Oil Field Services	Marketweight	10/21/2008	Mateer
Property/Casualty Insurance	Marketweight	10/28/2008	Walsh
REITs	Marketweight	10/27/2008	Mukherjee
Restaurants	Marketweight	10/27/2008	Nonneman
Supermarkets	Marketweight	10/23/2008	Miller
Electric Utilities	Marketweight	12/4/2008	Asselstine
Monolines	Not Rated	10/27/2008	Monteleone
TMT	Not Rated	NA	Shiffman
Transportation	Not Rated	NA	Vittorioso
Manufacturing	Not Rated	NA	Foley
Aerospace/Defense	Not Rated	NA	Vittorioso
Cable	Overweight	10/21/2008	Holden
Pipelines	Overweight	10/21/2008	Mateer
Distributors	Overweight	10/21/2008	Mateer
Pharma & Healthcare	Overweight	10/29/2008	Neilson
Banks and Finance	Underweight	10/30/2008	Glionna
Chemicals	Underweight	10/21/2008	Mateer
Paper	Underweight	10/21/2008	Mateer
Integrated E&P	Underweight	10/21/2008	Mateer
Refining	Underweight	10/21/2008	Mateer
Homebuilders	Underweight	10/31/2008	Foley
Life Insurance	Underweight	10/28/2008	Walsh
Mortgage Insurance	Underweight	10/27/2008	Monteleone
Newspapers & Printers	Underweight	10/20/2008	Holden
Retail	Underweight	10/23/2008	Miller
Consumer Products	Overweight Food & Beverage, Consumer Goods, Underweight Tobacco	10/31/2008, 11/14/08	Nonneman

Source: Barclays Capital

In particular, several sectors our analysts have rated overweight also show up as attractive relative values per the screen. These include healthcare, media cable, consumer products, distributors, and food & beverage. We also note relatively attractive value in the banking sector, where we and our analyst teams favor the large, diversified money-center banks, particularly given the introduction of the various new government-related funding sources for the sector, and in the communications sector, where relatively defensive fundamentals have been offset by recent heavy issuance. Conversely, several sectors that our analyst teams view as underweight also show up as unattractive per the relative value screen. These include integrated E&P, refining, and tobacco.

Sectors that appear to offer interesting relative value opportunities from a historical perspective but where our analyst teams maintain less constructive near-term views include REITs, finance companies, insurance, paper, building materials, home construction, and lodging. We believe these will likely be critical sectors to watch in the near term and making calls around these particular sectors will likely be a material performance driver in 2009. We will continue to monitor these sectors closely and await signs of some fundamental stabilization before becoming more constructive, despite the historically wide spreads. Along these lines, in conjunction with our analyst teams, we will provide more in-depth sector views in the coming weeks.

Quality

Summary recommendations

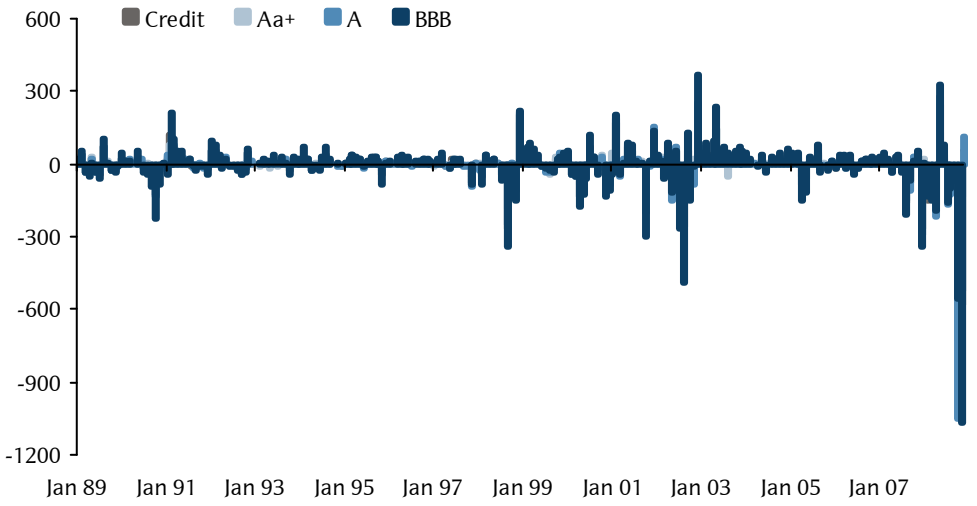
- Up in quality continues to make sense in the near term from a macro perspective
- The best relative value in a historical context appears to be in single-A bonds, but there is a sector component to that call. We believe select high quality banking paper represent attractive risk/reward opportunities.
- At the current wide levels, we think investors should look for discrete opportunities to reach down the quality spectrum, particularly in more defensive businesses/sectors where they have a strong positive fundamental view and in low price bonds that have been hard hit during the widening cycle.

Analysis of quality curves in a historical context

Unsurprisingly, we have typically seen outperformance from higher quality versus lower quality during periods of market weakness and underperformance during periods of market strength (Figure 47 - Figure 49). Specifically during the periods of broad market and macroeconomic/fundamental weakness highlighted in Figure 49, AA+ and A materially outperformed the overall index and BBB materially underperformed the overall index. Perhaps more interestingly, however, during the current downturn there has been a significant divergence versus the historical trends as A quality bonds have materially underperformed the overall index.

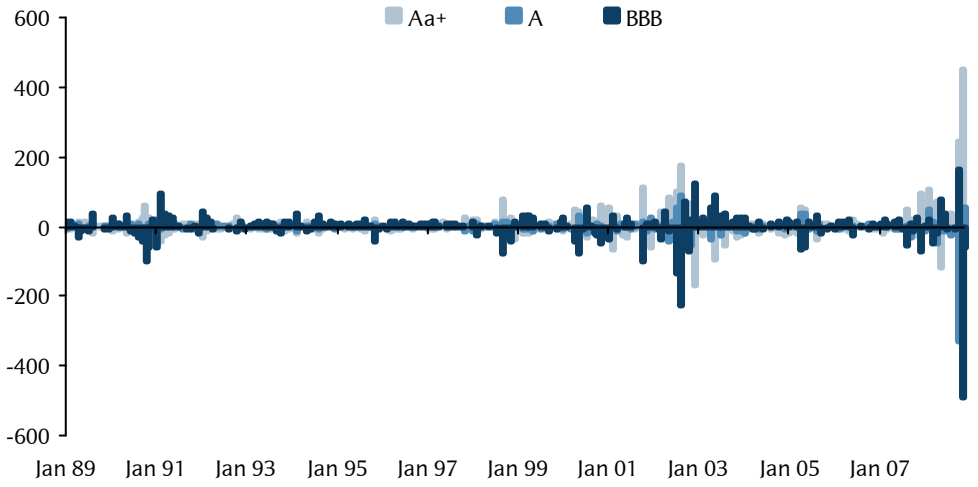
This is also borne out when looking at the trends in quality curves over time as well. While there has typically been a steepening of quality curves during downturns, and we have generally seen this trend during the most recent downturn, A quality bonds stand out as attractive relative value in a historical context. As shown in Figure 52, while A quality bonds are trading about 6.5 standard deviations wide of their average spread to AA+, BBB bonds are only trading about 2.7 standard deviations wide of their average spread to A bonds.

Figure 47: Monthly excess returns by quality (bp)



Source: Barclays Capital

Figure 48: Historical quality performance relative to US Credit Index (bp)



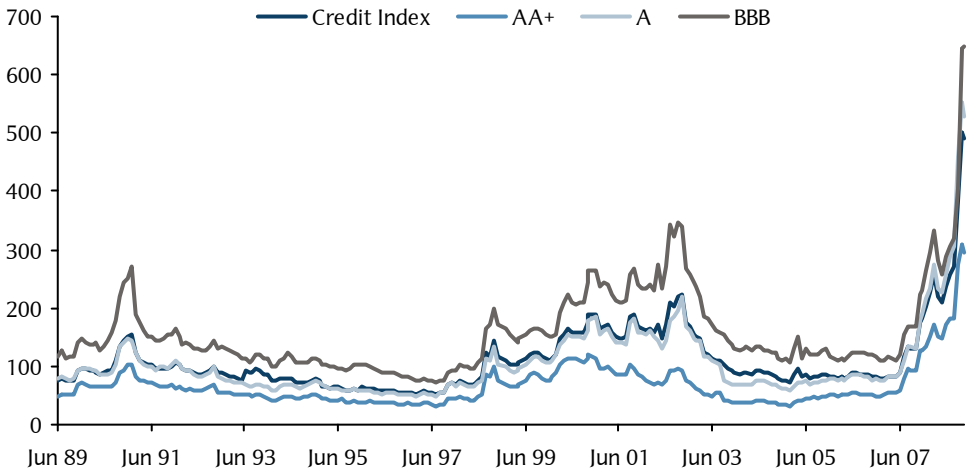
Source: Barclays Capital

Figure 49: Historical quality performance during prior weakening cycles (bp)

	Credit	Aa+	A	BBB
1990	-189	-110	-157	-385
1998	-238	-113	-168	-434
2000	-463	-164	-459	-712
2002	-187	118	-152	-449
2008 YTD	-1695	-867	-1987	-2122

Source: Barclays Capital

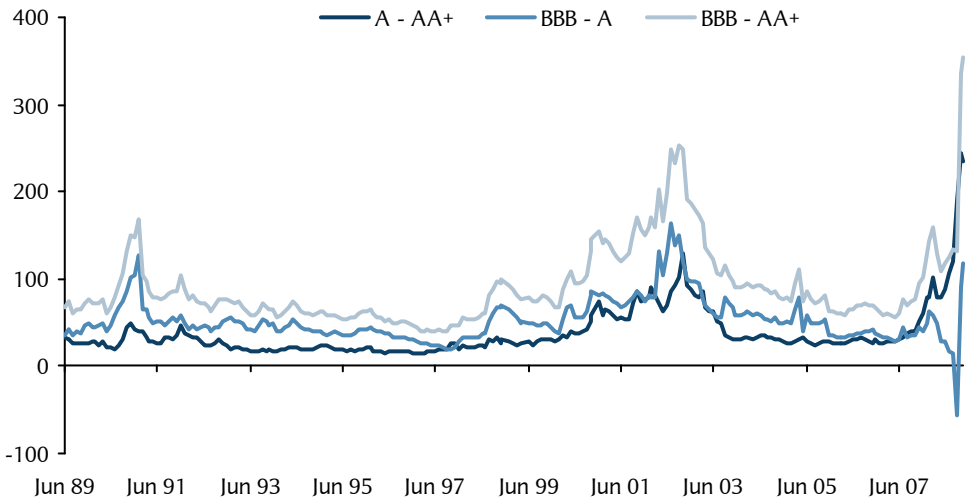
Figure 50: Historical OAS by quality (bp)



Source: Barclays Capital

It is important to note, however, that there is, in part, a sector component to these current quality relative value trends. As shown in Figure 53, the top five major subsectors contributing to A quality index OAS are banking, communications, insurance, finance companies, and consumer non-cyclical. These five sectors represent approximately 66% of A quality index OAS, with 27% of the index OAS driven by the banking sector alone. In particular, with the banking sector trading essentially in line with the broader corporate index, we believe that select high quality banking paper represents an attractive risk/reward opportunity.

Figure 51: Historical quality curves (bp)



Source: Barclays Capital

Figure 52: Summary quality curve statistics (bp)

	A - AA+	BBB - A	BBB - AA+
Average	38	53	91
Maximum	245	164	355
Minimum	15	-57	39
Current	236	119	355
St. Dev	30	24	47
Current # SD over Avg	6.5	2.7	5.7

Source: Barclays Capital

Further, BBB bonds now trade over 350bp wide to AA+ bonds, almost six standard deviations wide of the average spread to AA+ bonds. The expected cyclical steepening of the quality curve has clearly been playing out, and in a historical context, BBB quality bonds appear cheap to AA+ bonds in particular.

Thus, while we would generally continue to favor defensive/higher quality positioning from a macro perspective in the near term, given our expectations for weak fundamentals over the next couple of quarters, we believe much of the quality curve steepening, particularly versus the AA+ bucket, has likely largely occurred. As the cyclical downturn continues to play out over the next several months, we think investors should look for discrete opportunities to reach down the quality spectrum, particularly in more defensive businesses/sectors where they have a strong positive fundamental view. In addition, we note discrete opportunities to pick up low price lower quality bonds that have been hard hit during the widening cycle, as the risk/reward in many of these bonds has begun to become attractive.

Figure 53: Single A Index spread by sector

Sector	Market value ($mn)	Market value %	OAS	Contrib to OAS	% Contrib to OAS
Banking	**188,471,410**	**21.57**	**718**	**155**	**27.1%**
Communications	**107,113,087**	**12.26**	**541**	**66**	**11.6%**
Insurance	**67,415,702**	**7.71**	**846**	**65**	**11.4%**
Finance Companies	**38,613,916**	**4.42**	**1124**	**50**	**8.7%**
Consumer Non-Cyclical	**102,280,490**	**11.7**	**376**	**44**	**7.7%**
Electric	68,287,885	7.81	414	32	5.7%
Consumer Cyclical	41,819,421	4.79	637	30	5.3%
Capital Goods	51,460,021	5.89	396	23	4.1%
Brokerage	34,324,714	3.93	555	22	3.8%
Government-Related	53,627,580	6.14	321	20	3.5%
Technology	41,704,765	4.77	391	19	3.3%
Energy	28,195,231	3.23	406	13	2.3%
Basic Industry	22,781,537	2.61	420	11	1.9%
REITS	6,054,372	0.69	1177	8	1.4%
Other	21,698,871	2.49	510	13	2.2%
Total	**873,849,001**	**100**	**571**	**571**	**100.0%**

Source: Barclays Capital

Maturity

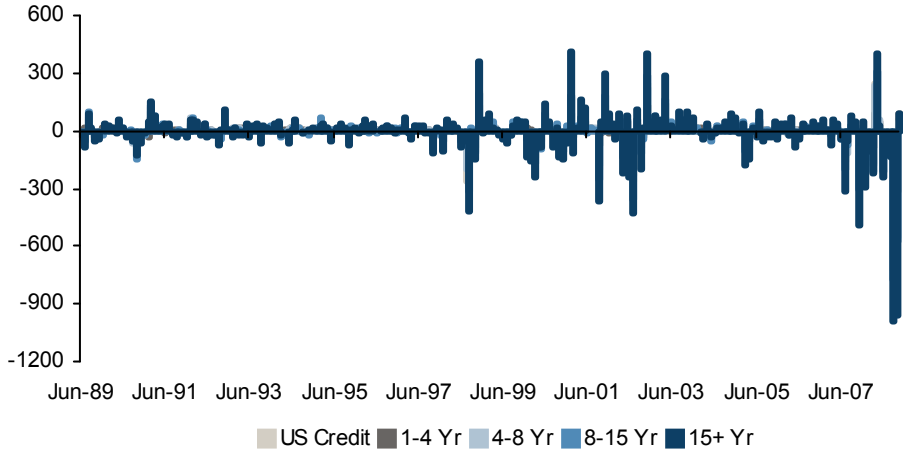
Summary recommendations

- In cash, the best value appears to be in the long end despite significantly inverted curves. Higher duration should offset steepening in material tightening, and lower price should support long bonds if spreads widen materially.
- In cash, historically wide spreads in the front end present opportunities in credits where investors have strongly positive fundamental views.
- In IG CDS, the most notable aspect of curves is the lack of differentiation by 5yr spread. In our view, the opportunity to take advantage of CDS curves depends on spread level.
- For credits trading at or below 250bp in 5yr CDS, we believe curves are too flat and favor notional neutral steepeners as an attractive risk/reward trade construct, particularly in names in which the investor has a bearish view. For credits trading wider than 500bp (but still trading in spread running terms), we prefer notional neutral flatteners from a risk/reward perspective as well.

Analysis of cash curves in a historical context

Unsurprisingly, on a historical basis, longer-dated paper has typically exhibited the greatest return volatility and shorter-dated paper has been less volatile (Figure 54), reflecting the higher duration of longer-dated investment grade bonds. In particular, as shown below, when the overall market performs positively, longer-dated paper outperforms and vice versa. However, with spreads now at historic wides across the curve, it is worthwhile revisiting this historical trend.

Figure 54: Historical excess returns by maturity (bp)



Source: Barclays Capital

Figure 55: Excess returns during positive index performance periods (bp)

	US Credit	1-4 yr	4-8 yr	8-15 yr	15+ yr
Avg	32	15	27	33	53
Min	1	-30	-6	-16	-35
Max	245	128	232	306	412

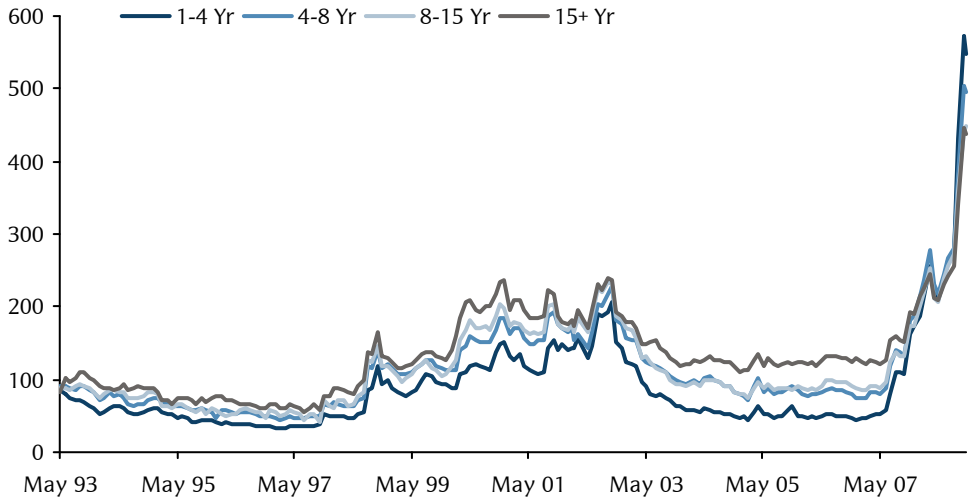
Source: Barclays Capital

Figure 56: Excess returns during negative index performance periods (bp)

	US Credit	1-4 yr	4-8 yr	8-15 yr	15+ yr
Avg	-62	-23	-50	-71	-108
Min	-718	-522	-657	-772	-993
Max	-1	17	18	31	19

Source: Barclays Capital

Figure 57: Historical OAS by maturity (bp)



Source: Barclays Capital

There are two components to relative performance by maturity – curve shape and duration exposure. In general, when spreads have been relatively tight, credit curves have typically been steeper, whereas when spreads have been relatively wide, they have

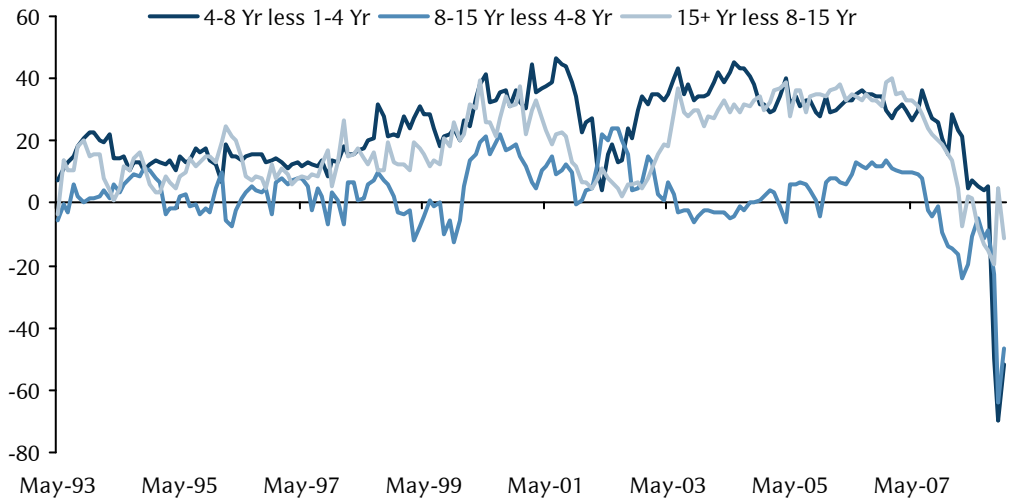
been flatter. Thus, while longer-dated paper does have higher duration, which would tend to lead to underperformance during the widening cycle, this has been partially offset during the most recent downturn by a historic flattening (inverting) of cash credit curves (Figure 58). Long bonds (15+ year maturity) now trade a record 109bp tighter on an OAS basis versus front end (1-4 year maturity) paper. A key driver of this significant inversion is the greater convexity in long-dated bonds, particularly as prices have begun to move materially away from par. Short-dated (1-4 year maturity) paper now trades at approximately $95, whereas long-dated (15+ year maturity) paper now trades at roughly $77.

Thus, in developing a view with respect to where the best relative value lies along the curve, we must balance curve shape, duration exposure, and convexity. The combination of these three factors leads us to favor the long end.

Given spreads at historically wide levels, we are inclined to begin getting long duration. In addition, as shown in the breakeven analysis below (Figure 61), after taking into account potential curve shape changes and the convexity profile of different points on the curve, risk/reward would also appear to favor the long end.

In a positive scenario, assuming a 100bp tightening of long-end spreads, curves would need to steepen from historically flat levels to near historically steep levels for shorter-duration buckets to outperform, which we view as unlikely.

Figure 58: Historical cash curves (bp)



Source: Barclays Capital

Figure 59: Historical cash curve statistics (bp)

	4-8 yr less 1-4 yr	8-15 yr less 4-8 yr	15+ yr less 8-15 yr
Avg	23	3	18
Min	-69	-64	-19
Max	46	24	40
Current	-52	-46	-11

Source: Barclays Capital

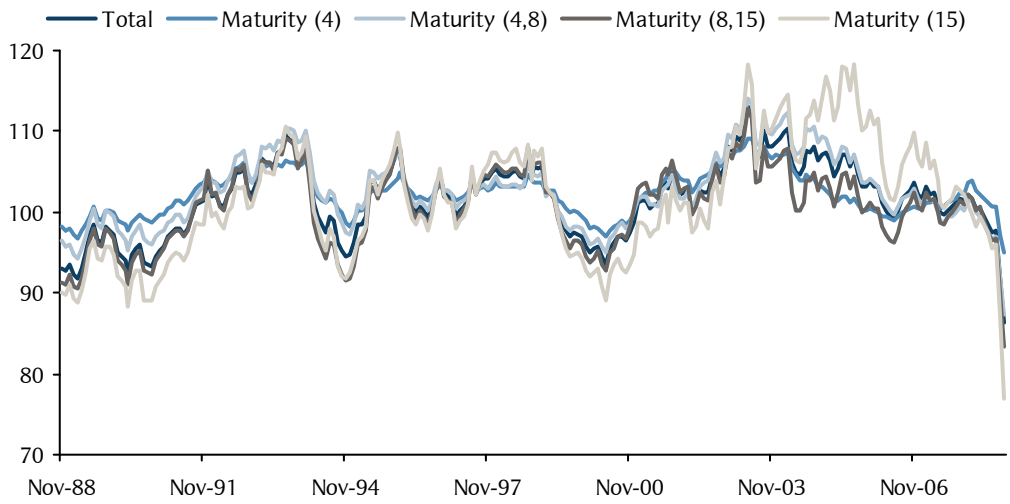
In a negative scenario, assuming a 100bp widening of long-end spreads, the convexity benefit of the significant price discount on long bonds should largely offset the longer duration. One way to effectively price this value would be to utilize our BCDS (bond-implied CDS) framework, which normalizes for price difference. With 100bp of widening in long-end spreads, we expect roughly 10.25 points of price decline for long-

end bonds. Assuming a similar price decrease for the other maturity buckets would produce the implied BCDS levels in Figure 61. As shown, after equivalent price declines across all maturity buckets, long-end bonds would trade at a wider BCDS versus intermediate bonds and slightly inside of short-dated bonds. We would expect the "par" BCDS curve to be relatively flat to inverted at these wide spread levels. Based on that fundamental view, even in a negative scenario, it seems reasonable to us to assume relatively limited underperformance for the long end as the convexity benefits offset the higher duration.

We also note the historically wide spreads in the front end given the current significantly inverted curves. For credits where investors have strongly positive fundamental views, we believe there are attractive opportunities in the front end as well.

In CDS, the most notable aspect of curves is the lack of differentiation by 5yr spread (Figure 62). Average curves are essentially flat across a wide spectrum of 5yr CDS spreads, from about 100bp to 600-700bp, although the variation in curve shape increases with wider spreads. We believe that at least part of this lack of differentiation is due to technical pressure from basis package unwinds, which in the current poor liquidity environment has had a substantial effect on pricing.

Figure 60: Historical prices by maturity ($ per $100 par)



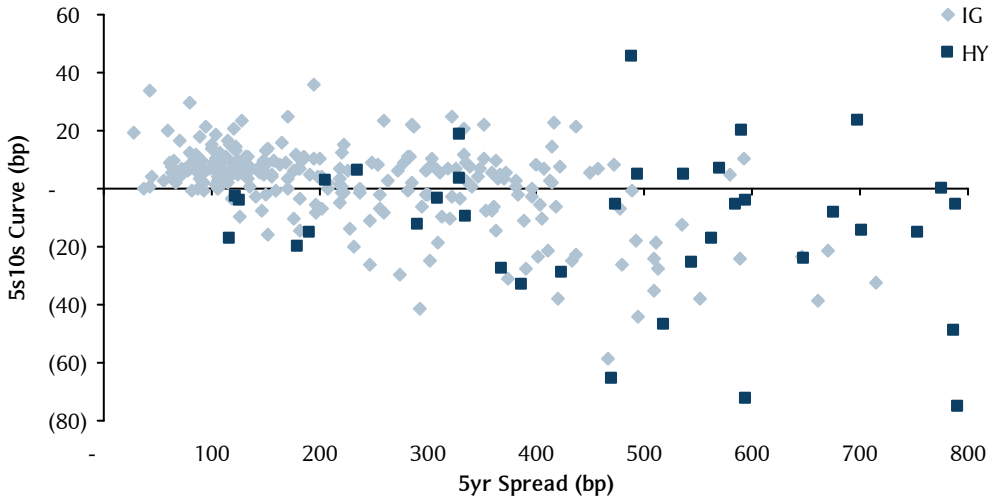
Source: Barclays Capital

Figure 61: Curve breakeven analysis

Current 15+ Price	76.90			
Current 15+ OAS	438			
Current 15+ Avg OAD	10.24			
Est Price Change per 100bp Spread Move	**10.24**			
Breakeven Spread Changes along Curve	**1-4 yr**	**4-8 yr**	**8-15 yr**	**15+ yr**
100bp Tightening				
Est Price Change to Breakeven	10.24	10.24	10.24	10.24
Current OAD	2.38	4.77	6.96	10.24
Est. OAS Change to Breakeven	-430	-215	-147	-100
Current OAS	547	496	449	438
Current Spread vs 15+ Mat	-109	-57	-11	NA
Implied Breakeven Spread vs 15+ Mat	**221**	**57**	**36**	**NA**
Avg Spread vs 15+ Mat, 1993 - 2008	**45**	**21**	**18**	**NA**
100bp Widening				
Est Price Change to Breakeven	10.24	10.24	10.24	10.24
Current OAD	2.38	4.77	6.96	10.24
Est. OAS Change to Breakeven	430	215	147	100
Current OAS	547	496	449	438
Current Spread vs 15+ Mat	-109	-57	-11	NA
Implied Breakeven Spread vs 15+ Mat	**-439**	**-172**	**-58**	**NA**
Implied Breakeven Prices	**84.64**	**77.19**	**73.00**	**66.66**
Implied BCDS (Assuming Flat Curve)	1,077	889	908	1,037

Source: Barclays Capital

Figure 62: CDS Curves versus 5 year CDS spread levels (bp)



Source: Barclays Capital

In our view, the opportunity to take advantage of CDS curves depends on spread level. For credits trading at or below 250bp in 5yr CDS, we believe curves are too flat and expect steepening as markets normalize. For bullish investors, this is potentially an opportunity to put on 5s10s DV01 neutral steepeners, which are empirically long credit risk trades and will benefit from any spread tightening. However, we prefer the bearish

implementation: notional neutral steepeners. We recommend this position as a long-term short position in names with a widening fundamental bias. The carry is close to zero (or even positive for inverted names), allowing the short to be held for longer and with better breakevens over time.

For credits trading wider than 500bp (but still trading in spread running terms), we prefer notional neutral flatteners. In this environment, we believe the riskiest credits should be trading with inverted 5s10s. The current curve shapes allow investors bullish on individual credits to get long risk in flattener form with limited downside risk, in our view. The notional neutral implementation eliminates jump risk, and should spreads widen, these credits will begin to trade points up front. Given the flatness of distressed curves (those of names trading up-front), there is little downside in this scenario. Investors benefit from tightening as the trade is net long risk, and we expect little steepening for even substantial moves tighter, given how flat curves are across a wide range of spreads.

US high yield

Bradley Rogoff, Michael Anderson, Matthew Mish, Gautam Kakodkar

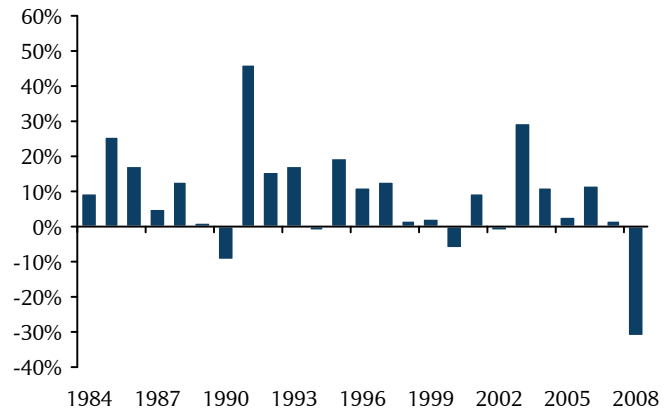
Defaults are set to rise, but so are returns

After enduring an epic bear market over the past 18 months, investor sentiment is as low as it can get for high yield debt. It is easy to see why confidence is minimal. Since the market peaked in May 2007, speculative-grade debt has lost over 33% and in the process, set numerous records for futile performance (Figure 63). Indeed, the prior three months (September through November), individually, are the three worst months in the 25-year history of the Barclays High Yield Index. Equity cushions are quickly dissipating, default rates are climbing, and companies are rarely able to access the capital markets. To make matters worse, despite record high spreads, there are arguably better risk-return opportunities in other higher-quality asset classes.

Regardless, with yields at all-time highs, high yield investors can expect to generate solid returns over the next few years (Figure 64). We believe, however, that the recovery will take a long time and two things will need to occur before the market can sustain a true rally: 1) higher-quality issuers need to regain access to the primary market; and 2) the default cycle needs to begin to play out, so investors are able to determine the cycle's survivors. We expect 2009 to be the beginning of the healing process for high yield credit.

As a result, we envision 2009 as a transition year for the market. There will be many opportunities for credit managers to outperform as fundamental performance diverges between the cycle's winners and losers. Overall, performance will not be stellar, as the bonds of the companies with failed business models and balance sheets weigh on index performance. However, it is difficult to envision a scenario in which returns do not approach double digits. Given an 8% coupon and an average price of $57, current yield is roughly 14%. Assuming a 10% default rate with a 25% recovery rate, the non-defaulted portion of the index just needs to hold its current dollar price to result in an 8.4% return in 2009. As we detailed in *US Credit Alpha*, October 24, 2008, we believe high yield's fundamental bottom is in the upper $50s, or right about where the market is currently priced. **Therefore, we project an 8-10% total return in 2009.**

Figure 63: Annual HY index returns



Source: Barclays Capital Family of Indices

Figure 64: HY index yield

Source: Barclays Capital Family of Indices

Within high yield, we still favor a defensive stance with respect to quality and sectors. Specifically, we recommend being underweight on triple-C paper because we believe the upcoming default rise will disproportionately affect this part of the market. By sector, we prefer recession-resistant, asset heavy sectors such as healthcare and electric utilities. We are also positive on wireless where fundamentals are holding up. We have negative views on consumer-driven sectors where defaults are likely to appear. These sectors include retail, gaming, and media.

We expect the pace of issuance to pick up from that of the past few months but it should only total $50-55 bn, roughly equaling 2008. However, the activity will be much healthier than 2008's. The backlog is quickly dwindling as the deals for BCE and Huntsman buckle under the weight of the currently frozen credit market. So unlike this year, supply will not be heavily weighted toward bonds resulting from bridge maturities. In 2009, we expect high quality issuers to raise capital in the unsecured debt market. Much of the capital raising will be opportunistic and used for refinancing purposes. If these deals hold up in the secondary market, selective lower-quality credits may follow with new bond deals but they will pay a hefty premium. In addition, over the long term, we expect a reversal of the unsecured-to-secured supply trend the CLO market made possible over the past few years.

Lastly, we project a 9-10% default rate in 2009. Clearly, tighter capital markets, a weaker economy, and seasoning balance sheets will create many more defaults than we have seen in nearly a decade. The default cycle has been slow in developing due to the flexibility issuers created for themselves when times were good. That flexibility is waning in many but not all issuers. Therefore, we expect the cycle's default peak to occur in 2010. Another reason defaults will not peak until 2010 is that, in some cases, the credit market is too broken to see many defaults. In other words, lenders are hesitant to push a borrower into bankruptcy for fear that a liquidation could result (and subsequently, materially lower recoveries) if DIP financing proves difficult to obtain. The fate of the automotive companies, and in particular General Motors in the short run, will play a large role in determining next year's default rate.

The wide CDS-bond basis will persist deep into 2009, but may decline marginally as a result of improved funding conditions provided by numerous government programs and increased transparency in the CDS market. We recommend investors focus on basis trades in two scenarios – 1. equity-like returns can be obtained in credits that trade in spread running; and 2. issuers with a real trigger to default. In other words, investors either need to be compensated for the volatility of holding the basis package or must be able to realize the value on default (VoD) in relatively short order. Normalization of the basis can not be counted on to provide returns.

In summary, 2009 will not be a great year for high yield credit but will set the stage for a more meaningful performance in the beginning of the next decade. However, before we get to those robust returns, we will go through the necessary cleansing over the next 12-18 months.

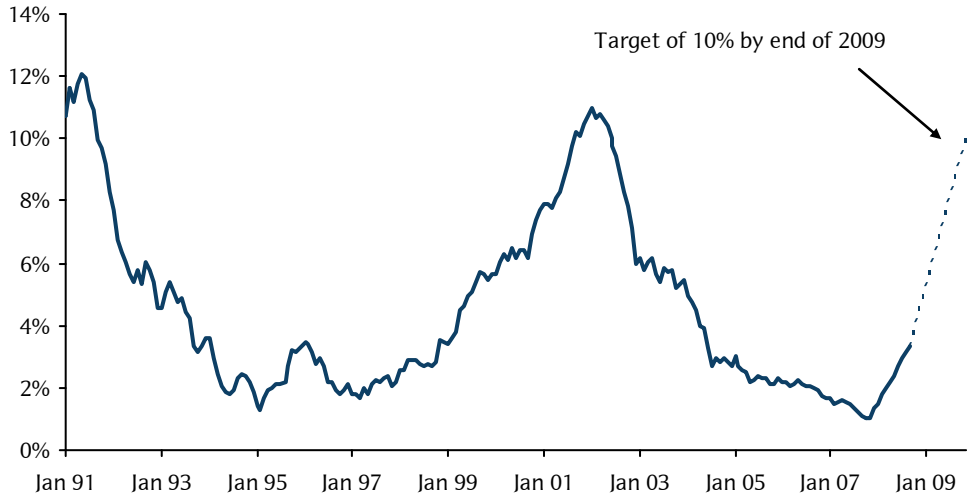
Default rates

We used two methods to derive our 2009 default rate forecast; a quantitative model based primarily on lending standards and a bottoms-up fundamental analysis of the HY CDX portfolio. Our quantitative approach[4] suggests that the default rate should be 12-14%, while our fundamental approach shows **that the default rate will almost certainly exceed 5% and may reach 13%, but will likely fall between 9-10%**. The quantitative

[4] *See European Credit Alpha: Projecting the Cycle, U. Erlandsson, November 7, 2008.*

model reflects the poor credit conditions that are conducive to a record default rate, and underscores the potential downside risk should government measures prove ineffective in normalizing financing markets. We believe, however, that the qualitative factors discussed below will suppress the default modestly in 2009 and ultimately lengthen the default cycle. We estimate the peak default rate will occur in 2010.

Figure 65: Default rates



Source: Barclays Capital

The fundamental method analyzes default risk in the 100 names in the HY CDX as a proxy for the overall market. On one hand, that method might understate the true issuer-based default rates because the CDX is heavily concentrated in larger names and more recent LBOs, which we expect to default at a lower rate in the short run. On the flip slide, the CDX may overstate the true default rate due to its heavy automotive concentration. Excluding Ford, automotive paper comprises 8% of the HY CDX, nearly twice the par-weighted allocation in the High Yield Index (5%).

If the government allows General Motors to fail without any assistance, we believe the domino effect across the auto sector will be significant and the high yield default rate could hit 13%. On the other hand, if the auto sector stages an unlikely rapid recovery, default rates could be as low as 7%. We believe the likely outcome will be somewhere in between. In the event that GM files a government-supported pre-packaged Chapter 11, we could still see a couple of supplier defaults as contracts are renegotiated. This is the most likely outcome, in our view.

The factors that will dictate the default rate in 2009 include:

- **Economic growth** – As the primary economic risk continues to shift from high input/commodity costs to contraction and deflationary pressures, companies will experience more top-line challenges but should benefit somewhat from fading input costs. Barclays Capital Economics Team estimates that GDP will drop 1.6% in 2009 with weakness concentrated in Q4 08 and Q1 09. The last time we had consecutive quarters of negative growth was in late 1990/early 1991 when the default rated peaked at 11%.
- **Covenant relief** – Lack of DIP financing could induce lenders to work with borrowers to avoid Chapter 7 liquidation. CLOs will also be biased to approving amendments as long as they are not breaching any tests.
- **Exchange offers** – We expect the recent trend of issuers offering unsecured bondholders a more senior position in the capital structure in exchange for

reducing their claim to continue throughout 2009. The decline in leverage following these trades and typically lower interest expense should delay defaults. We believe recent LBOs with large credit facility carve-outs in their bond indentures will be prime candidates, as well as fallen angels with loose limitation on liens language. However, we think investors are becoming fatigued with these offers and companies will need to negotiate more with bondholders. We also believe that the universe of names with the capacity to present bondholders with truly compelling transactions is fairly limited, therefore, the success rate will decline over time.

- **Basis holders** – Some credits have provided attractive opportunities to basis buyers. Consequently, we expect these situations to unfold differently because basis owners have the incentive to push a company into bankruptcy to trigger the CDS. The threat of a lower recovery or liquidation should not deter these lenders because they own the CDS and will be made whole regardless of the defaulted issuer's future.

Recovery rates: Likely to match historical lows

In our opinion, senior unsecured recovery rates are poised to match the historical annual low of 21% reached in 2001. This will be driven by a plethora of factors including excessive subordination in many loan-heavy LBO capital structures (exacerbated by debt-for-debt exchange offers), significant multiple compression in high default risk industries, sizeable distressed debt supply given our default outlook, the increased threat posed by liquidations, and plenty of competition from other distressed assets (eg, ABS, CMBS, secured loans).

The combination of excessive leverage on many 2006/2007 vintage private equity deals, particularly secured leverage, and double-digit declines in EBITDA growth for many consumer-sensitive sectors (eg, autos, gaming, retail, media) has left many high yield issuers with high absolute leverage that will continue climbing. Approximately 25% of the CDX.HY index has senior unsecured leverage above 8x, and another 10% is 6-8x leveraged (Figure 66). Furthermore, the recent acceleration in EBITDA declines suggests many of these companies could end up in the 9-10x range by the end of 2009. Under normal circumstances, many of these businesses would be valued on a going-concern basis; however, given recent difficulties in obtaining DIP financing, liquidation analysis must also be considered for select firms. This generally results in little to no recovery on senior unsecured debt.

The equity market sell-off has significantly depressed valuation multiples and, in turn, recovery prospects. The average EV/LTM EBITDA multiple for the S&P 500 has compressed from near 10x to 7.4x; average valuation multiples for consumer discretionary stocks are more depressed at 6.1x versus 8.2x at year-end 2007 (Figure 67). These are the lowest levels for both groups since the early 1990s and late 1980s, respectively, and are pressuring exit multiples employed by potential distressed investors.

Different approaches for quantifying 2009 recovery rates all paint a dire picture. From an historical standpoint, projected default rates of 10% would correspond with unsecured recovery rates of 29%[5] (Figure 68). Alternatively, using a market-implied perspective, the average bond price for CDX.HY issuers flagged as at-risk for default over the next two years is $27; we expect most of these to recover in the high teens and, where available, the average recovery lock market for these issuers is $16. Finally, from a more quantitative standpoint, Moody's loss-given-default model produces an average recovery estimate for these issuers of $13-26, depending on firm-level recovery assumptions[6]. In our view, the market-based approach is more probable and suggests average unsecured recovery rates in the low 20s.

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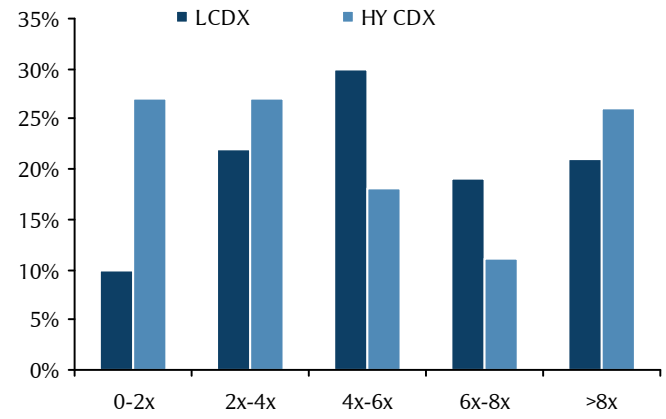
[5] Based on a linear relationship between default and recovery rates over the 1982 – 2007 period.

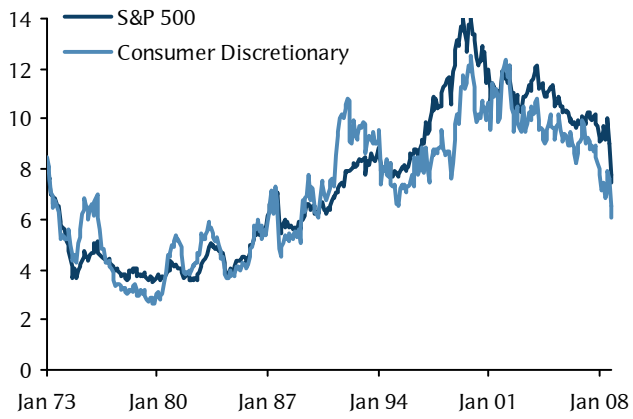
[6] These figures reflect 30% and 50% firm-level recovery assumptions, respectively. We believe the likely outcome will be somewhere in between.

Figure 66: Distribution of issuer leverage (Total Debt/LTM EBITDA)



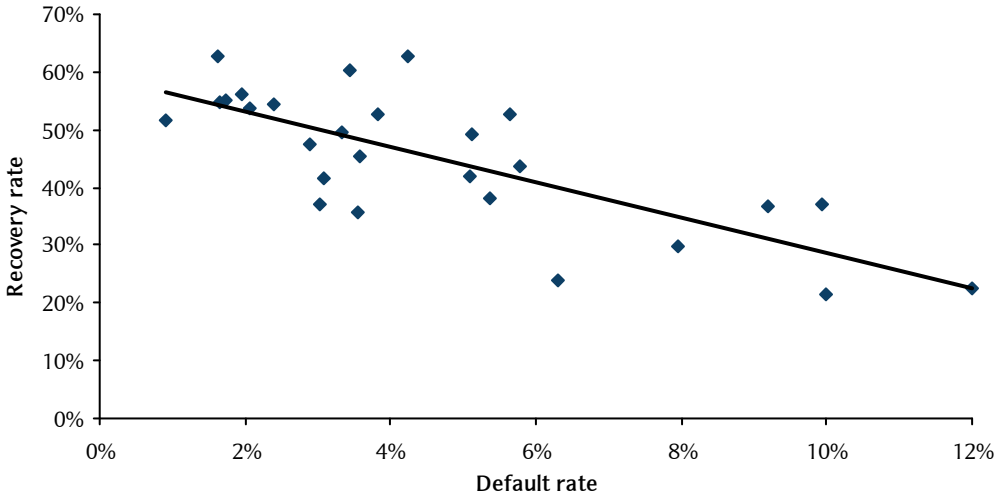
Source: Barclays Capital

Figure 67: S&P500 and consumer valuation multiples (EV/LTM EBITDA)



Source: Bloomberg, Barclays Capital

Figure 68: Historical recovery rates versus default rates



Source: Moody's

Technicals

The technical backdrop should remain benign in 2009, in our view. While we do not expect much new money chasing after high yield paper, given the relative value of higher quality asset classes, we also do not forecast material outflows from the asset class. Even with some outflows, investors have built up healthy cash positions and should have the liquidity to meet modest redemptions without having to resort to selling existing positions. We also think supply from new issuance will match 2008's meager tally. New issuance will be supplemented by fallen angels, which we expect to remain a significant overhang in 2009.

Supply

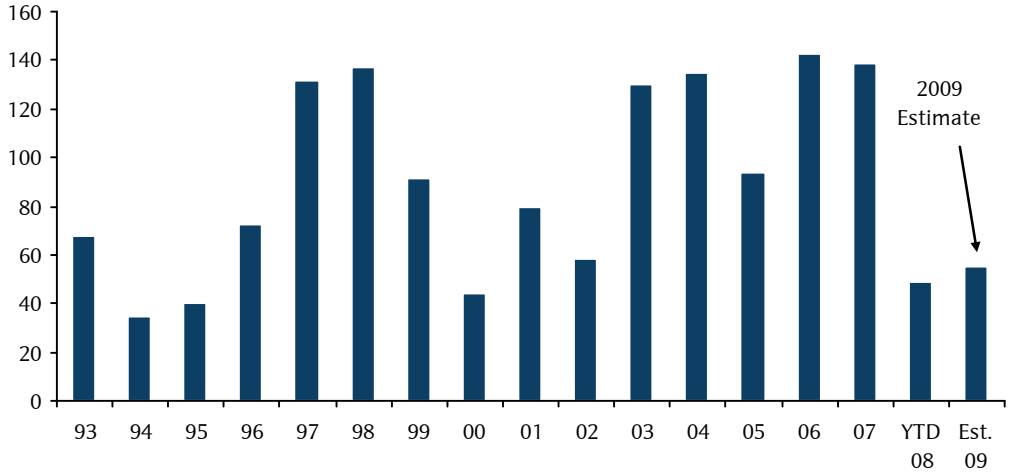
On the surface, 2009 issuance will likely match 2008's six-year-low tally (Figure 69). However, the composition will be dramatically different.

- **Use of proceeds**: Over one-third of 2008's calendar has been used to finance LBO debt. With the LBO pipeline shut down and the two large 2007 deals, Huntsman and BCE, on the ropes, LBOs will probably comprise a very small part of the 2009

calendar. Instead, we expect refinancing to pick up the slack as issuers tap the market opportunistically. There is nearly $20bn of non-auto 2009 maturities, some of which will be paid with cash on hand. Another source of refinancing may come from the repayment of revolver draws. Considering the state of the credit markets, we do not expect high yield companies to be aggressive acquirers. In an effort to conserve cash, companies from a number of sectors including retail, energy, and technology are cutting capex plans in 2009. As a result, very little issuance will be used for capex purposes.

- **Quality**: Although investors were clearly in risk-aversion mode in 2008, nearly one-quarter of the pipeline came in the form of triple-C (or lower) credits. Outside of 2007, this is the highest allocation to sub-single-B paper in the past decade. The reason for this inconsistency is that most of the low-quality supply came as bridge loans (that were not syndicated in 2007) matured and converted into bonds. However, much of this supply remains unallocated and sits on arrangers' books. Next year, most of the appetite for new issuance will be raised by higher-quality companies. Eventually, we expect the primary market to open up for lower-quality credits but for much of the year, the best reception will be given to double-B and high single-B issuers.

Figure 69: HY bond issuance ($bn)



Source: Barclays Capital

Fallen angels

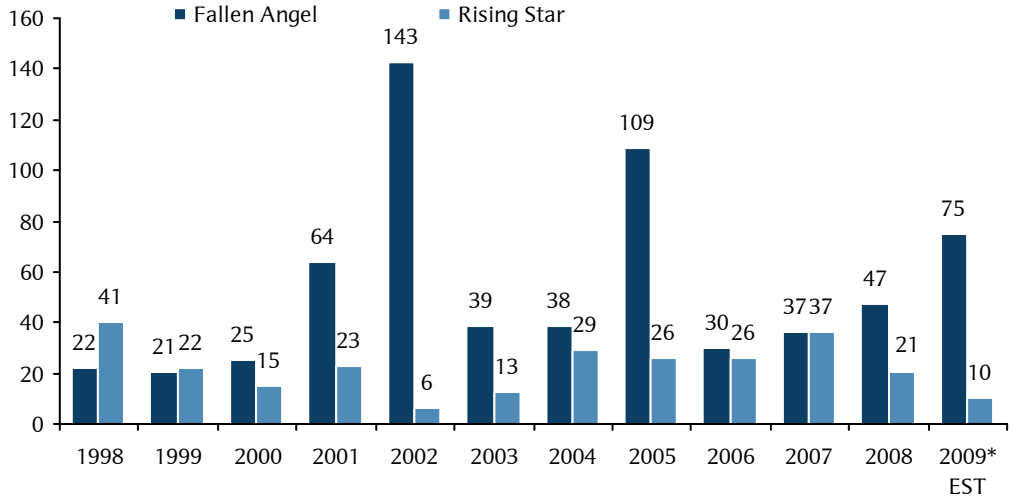
We expect fallen angels to represent an increasingly important source of new debt for investors, given the challenges facing the new issue market. In 2008, high yield index-eligible debt increased $26bn due to downward ratings migration, with $47bn in fallen angel debt versus $21bn in rising star paper. For comparison, there was no increase in net debt due to fallen angels in 2007 (Figure 70). Activity was particularly robust in financials, which accounted for about one-third of the total and was one factor contributing to the sector's status as the worst performer in 2008. Looking to next year, we quantify the potential fallen angel debt using a quantitative screening approach that flags issuers with a) negative ratings trajectory, and b) valuations consistent with crossover/high yield ratings. We then overlay our qualitative views to place these issuers into two buckets, highly likely and potential fallen angel candidates.

Our results indicate that $30bn of debt is in the highly likely category and an additional $108bn in the probable bucket ($70bn of which is financial debt). In our view, $70-80bn in fallen angel debt for 2009 is likely (ie, $30bn highly likely, 40% of $108bn possible). Besides financials, sector concentrations, include retail and homebuilders/building materials. In contrast, we expect the proportion of rising star

debt to decline approximately $10bn using a similar approach, resulting in a net increase in high yield debt of $60-70bn.

Fallen angels will provide an excellent opportunity for managers to outperform in 2009. Because of current market volatility and the increased likelihood of a fallen angel becoming a fallen knife, we expect significant underperformance of fallen angels as they transition to high yield. However, fallen angels that stabilize should post outsized gains relative to the broader market as a result of the initial underperformance.

Figure 70: Fallen angel and rising star debt ($bn)



Source: Barclays Capital Credit Indices

Demand

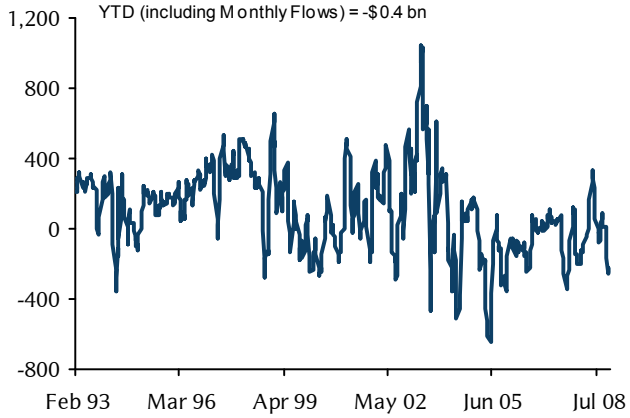
Even though high yield credit has weathered its worst year on record, redemptions out of high yield funds have been moderate so far. Cash balances have risen accordingly, providing current high yield participants dry powder if they become more bullish. We estimate the $800bn high yield market will kick off roughly $65bn/year in coupon payments.

However, we expect the demand for high yield paper from non-traditional investors to be tepid for a number of reasons:

- **Better opportunities in higher quality assets**: With triple-A ABS and CMBS yielding 8.7% and 14.6%, respectively, it is not difficult to understand that there are more compelling risk-reward opportunities outside of high yield paper. Even within credit, investors can get close to double-digit yields in triple-B paper.
- **Low-quality baskets filling up with downgraded issuers**: As we stated above, we expect fallen angels to outpace rising stars by a wide margin. As a result, investors such as insurance companies or traditional investment grade accounts will see their high yield baskets fill up with fallen angel debt and, therefore, will not have as much capacity to add existing high yield debt. Within high yield, net downgrades may also push some portfolios over their triple-C capacity.

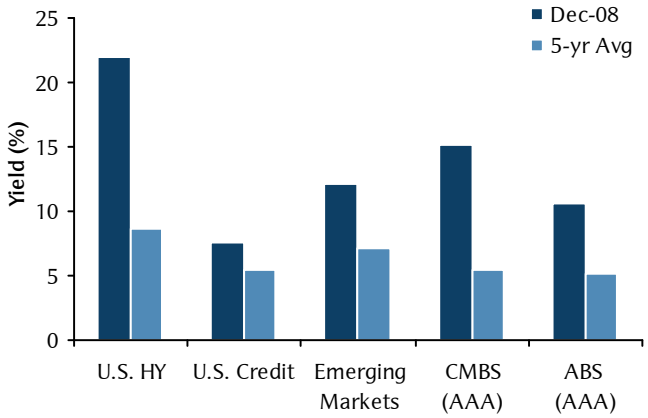
We expect the primary bid for high yield product to come from two sources – 1) coupon payments; and 2) company debt buybacks. With high yield paper trading at an all-time low price, issuers have become more aggressive in buying back their debt in the open market. Although debt-for-debt exchanges can help companies deleverage without using as much cash, many high yield companies have opted to use their cash to buy back debt (eg. among many others, Mirant, Pinnacle Foods, Bon-Ton, and Belo have either bought or announced intentions to buy back debt recently). This is probably due to debt buybacks being operationally simpler and/or the unwillingness of companies to antagonize lenders at a time when they may need their support in the near future.

Figure 71: High yield mutual fund flows ($ mn)



Source: AMG Data Services

Figure 72: Yield-to-worst by asset class



Source: Barclays Capital Family of Indices

Recommendations

Maintain up-in-quality bias

Investing in higher-rated assets rewarded investors in 2008 with the Ba, B, and Caa Indices posting year-to-date returns of approximately -22%, -32%, and -44%, respectively. Since the downturn began, double-B and single-B credits have outperformed their triple-C counterparts by 20-25%; however, this performance dispersion across ratings is rather modest by historical comparison. Through the 2000 recession, BBs and Bs outperformed CCCs by 40% and 70%, respectively (Figure 73).

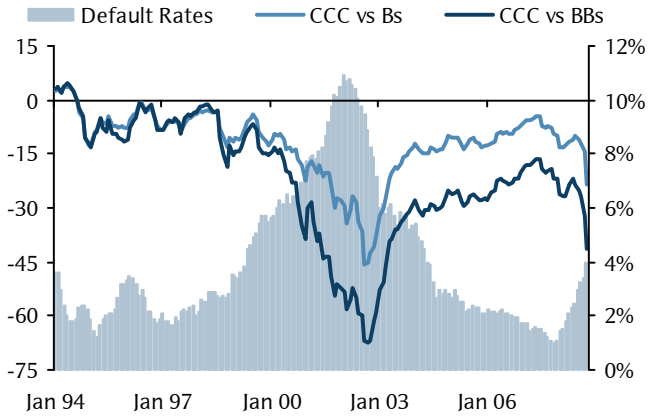
Admittedly, there are inherent differences between this cycle's triple-C universe and prior ones, but overall the strengths largely offset the weaknesses, in our view. For example, the current cohort of triple-C companies in this cycle benefit from their size and diversity and are generally concentrated in more asset-heavy sectors. They also benefit from weaker covenant packages that should, in theory, give the issuer greater flexibility to turn the corner. On the other hand, triple-C debt suffers from more subordination (particularly amongst LBO targets) and the unfavorable supply-demand balance as the concentration of triple-C credits has tripled over the past decade.

The additional yield offered in CCC paper also appears slim from an historical and loss-adjusted standpoint. The incremental yield pickup to swap from BBs and Bs into CCCs is roughly half of peak levels reached during the last recession (15% and 18%, respectively, Figure 74).

In addition, the incremental yield in CCC paper looks underpriced taking into account rising loss rates. Using average one-year default rates during prior recessions[7], we calculate probable expected losses for each rating and the residual yield (Figure 75). In short, the results suggest a significant portion of the triple-C yield will be eroded by losses; in comparison, the loss-adjusted yields for double-B and single-B paper appear much more attractive (in the 12% context). Given the severity of the current credit crunch, it is possible that historical data understate the default risks inherent in double and single-Bs. Therefore, we also calculate breakeven one-year default rates for double and single-Bs (holding triple C default rates constant) and the results still look aggressive, in our view, confirming the value in higher-quality segments.

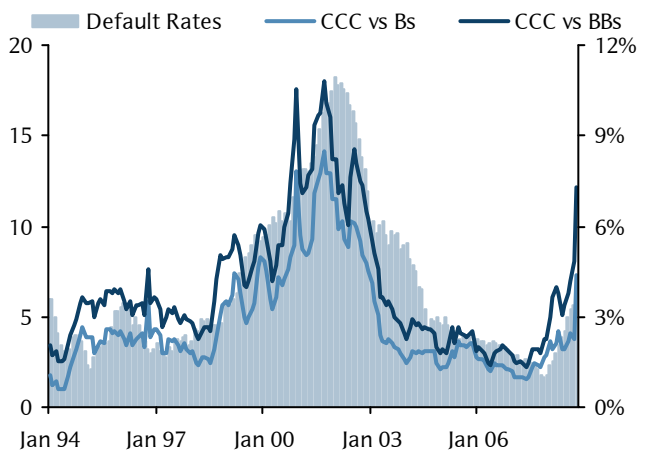
[7] *One-year default rates from 1987 – 1991 and 1998 – 2002.*

Figure 73: Cumulative return differentials and HY default rates



Source: Moody's, Barclays Capital

Figure 74: Yield differential vs default rates



Source: Moody's, Barclays Capital

Figure 75: Loss-adjusted yields and breakeven default rates

	BBs	Bs	CCCs
Yield to worst	13.8%	18.7%	26.0%
Default rate	2.0%	8.0%	28.0%
Recovery rate	20%	20%	20%
Loss given default	1.6%	6.4%	22.4%
Loss adjusted yield	**12.2%**	**12.3%**	**3.6%**
Breakeven default rate	**12.8%**	**18.9%**	**28.0%**

Source: Barclays Capital

Sector selection still important at this stage

Key sector selections

Sector selection was particularly important in 2008 as the best-performing industries (environmental, supermarkets, aerospace/defense, healthcare, and packaging) trumped the worst (financials, automotive, gaming, media noncable, and technology) by 32% on average[8]. Issuer-level returns were highly correlated with overall industry returns, in part due to the strong influence of market technicals on bond valuations. Although we expect issuer-level returns to exhibit more differentiation in 2009, industry bias will remain a critical factor driving investment returns.

In brief[9], we favor overweight allocations in higher-quality, recession-resistant industries with better relative fundamentals because we are more confident that investors can achieve low double-digit returns on coupon income alone with lower mark-to-market and default risk. Among the largest high-quality industries, we believe utilities and healthcare offer better risk/reward than energy, given solid liquidity profiles, good earnings visibility, and better recovery prospects from hard assets[10]. We also like the wireless sector as trends generally remain strong (eg, solid subscriber growth and higher data revenues offsetting declines in voice)[11]. Finally, we are

[8] *Average returns for the top and bottom performing cohorts were -13.4% and -45.6%, respectively.*
[9] *Please see LehmanLive for a comprehensive list of sector recommendations.*
[10] *Our utility analyst favors Mirant and TXU/EFH notes specifically, and our healthcare analyst recommends HCA, Davita, Biomet, Hanger Orthopedic, and Alliance Imaging notes across the cap structure.*
[11] *Our telecom/ cable analyst likes select notes in the Sprint and MetroPCS cap structures – see "Initiating Coverage on the HY Telecom and Cable/DBS Sectors" for full details.*

overweight aerospace/defense, given generally strong liquidity/balance sheets, solid free cash flow generation, and several positive single-name views[12].

Alternatively, we remain wary of sectors with a significant number of potential default candidates (eg, autos, retail, gaming, and media). However, in the case of autos, yields trade well above its peers and probable government intervention argues against an outright underweight stance on this group. The other sectors (ie, retail, gaming and media) are unlikely to benefit from similar tailwinds and face significant fundamental hurdles, including negative investor sentiment and additional re-pricing of risk premium. We advise low allocations to all three, although we recognize that each sector has select opportunities.

We expect retailers to suffer disproportionately because of the current consumer-driven recession (akin to 1988-90 when the sector was the second-worst performer) and tight credit conditions. In our view, lower recovery prospects and sizeable potential fallen angel supply will also weigh on this group. We also believe gaming is still in the earlier innings of a fundamental downturn and lower multiples are inevitable given the lack of credit availability and the coming wave of distressed properties. Finally, we are cautious on the media non-cable and wireline sectors given weak operating trends and, in the latter case, rich valuations, in our view.

Figure 76: 2008 Industry performance and current valuations

	OAS	OAD	YTW	Price	Moody Rating	S&P Rating	% of Index	YTD Return
High Yield Index	1803	4.1	21.6	57	B1/B2	B+/B	100.0	-31.3
Media Noncable	1953	4.1	23.4	52	B2/B3	B+/B	8.1	-39.4
Electric	1122	4.9	14.1	73	BA3/B1	B+/B	8.1	-21.3
Healthcare	1232	4.5	15.0	73	B2/B3	B+/B	7.3	-16.5
Independent	1349	4.9	16.5	66	B1/B2	BB-/B+	5.5	-26.5
Technology	1969	3.9	23.4	53	B1/B2	B+/B	5.4	-38.0
Automotive	3711	2.7	43.3	35	B3/CAA1	B/B-	4.8	-50.5
Wireless	1339	4.7	16.3	65	BA2/BA3	BB-/B+	4.2	-19.8
Paper	1809	4.2	21.6	58	BA3/B1	BB-/B+	3.8	-32.7
Gaming	2662	3.4	31.2	43	B1/B2	B+/B	3.6	-48.1
NonCaptive Finance	4393	2.7	53.1	33	B3/CAA1	B-/CCC+	3.2	-51.9
Wirelines	1473	4.3	17.6	67	BA3/B1	BB-/B+	3.2	-25.9
Pipelines	1126	5.2	14.2	71	BA2/BA3	BB/BB-	3.0	-24.0
Media Cable	2142	3.4	25.3	55	B2/B3	B+/B	3.0	-31.8
Home Construction	1793	3.7	20.8	57	BA2/BA3	BB/BB-	2.7	-24.6
Retailers	2057	3.8	24.2	51	B2/B3	B/B-	2.5	-34.3
Metals & Mining	1508	4.2	17.9	66	BA3/B1	BB-/B+	2.4	-29.1
Industrial Other	1420	4.3	17.0	71	B1/B2	B+/B	2.4	-19.0
Aerospace/Defense	1053	4.5	13.2	77	B1/B2	BB/BB-	2.3	-16.2
Food/Beverage	1403	4.1	16.7	73	B2/B3	B+/B	2.3	-20.5
Chemicals	1700	3.7	20.2	57	B1/B2	B+/B	1.9	-28.8
Consumer Cyclical Svcs	2039	4.0	24.0	51	B2/B3	B+/B	1.8	-36.8
Packaging	1157	4.6	14.4	75	B1/B2	B+/B	1.5	-16.6
Building Materials	1980	4.1	23.5	54	BA3/B1	BB-/B+	1.5	-33.8
Oil Field Services	1411	4.5	17.0	67	B1/B2	BB-/B+	1.3	-25.1
Environmental	788	4.4	10.2	88	B1/B2	BB/BB-	1.2	-4.5
Lodging	1503	4.1	17.7	67	BA1/BA2	BBB-/BB+	1.1	-26.8
Supermarkets	986	4.6	12.1	81	B1/B2	B+	1.1	-12.9

Source: Barclays Capital Credit Indices

[12] *Our aerospace/defense analyst has an overweight recommendation on names like L-3 Communications, Bombardier, and Hawker.*

CDS-cash basis: Mind the gap

In our view, the CDS-cash basis is unlikely to converge over the near to medium term, primarily given our expectation that the factors driving the basis are unlikely to improve meaningfully. First, we foresee the difficult conditions in the HY repo markets persisting as bank funding needs remain elevated and capital remains constrained. While we have seen some signs of improvement in higher-quality markets, any normalization will take longer to flow through to the financing of lower-quality assets. Second, hedge fund redemptions and general deleveraging have not fully run their course, in our opinion, suggesting further pressure on the basis. Third, counterparty concerns are unlikely to dissipate overnight despite efforts to enhance transparency through the weekly DTCC reports. All that said, there are a couple factors that could cause some gradual compression in the basis over time, namely new financing requirements for CDS positions, a larger incidence of defaults, and/or greater sponsorship of cash product from real money accounts. We believe the best basis opportunities are explicitly default plays (and implicitly basis convergence trades) involving distressed issuers and, in select cases, fallen angels (trading in spread running form) that have potential liquidity issues or rapidly deteriorating fundamentals. Additionally, basis package "outliers" that provide equity-like returns are also attractive.

Conclusion

We believe the market's record cheap valuations are warranted, given the fundamental outlook. The default experience over the next few years will be among the worst on record with respect to the default and recovery rate, in our view. Elevated yields, however, should cushion much of the blow, and investors could receive near double-digit returns in 2009.

US leveraged loans

Bradley Rogoff, Michael Anderson, Matthew Mish, Gautam Kakodkar

Looking for a new home

The loan market experienced unprecedented volatility in 2008 as a result of technical pressure from market-wide deleveraging. With the average loan now trading close to historical recovery rates of $70 and robust Sharpe ratios turning negative, it is time for traditional buyers to reassess the market. We believe that the intrinsic fundamental value of loans is attractive relative to other asset classes at current levels. The prospect of double-digit unleveraged returns is finally attracting the interest of non-traditional yield-seeking investors. However, as more structured vehicles unwind, the amount of loans needing a new home continues to increase. Put simply, without leverage it is impossible for a market to grow 140%, as the loan market did over the past three years. In 2009, we expect loans will find it difficult to rally materially as fundamentals deteriorate and market participants continue to deleverage. We identify the following key themes and recommendations for 2009:

- We expect unleveraged loan returns to be 6-8% in 2009, assuming the asset class bottoms in the mid- to high 60s. This takes into account the boost from more covenant amendment fees and loan coupon step-ups, offset by expectations for lower Libor rates, lower repayments rates, higher default rates and depressed recoveries.
- We believe that loan issuance will resemble the tepid supply of 2008. With little need to term out maturities, we expect about $75bn in supply from new issuance, approximately $50bn in supply from CLO/TRS unwinds, and small supply from loan mutual fund redemptions.
- We expect the slack in loan demand caused by the evaporation of the natural CLO buyer to be replaced by non-traditional yield-seeking investors, analogous to the incremental private equity bid in early 2008. Since many of these investors are only interested in mid-teens unleveraged returns, this bid may fade if the market rallies.
- The introduction of the non-cancellable bullet LCDS contract in early 2009 should improve derivative market liquidity. The use of LCDS should also help support liquidity in the traditionally thinly traded secondary loan market. Until the new contract is rolled out and used for a new LCDX series, liquidity in single name LCDS will remain poor.

Loans offer more downside protection than bonds

We believe that the loan market is close to the fundamental bottom, with the average loan trading near $70, which is the historical recovery rate on the asset class. Assuming conservative base case default rates of 8.6% annually for five years, a prepayment rate of 2%, and a recovery rate of 60%, **we believe that target entry prices of $67-69 for loans and $71-73 for LCDX should provide attractive 12-13% loss-adjusted unleveraged returns** (Figure 77, excerpted from *US Credit Alpha*, October 24, 2008, where we derived *target valuations* by credit asset class). With another leg of deleveraging remaining, we believe technical pressures will result in loans finding a bottom in the mid- to high 60s next year.

Figure 77: Target valuations

Asset	Base case annual		Base case target value range	
	Defaults	Recovery	Unleveraged	2x Leveraged
LCDX	8.6%	60%	$71 - $73	$82 - $84
US Leveraged Loans	8.6%	60%	$67 - $69	N/A

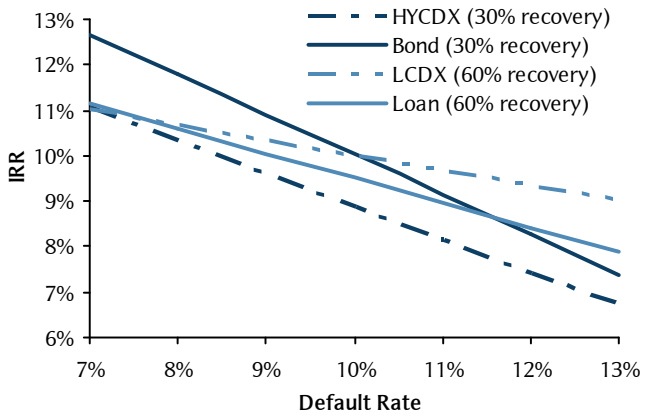
Source: Barclays Capital

Our base case for loan returns in 2009 is 6-8%. Even assuming a draconian scenario of a 12% default rate and a 55% recovery rate, the non-defaulted portion of the loan index just needs to hold its current dollar price of $68 to result in a 7% return in 2009. This scenario also assumes an initial average index coupon Libor spread of 260bp, 3-month Libor at 2%, and 15% of the index amending its coupon higher by 150bp along with an amendment fee of 75bp.

Specifically, we believe that the up-in-quality trade will perform very well in loans because CLOs will be forced sellers of lower-quality loans as their CCC buckets are filled. While we go into more detail on the incentives of CLOs in the Structured Credit section, we highlight that CCC buckets are based on CFRs and loans will be affected even if they have been notched up from the unsecured ratings.

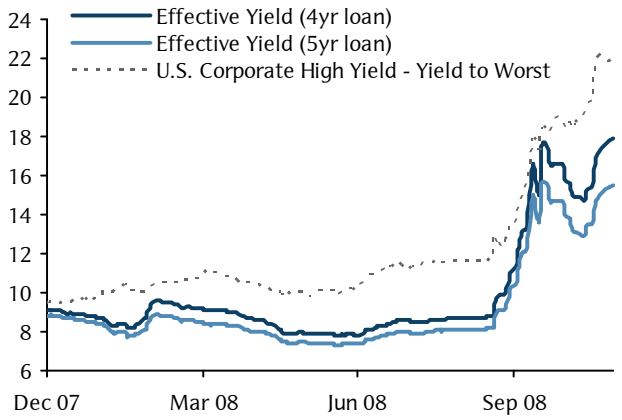
LCDX versus loans: Similar to the high yield market, loan derivatives produce lower returns than their cash counterparts on an unleveraged basis due to the negative basis in the market. While the concept of basis for loans is not entirely comparable to that for bonds, primarily due to LCDS being cancelable, as defaults increase, loans should perform better (Figure 78) because of their lower price (current difference between LCDX and average loan price is 7 pts) . However, given the tough funding environment in the cash markets, applying 1:1 leverage on the LCDX yields superior returns versus loans at current entry points under our base case scenario.

Figure 78: Loan and bond unleveraged IRR scenarios



*Note: Assumptions: **HYCDX**: Price $73, **HY Bond**: Price $57, **LCDX**: Price $75, prepayments 1%, **Loan**: Price $68, prepayments 2%.*
Source: Barclays Capital

Figure 79: Loan and bond yields



Source: Barclays Capital Family of Indices

Loans versus high yield: We believe that loans provide better risk/reward than HY bonds (Figure 79). Investors should generate similar returns in the bond and loan markets. However, loans should have much less downside, given their senior position in the capital structure and higher recoveries. Creating bank debt at current market values makes leverage multiples appear favorable to enterprise values.

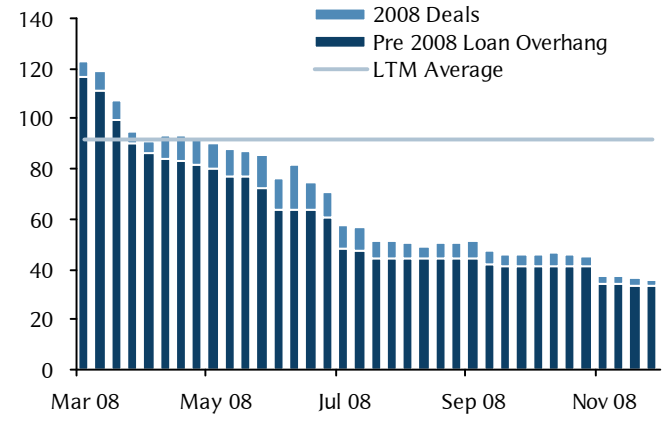
While we believe there is more value in the leveraged loan market, we acknowledge that most of the value comes from the discounted price, and it is unclear when investors will realize that appreciation to par. This highlights the low current yield if the market rallies, which will likely dissuade non-traditional investors. Also, despite clear pockets of value in leveraged loans, credit selection will be critical, given our expectations for a challenging default cycle and a potential lack of DIP financing. For our general sector views, please see the High Yield section.

Deleveraging to weigh on technicals, new supply constrained

The new issue market will likely remain severely constrained. The loan pipeline was a major factor pressuring loans in 2008, and there was only $140bn (Figure 80, Figure 81) in issuance despite the forward calendar beginning 2008 at an even higher amount. The forward calendar has been whittled down to a manageable $36bn ($33bn is pre-2008 overhang), primarily because deals were cancelled as funding evaporated. The pipeline now stands at less than 20% of its peak size, with BCE representing 41% of the pre-2008 overhang and HUN/HXN another 17%. Despite the pipeline relief, the negative pressure from the deleveraging should continue to re-price loans lower in H1 09, stifling new supply as few issuers are able to make financing work at the higher yield, steep discounts and convexity demanded by investors. **Until the technically driven selling pressure subsides, it will be challenging for the new issue market to recover.**

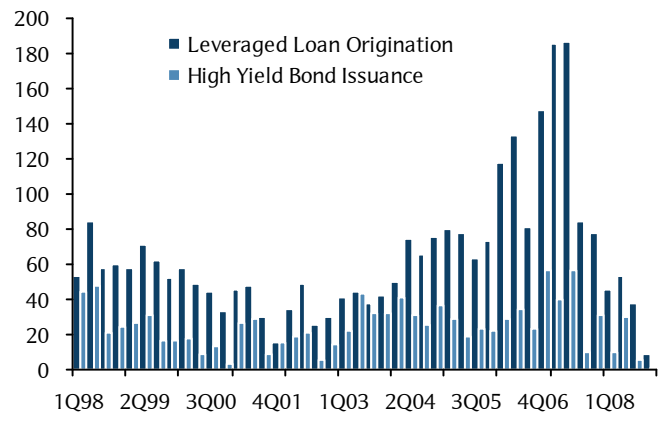
Supply should pick up in H2 09. We are looking for a very weak H1 09, when only highly motivated or liquidity-challenged issuers will attempt to enter the market. Supply should pick up in H2 as the secondary loan market hopefully stabilizes. New issues are likely to be concentrated in small cap club deals and large cap BB rated deals. We expect more investor-friendly structures with OID, Libor floors and coupon step-ups. There could also be more CLO-friendly carve-outs offering OIDs that help over-collateralization (OC) tests. For example, Precision Drilling recently came to market with a $400mn TLB (OID of $80, L+600 spread, 3.25% Libor floor) that had a $75-100 million CLO-friendly carve-out at an OID of $85 and a higher coupon. While the outlook for new LBOs is very weak in the medium term, sponsors control balance sheets that represent as much as half or more of the current loan market outstanding. Although most of these companies do not have near-term maturities, there will be some refinancing from sponsor-related companies. **In total, we expect approximately $75bn in supply from new issues in 2009.**

Figure 80: Loan pipeline ($ bn)



Note: S&P LCD, Barclays Capital

Figure 81: Loan issuance ($ bn)

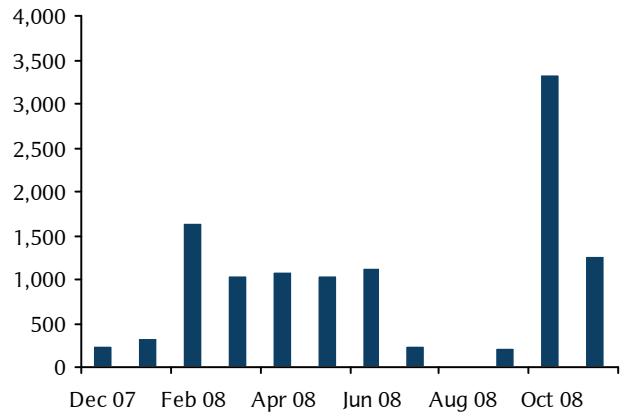


Source: S&P LCD, Barclays Capital

Deleveraging of bank, hedge fund and mutual fund loan portfolios and CLO/TRS unwinds will add to supply. Loan technicals continue to be dominated by a flood of BWICs, which amounted to $5bn in Q4 08 and $12bn for the year (Figure 82). **We expect added shadow supply of about $50bn from CLO/TRS unwind.**

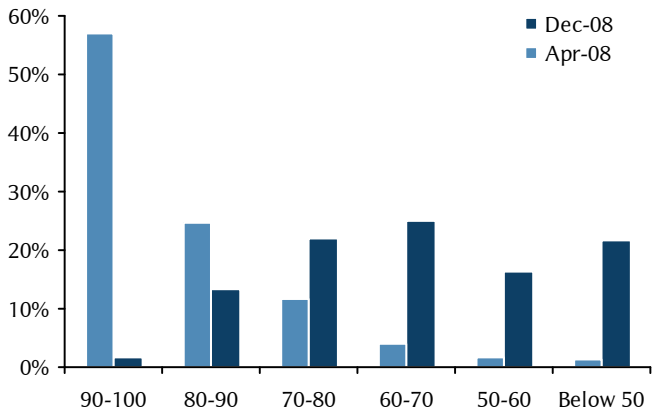
- Market value CLOs: $40bn of MV CLOs were outstanding in early 2008 and were forced to unwind to meet OC tests as loan prices fell (Figure 83). **We estimate that $10bn is left and at risk of unwinding in 2009.**
- Total return swap (TRS) CLOs: $20bn of Fitch-rated CLOs were issued prior to 2008 and had termination triggers at $85-90. The first wave of unwinds/ restructurings occurred in March, followed by another wave in September-October. $6bn in notional is outstanding, of which some has been already restructured. **We estimate a minimal amount of supply from TRS CLO unwinds.**
- TRS: Over $100bn in loan TRS were issued prior to 2008, which require variation-margin posting as losses occur (most deals had 15-25% initial equity cushions). **The majority of these TRS are mostly full recourse and have substantially deleveraged, which should leave less than $50bn at risk of unwind in 2009.**
- Mutual funds: Although fairly small in the context of the overall market, several closed end mutual funds have reportedly breached or are close to breaching leverage tests that restrict their ability to pay dividends. In many cases, these funds are modestly leveraged (1.5x to 2.0x), but poor performance exacerbated by fund discounts to net asset value and gridlock in the auction rate debt markets are potentially forcing them to sell to remain in compliance with their leverage maintenance requirement.

Figure 82: BWICs from TRS unwinds ($ mn)



Note: S&P LCD, Barclays Capital

Figure 83: Loan prices versus six months ago



Source: S&P LCD, Barclays Capital Global Family of Indices

New loan buyers enter the ring, seeking higher yields

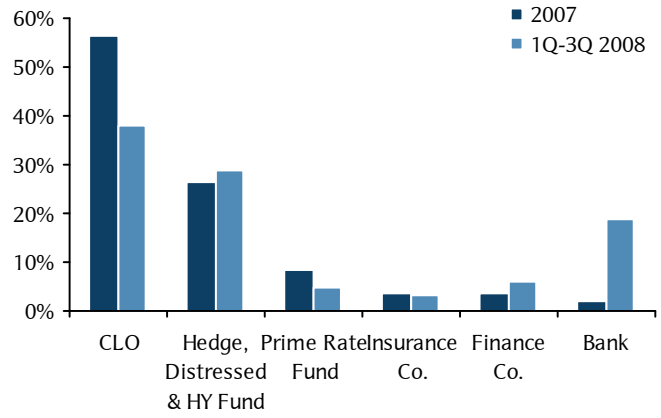
Historically, CLOs have been the largest buyer of leveraged loans (Figure 84), soaking up as much as 65% of such issuance. With the average loan trading near $70, CLOs are unlikely to purchase loans unless they are forced to build par. In our view, potential new buyers for the asset class will be patient, given the supply/demand imbalance, lack of access to funding, and negative fundamental headwinds. We expect loans to find a bottom in the mid- to high 60s in H2 09, delivering equity-type mid-teen unleveraged returns over the longer term. Private equity firms bought loans on leverage earlier in 2008 (Figure 85), which was a major factor in stabilizing the market at the time. **We expect such non-traditional buyers to step in to fill the void as the loan re-pricing promises equity type returns.**

Fundamentals erode, defaults spike and recoveries "DIP"

As fundamentals deteriorate further in 2009, with companies brushing up against their covenants, liquidity waning and near-term bond maturities looming, we see an increasing likelihood of a large spike in defaults. We are concerned about cyclicals in general, with the biggest near-term risk concentrated in sectors sensitive to the housing market and the consumer.

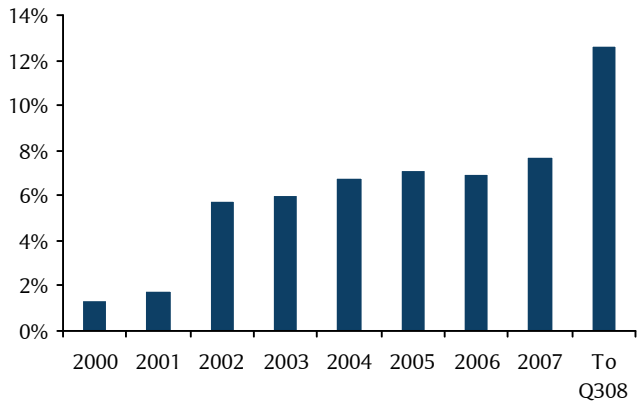
Defaults. While defaults were fairly benign and concentrated in small issuers in 2008, we expect the default rate to pick up substantially in 2009. The issuer-weighted 12-month default rate stands at 3.59%, while on a par value basis, it is lower, at 1.97% (Figure 86). **We expect the annual default rate to spike to 9-10% on an issuer basis by the end of 2009** and be slightly lower on a par basis. Within the LCDX10, there were two recent defaults (Hawaiian Telcom and Masonite), and our bottom-up approach expects 10-12% defaults over the next year. As mentioned in our High Yield section, the extent of defaults will depend on the fate of GM in particular, the effect of governmental assistance if any, and the repercussions on the auto sector. These levels are consistent with the highest observed default rate (ratings adjusted) over a historical five-year period for LCDX and leveraged loans. Given the evolution of the loan market, the default experience for loans should now closely mirror that of high yield.

Figure 84: Loan buyer base



Note: S&P LCD, Barclays Capital

Figure 85: Private equity & private equity-backed loan accounts' share of the primary institutional market



Note: Excludes secondary sales of 2007 inventory.
Source: S&P LCD, Barclays Capital

Recoveries. Moody's 2008 estimate of recoveries on senior secured loans is $64, below the historical average of $70 (Figure 87). However, loan prices for weaker quality issuers[13] in the LCDX10 index are trading at an average of $60. As enterprise multiples compress in 2009 and defaults rise, **we expect loan recoveries to fall to 55-60%.** Second liens, which represent 6% of the loan market and are present in many CLO structures, will have even lower recoveries. The biggest downside risk to this projection is a dearth of DIP financing.

Below-par loan buybacks and pre-payments. We think companies will continue to attempt to deleverage their balance sheets opportunistically by repurchasing loans below par. However, such buybacks are difficult to implement because garnering the necessary lender approval can be challenging, even with an amendment fee as a sweetener. In contrast, we expect par pre-repayments to trend down, as they have been doing in 2008. Historically, par repayments represented an important component of total return. Even small repayments can have a significant positive impact on returns at

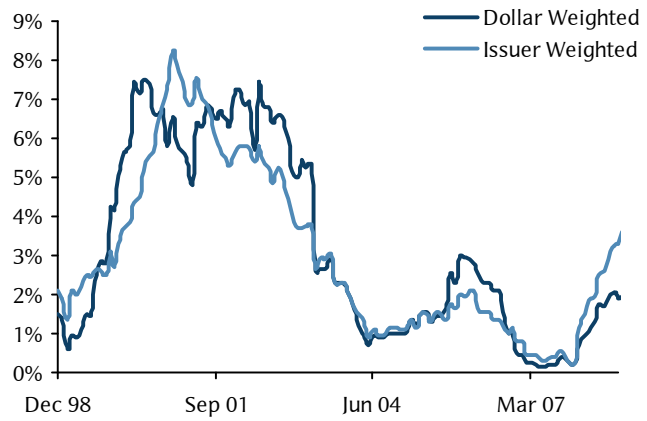
[13] *See High Yield Advisor, September 3, 2008, for the list of weaker issuers considered.*

current prices. As issuers look to boost liquidity, there might be some mandatory repayments triggered by M&A and asset sales in 2009.

Revolver draw-downs: We expect additional revolver draw-downs as companies shore up liquidity before they have an immediate cash need. As a result, banks are less likely to extend new loans to leveraged issuers and may also look to sell term loans (which are more liquid) to reduce exposure. Companies are also coping with some lost revolver availability following the Lehman Brothers bankruptcy. We expect the trend of pre-emptive revolver draws to continue for as long as the financing markets are in flux.

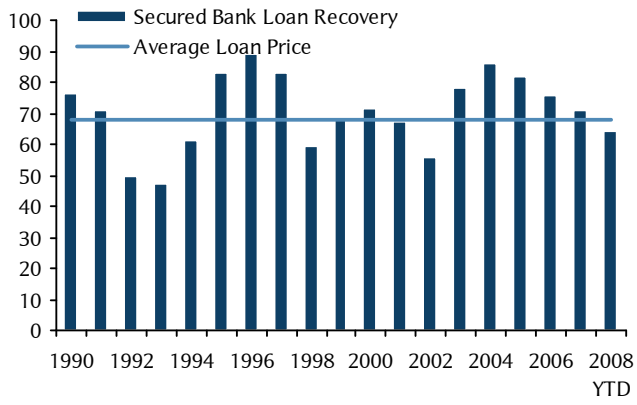
Covenant amendments. We expect more companies to seek covenant amendments as cushions erode with declining EBITDA in 2009. While covenant-lite issuance got all the headlines in 2007-08, 84% of the market still has maintenance covenants. There were 104 covenant amendments (12% of loans in the S&P Index) in 2008, with an average fee of 57bp and an average spread increase of 170bp. We expect more investor-friendly structures such as OIDs, Libor floors and step-up coupons in amended loan agreements. This would obviously help the current yield and might attract new investors. We note that CLOs that are in compliance with OC tests and CCC baskets will be generally in favor of amendments so that they can continue to carry the collateral at par.

Figure 86: Lagging 12-month default rates



Note: S&P LCD, Barclays Capital

Figure 87: Annual secured bank loan recovery rates



Source: Moody's

DIP financing. We expect DIP financing to remain tight in 2009. However, as defaults rise, lenders are less likely to force companies with enterprise value in excess of the loan to file if it means liquidation. There is almost always more value in keeping a company as a going concern than liquidating. Pre-petition lenders have it in their best interest to provide DIPs for the working capital needs of companies. However, a true lack of DIP financing and more liquidations would push average recoveries (and returns) lower.

Bullet LCDS should boost volumes

The introduction of the non-cancellable bullet LCDS contract in early 2009 should improve derivative market liquidity as more investors gain comfort with using LCDS to take credit views. The bullet contract will have enhanced succession provisions to limit orphaning. In a market in which leverage is not available and shorting is not allowed, LCDS should become an increasingly important tool for managing loan exposure and taking positions. The use of LCDS should also help support liquidity in the traditionally thinly traded secondary loan market. After the finalization of the bullet contract, we expect the delayed LCDX roll to occur in March/April 2009 in conjunction with other

CDX indices. Please see our focus piece "*The Roll*," *Credit Markets Weekly*, September 5, 2008, in which we discuss candidates for inclusion/exclusion.

In addition, the potential inclusion of LCDS and LCDX in the proposed central counterparty solution for clearing derivatives in 2009 will boost transparency. We expect LCDS and LCDX volumes to grow as investors use the products for a variety of trades, including loan hedging, directional credit views, capital structure arbitrage, and basis trades.

Another development that we expect is an increase in distressed LCDS. With the large number of highly leveraged and LBO credits with LCDS (Figure 88), the worsening credit cycle will probably cause many of these names to trade with points upfront. Upfront LCDS trades the same as unsecured CDS – with a specified upfront payment in points and a 500bp running spread.

Figure 88: LCDX vs HYCDX credit metrics

Index	Gross first-lien leverage	Gross total leverage	Interest coverage
LCDX10	3.3x	5.6x	3.0x
HYCDX11	1.8x	5.1x	4.4x

Source: Barclays Capital

Conclusion

As fundamentals erode, recoveries dip and defaults spike, we expect further downward pressure from the deleveraging of bank, hedge fund and mutual fund loan portfolios and CLO/TRS unwinds. Despite the backdrop of constrained new supply and hesitant demand, today's entry point should allow loans to return 6-8% in 2009. We believe that the up-in-quality trade will perform very well in loans and credit selection will be key. While loan returns should be similar to high yield, we prefer the former asset class, given the better downside protection offered by its higher position in the capital structure.

European investment grade

Puneet Sharma, Magdalena Malinowska, Aziz Sunderji

We have held a bearish stance on European IG credit for the past year (see *iTraxx Main at 200? Or 20?, 1 May 2008* and *Main at 100?, 16 November 2007)*. Today, valuations have corrected significantly. In the cash credit space, for example, spreads appear to be "optically" pricing in a depression (however, adjusting for funding costs in a deleveraging environment, they are not cheaper than CDS). At the same time, there have been a number of policymaker initiatives that attempt to alleviate the economic downturn.

However, despite cheaper valuations and policy initiatives, real credit deterioration is set to now take hold as we enter 2009 – negative rating migrations and defaults are likely to rise dramatically, which is likely to be accompanied by substantial swings in credit spreads. As consumer demand wanes, earnings are likely to drop sharply, and amid economic uncertainty and a weak banking sector, credit deterioration in European high grade credit could be worse than historical precedents. The weakness in the banking sector is the key variable in this credit deterioration. We expect credit availability to remain impaired as European banks digest losses to the tune of €400bn from loan books in a deteriorating economy. The weak earnings would lead to capacity adjustments, possibly leading to an uptick in unemployment. We also expect negative impact on credit quality from sharp currency movements, negative liquidity spirals in some pockets and the risk of an uptick in western European sovereign spreads if policymakers cross the line of prudence in "saving the system". In fact, we argue that the elevated sovereign risk is not in the price of European IG credit today, which is one factor that significantly raises potential downside despite spreads being close to our target level. We also believe that potential CDO unwinds (*CDO unwind headwinds*, *16 October 2008*) are likely to be another key driver of spread widening in CDS spreads.

So, while an earnings downturn is priced into the European IG credit spreads today, the uncertainty risk premiums are not priced in to any significant degree and there are a number of reasons investors should demand these premiums. This is especially true for CDS with the iTraxx Main index currently at 190bp although the cash credit space appears cheaper with i-Boxx €/£ corporate indices at 350bp (in line with CDS when we account for say 125bp of funding costs).

We therefore remain bearish on European high grade credit but acknowledge that the magnitude of spread widening from current levels is likely to be of the order of 20-25% rather than the 2-4x we had forecast before the two previous bouts of widening. We would expect to turn around our view either when credit spreads reach levels of say 250bp on the Main index or there is more visibility of a real credit fundamental turnaround. In the meantime, we expect some short covering rallies will ensue – we would use any substantial spread tightening to say 150bp on the Main index to reset shorts with high conviction.

In terms of positioning, we make the following recommendations:

- We remain Underweight on European IG credit and would not recommend long positions unless spreads reach 250bp or there is more visibility of a turnaround. Upon any rallies to levels below 150bp in the iTraxx Main we would recommend resetting shorts with a high conviction.
- With the extremely sharp widening in sovereign CDS, we recommend playing corporates versus sovereigns. In particular, we like shorts in cyclical names which are trading through their sovereigns – such as Compass, Cadbury, Experian and Safeway – as we believe these will underperform as earnings plummet and as sovereign risk gets priced into credit.

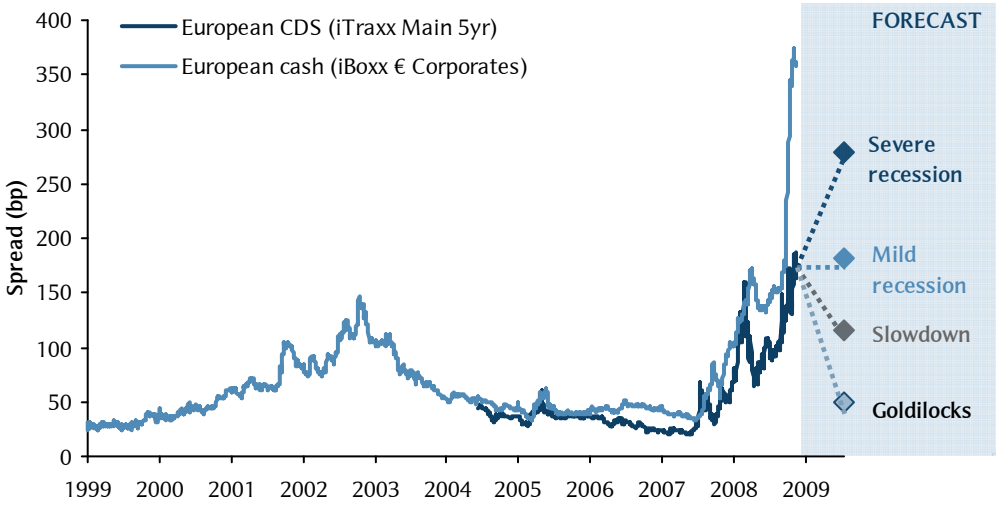
- While we expected curves to flatten in 2008, especially for cyclical sectors, we now think that flat curves provide some attractive opportunities to position into short forwards, although we remain wary of steepeners. We recommend short forwards in the indices as an attractive method of executing our view at the macro level.
- We reiterate our macro trades, such as short Hi-Vol/Main versus Financials and also short Hi-Vol versus Main – with timing fresh entry on any spread tightening to 150bp on the Main index and profit taking above 250bp.
- In terms of sectors, we continue to like Telecoms, Utilities and senior financials (preferred entry through new issues) and remain bearish on Media and Consumer sectors, which are not pricing in the full downside, according to our migration analysis and our fundamental views.
- We believe Autos and Industrials are now pricing in the downside according to our rating-migration analysis, but our analysts believe that the expected earnings downturn could be worse than that used in our model and therefore we remain bearish.
- We also like basis trades in some selected names when the cash/CDS basis is above 300bp (we think given funding costs a basis of 125bp is fair and not cheap).

European IG credit spreads have repriced significantly…

Valuations in European IG credit have deteriorated substantially. Globally, spreads are now beginning to reflect some of the deterioration we had forecast previously. In Europe, for example, credit spreads are pricing in the worst economic scenario, with cash pricing in a depression.

Spreads have skyrocketed...

Figure 89: Credit spreads have widened substantially

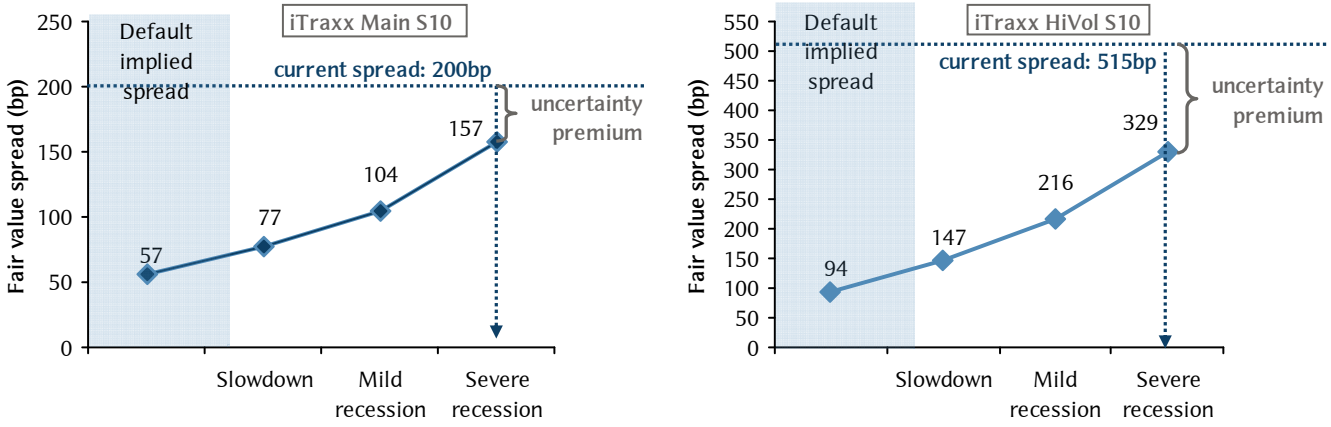


Source: Barclays Capital

... but even so, they are not wide enough to recommend an entry point as uncertainty premiums remain quite low

However, looking more closely, we believe credit spreads, especially in CDS, are not wide enough for us to recommend an entry point as uncertainty premiums are still quite low. Current levels offer almost no uncertainty premium over and above the spread level that investors should demand, given slowing growth and deteriorating fundamentals, and the risk that the downside could be worse than historical precedents.

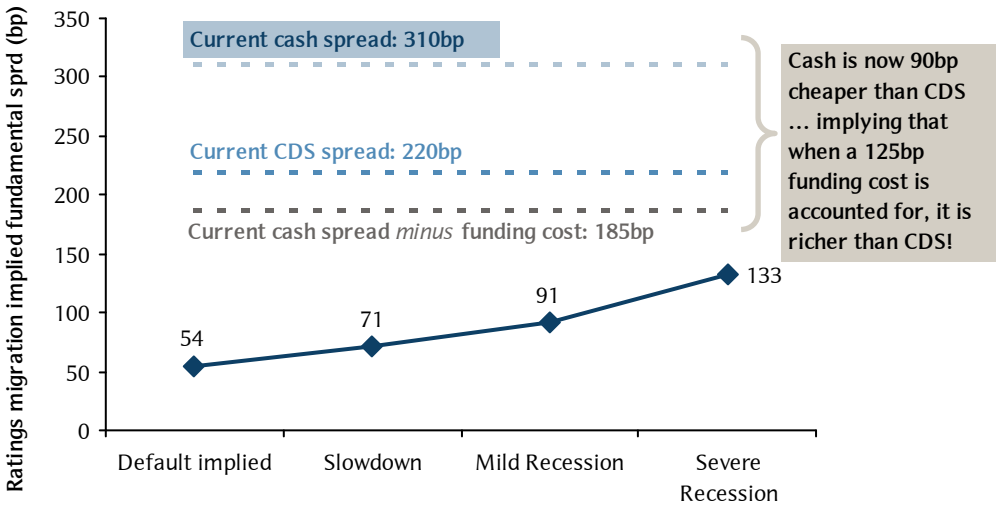
Figure 90: Current valuations imply a substantial economic downturn but offer too little uncertainty premium



Source: Barclays Capital

Moreover, cash is only cheap when funding costs are not taken into account. **When funding costs are subtracted from the bond spread, cash is not cheaper than CDS.** This is clearly most relevant to leveraged investors, but is also significant to real money investors given that funding costs broadly equate to opportunity costs. Furthermore, cash credit should be pricing in an illiquidity premium as well.

Figure 91: Cash is not cheaper than CDS



Note: We here use the 86 constituents of the iTraxx Main index for which a CDS and a comparative 5yr cash spread was available. Source: iBoxx, Markit, Barclays Capital

The rising sovereign credit risk is underpriced in European credit spreads… as is the risk of CDS unwinds

Furthermore, we believe there are additional risks that have not been factored into valuations and that will keep spreads elevated as they are increasingly recognised. Sovereign risk continues to rise as nations implement aggressive fiscal packages and the cost of financial bailouts rise – stretching fiscal health and raising the floor for credit spreads. Another important risk emanates from the potential for CDO unwinds.

In the rest of this article, we delve into these and other risks that we believe will affect European IG credit over the next 12 months. We weigh these against some recent positive developments, such as aggressive and supportive policy actions. Finally, we assess how much is priced into credit and recommend positioning for 2009.

The factors underpinning a negative trend

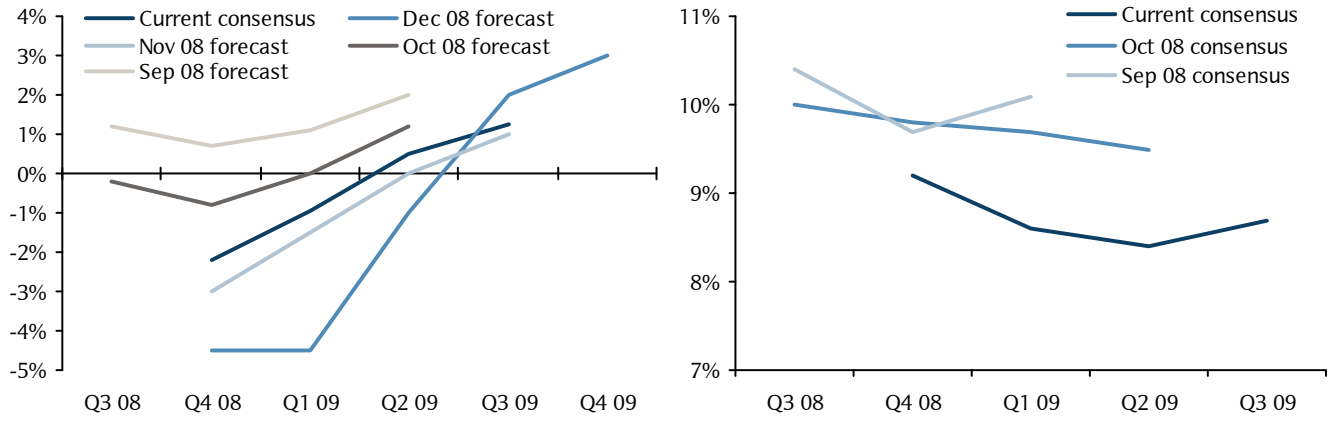
In the current environment, we see many factors still weighing on European IG credit from fundamental as well as technical perspectives.

1. Fundamental credit deterioration set to accelerate…

The global economy appears to be hurtling down a steep slope, and all the major indicators are painting an increasingly worrisome picture.

- **Growth.** Many well-developed economies have entered a period of recession, while growth in emerging markets is slowing fast.

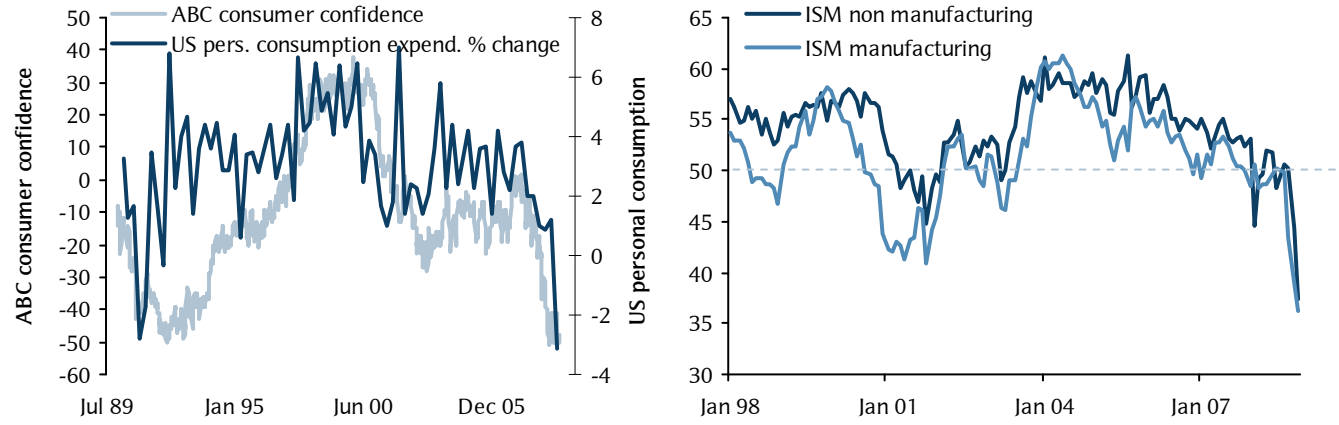
Figure 92: Growth forecasts for the US (left) and emerging markets like China (right) have fallen



Source: Bloomberg, Barclays Capital

- **Consumer**. Spending has fallen off sharply and is now a drag on growth, as credit has seized up and confidence has plunged.

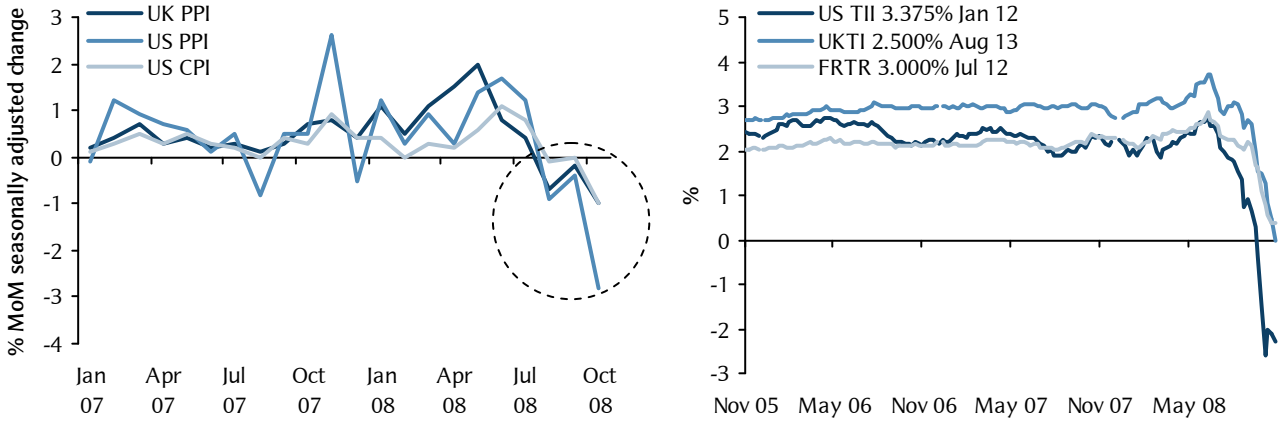
Figure 93: Consumer spending has fallen off sharply (left) and manufacturing has plunged (right)



Source: Bloomberg

- **Inflation**. We believe the current risk of deflation indicates towards not only a severe recession but also a perception of some probability of a depression.

Figure 94: Inflation metrics have plunged: CPI, PPI and the outlook priced into TIPS have dropped



Source: Bloomberg, Barclays Capital

…and this spells severe rating migrations

Migration is the key risk for IG investors

In such an environment, credit fundamentals will deteriorate significantly. The key mechanism is from slowing earnings, to rising leverage and finally, in the IG space, to intensifying ratings migration – the key risk in our view. As we have argued before, we believe rating migration should be the key driver of credit spreads fundamentally, as non-MTM investors are getting paid to take downgrade risk as opposed to default risk.

A brief look at our migration model

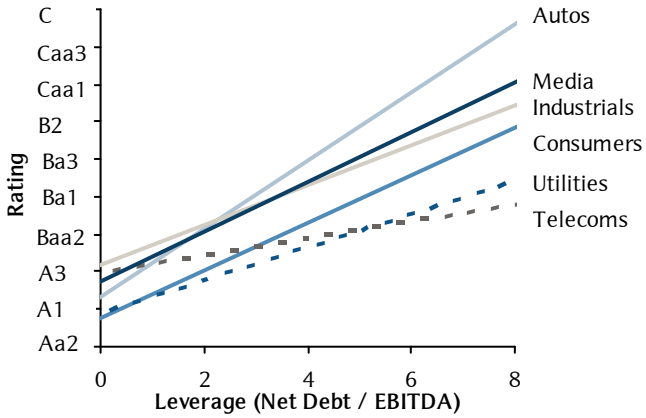
We first introduced our credit migration model in *European Credit: Main at 200? Or 20?* 1 May 2008.

Our methodology is detailed in our original publication, but the essential steps are:

- We estimate peak-to-trough changes in earnings under varying conditions of economic deterioration.
- On a sector by sector basis, we estimate the relationship between leverage (Net debt/EBITDA) and credit ratings.
- Using these relationships, we map earnings shocks to rating shocks to estimate downward migration under various economic scenarios.
- Using historical data, we measure historical losses on various buckets of credit. Using these loss rates, we estimate fair value spreads under varying conditions of economic and fundamental distress.

Figure 95: We estimate EBITDA falls under various scenarios of economic deterioration (left), and map the resulting increase in leverage to ratings deterioration (right)

Scenario	EBITDA fall
Slowdown	20%
Mild recession	35%
Severe recession	50%

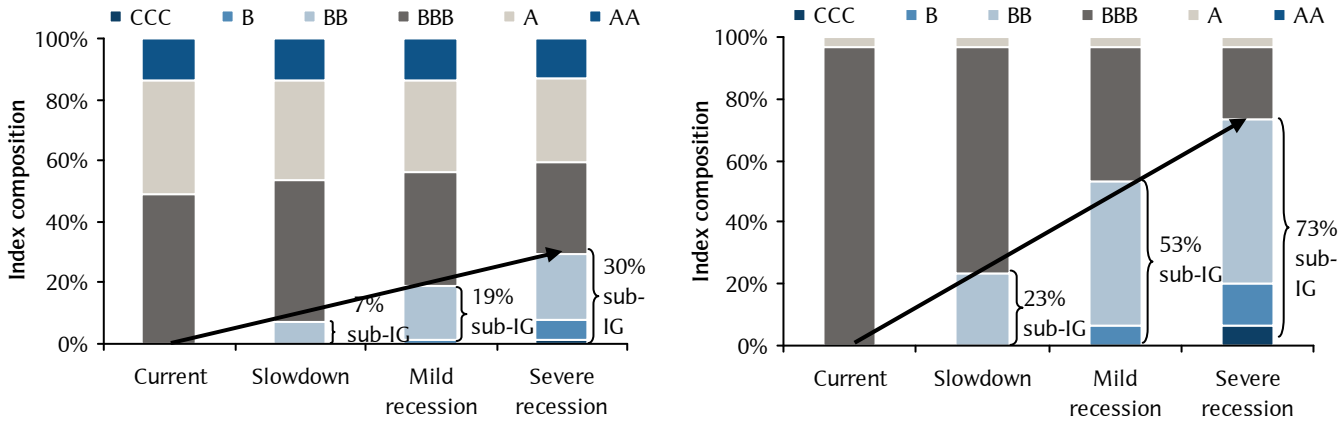


Source: Barclays Capital

Potential magnitude and implications of deterioration

Using our migration risk approach, we had forecast ratings deterioration for the iTraxx Main index in various economic scenarios. We estimated that in a severe recession, as much as 30% of the iTraxx Main index could be downgraded to sub-IG. This implies a very significant deterioration in the CDO portfolios, which tend to be much worse in credit quality of constituents compared to the iTraxx Main index.

Figure 96: Rating migration for iTraxx Main (left) and HiVol (right) in various scenarios



Source: Moody's, S&P, Barclays Capital

2. Earnings drops could be much worse than expected, affecting the expected credit quality deterioration

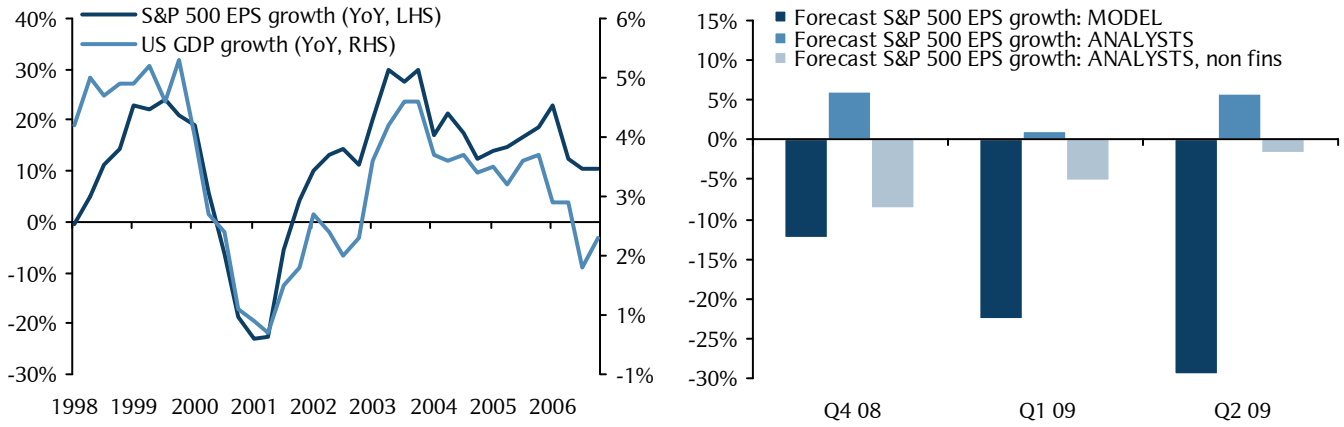
Earnings drops have an effect on actual and expected credit quality

Actual earnings declines are a key driver of deterioration in credit fundamentals and ratings migration, as explained above. However, *expected* changes in earnings, and the extent to which these expectations are realised, are also likely to severely affect sentiment, **as many credit market participants look to consensus equity analysts for earnings guidance**. As the economy deteriorates, we believe that earnings expectations are currently overly optimistic – the scope for disappointment is large.

We believe that optimistic global earnings expectations will translate into pressure on credit and sentiment worldwide. Using a simple growth-earnings model, we estimate the potential level of such disappointment for the US, as an example. Earnings and economic growth are highly correlated, as shown in Figure 152 (left). Using this relationship, we compare the earnings expectations based on economic growth forecasts, versus analyst earnings expectations. We believe that earnings expectations

are currently over-optimistic, as shown in Figure 152 (right) – the scope for disappointment is large, as the economy deteriorates, especially in H109.

Figure 97: Corporate earnings growth is highly correlated with economic growth (left); analyst earnings expectations are too bullish relative to those implied by growth (right)

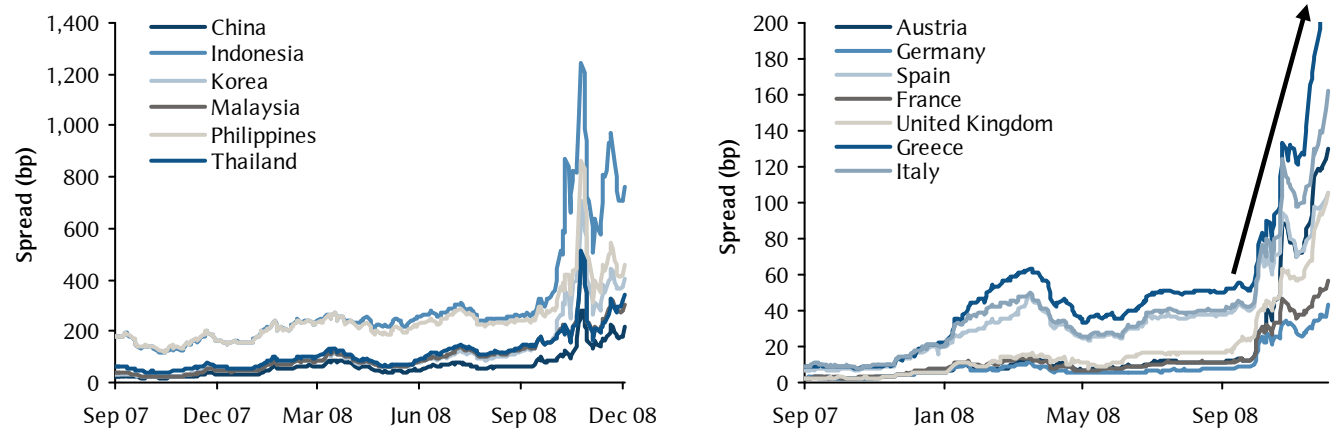


Source: Bloomberg, Barclays Capital

3. Sovereign risk on the rise – knock-on effects on corporate ratings

Since the near-market meltdown in September, global sovereign risk has spiked sharply. CDS levels have risen across the board: Asian countries experienced a particularly sharp re-pricing in October (Figure 153 – left), while European sovereign risk has spiked more recently and is now at an all-time high (Figure 153 – right).

Figure 98: Asian sovereign risk has spiked and retraced somewhat (left); Western European sovereign risk is at all-time high (right)



Source: Markit, Barclays Capital

Assessing the price credit investors will pay for sovereign risk based on a simple hypothesis

We use a simple model to explain the relationship between sovereign and corporate creditworthiness

We strongly believe that credit should react to a complete re-pricing in sovereign risk, since it is a key factor affecting corporate creditworthiness. While we are in the process of developing a more robust framework to incorporate sovereign risk in credit, we instead use a very simple model to understand and assess the impact of the sovereign creditworthiness on corporate creditworthiness. The essence of this framework is that corporate ratings can be decomposed into the "sovereign" and "pure credit" components. We believe that at times of stress, the sovereign can always seize the assets of the corporate if need be, although exceptions could arise. As such, sovereign creditworthiness provides a floor to credit ratings. Additionally, the corporate rating

will be affected by the "pure" credit component related to name- and industry-specific fundamentals, which can in turn be affected by implicit or explicit government support.

The following model of corporate ratings formalises in very simple terms the relationship between corporate (rating) and sovereign creditworthiness:

Sovereign – credit risk model

$$Rating_c = f\left[Rating(Sovereign_c) + Rating(Pure\_Credit_c)\cdot(1 - Govt\_\sup port_c)\right]$$

Where, for any given corporate *c*, the rating ($Rating_c$) is affected by the following factors:

Figure 99: Factors affecting the corporate rating

Factor	Definition	Impact
$Rating(Sovereign_c)$	Creditworthiness of the sovereign of corporate *c*	Floor of corporate creditworthiness. The higher the sovereign risk, the lower the rating of the corporate.
$Rating(Pure\_Credit_c)$	The effect of purely name- and industry-specific risk factors on the corporate's creditworthiness	This is the "pure" credit risk – the higher this risk, the lower the corporate rating. **Crucially, we believe this is the real risk that credit investors wish to take exposure to.**
$Govt\_\sup port_c$	Degree of government support for the corporate *c* (%)	Implicit or explicit government support for the corporate – the higher the support, the lower the impact of "pure" credit component and the higher the rating of the corporate *c*.

Source: Barclays Capital

Implications of a deterioration in sovereign rating – A simple parallel hit on corporate rating for non-financials

In the present environment, government activism has increased dramatically, with financial bail-outs occurring on both sides of the Atlantic. This effects two factors in the above model: the sovereign creditworthiness, $Rating(Sovereign_c)$; and the government support, $Govt\_\sup port_c$. The limit cases and the resulting corporate rating with minimum/maximum government creditworthiness and support are presented in Figure 155.

It is clear that the implications for credit ratings are diametrically different for financials and non-financials:

- Financials received extensive government support. Therefore, the creditworthiness of the sovereign and financials should converge. **However, for weaker sovereigns, senior financials would continue to suffer along with sovereigns.**
- Non-financials have not experienced a material increase in government support, and given the budget limitations that European governments face, they are unlikely to do so. However, they are still exposed to the risk of increased sovereign creditworthiness. In fact, for non-financials where the increase in government support is negligible, the deterioration in sovereign credit worthiness (as measured by sovereign rating) would cause a parallel and equal shift in corporate rating.

Figure 100: Implications of the model – Sovereign creditworthiness deterioration to translate into a parallel hit for non-financial ratings

		Government creditworthiness	
		Maximum $Rating(Sovereign_c)$ = AAA	Minimum $Rating(Sovereign_c)$ = B
Government support	Maximum (100%) – financials	AAA	B
	Minimum (0%) – non-financials	AAA + $Rating(Pure\_Credit_c)$	B + $Rating(Pure\_Credit_c)$

Source: Barclays Capital

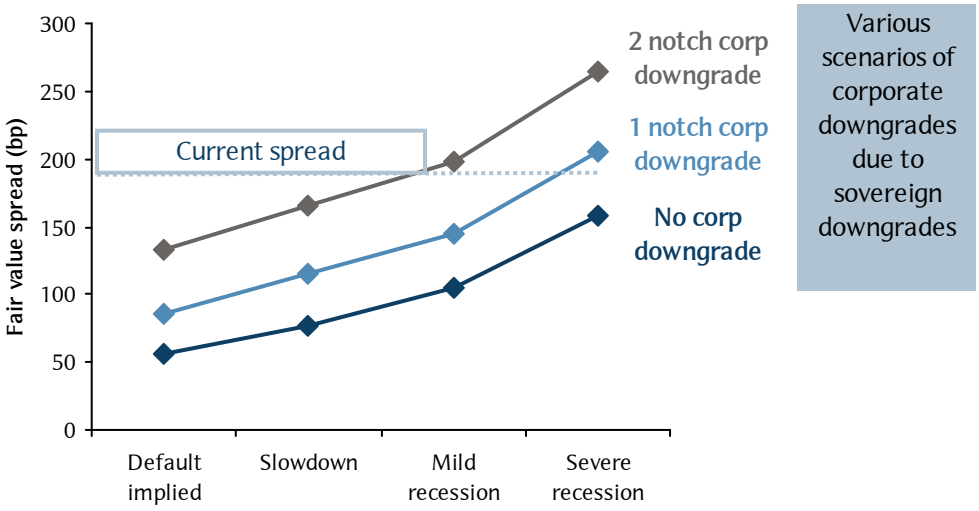
Is the effect on spreads therefore also parallel? Not really

Parallel shift in ratings due to deterioration in the sovereign rating would cause an exponential widening in credit spreads

We believe the key point is that the parallel shift in ratings due to deterioration in the sovereign rating would cause an exponential widening in credit spreads. This is because the fair value spread rises exponentially as ratings drop – spreads jump particularly strongly below IG.

To illustrate the extent of this impact, we conduct analysis of various notch downgrades of European sovereigns and their effect on the fundamental migration-risk fair value of credit. For example, fair value of European credit (iTraxx Europe Main index) rises as much as 100bp if corporates are downgraded two notches due to sovereign downgrades (over and above the pure credit deterioration we forecast from weak earnings)! **While we resist making specific value judgements at this point in time, it is clear that sovereign credit risk appears to be one of the most underpriced risks in the credit markets.**

Figure 101: Fair value of European credit as a result of sovereign downgrades



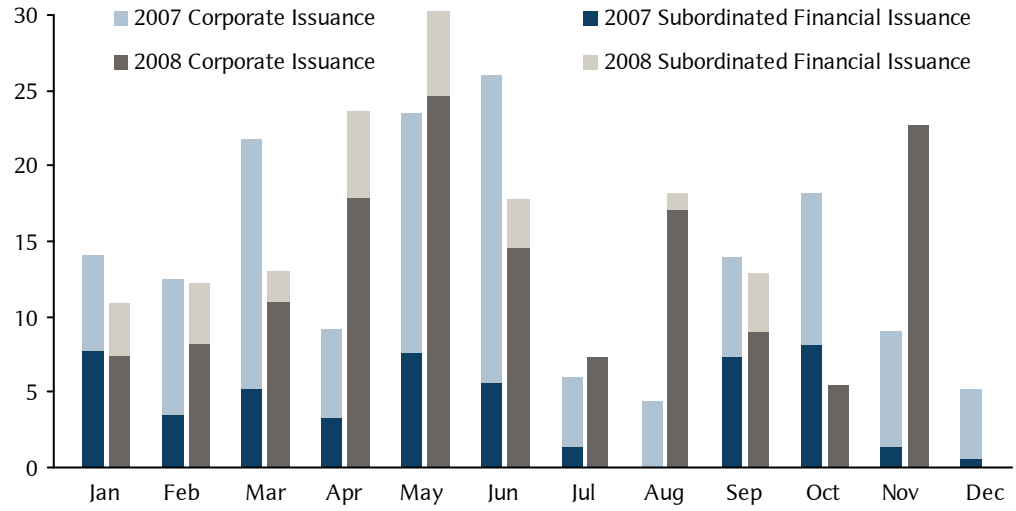
Source: Barclays Capital

4. The Liquidity illusion- refinancing risks

Although issuance has recently ticked up, we believe that there remains a significant risk that at least some corporates – especially the lower-rated ones – might run into liquidity spirals and could find it prohibitively expensive and extremely difficult to refinance in 2009.

Issuance soared in November 2008 after virtual issuance droughts in the preceding two months. This is a clear positive: a lively primary market indicates healthy risk appetite and strong demand, and could become a positive feedback loop into the secondary market. However, this is only relevant for better-quality corporates. The bulk of the new issues have come from strong corporates, frequent issuers, who were not *forced* to tap into the primary market. Furthermore, even relatively pristine issuers gave exceedingly high concessions to investors – new issues came at extremely high spread premia not only to CDS, but also to secondaries. Given the highly negative CDS-cash basis, this indicates just how cheap these issues are. So we believe there is demand in the market for extremely cheap high-quality issues, but the real test will come if and when a forced/relatively unfavoured issuer attempts to tap the market. **The primary market has yet to pass this test and we believe some issuance failures are a real risk in 2009.**

Figure 102: Issuance has ticked up – November supply was large relative to September and October, and was larger than in Nov 2007



Source: Dealogic, Barclays Capital

Refinancing risk remains as corporates' financing needs are high amid limited funding options

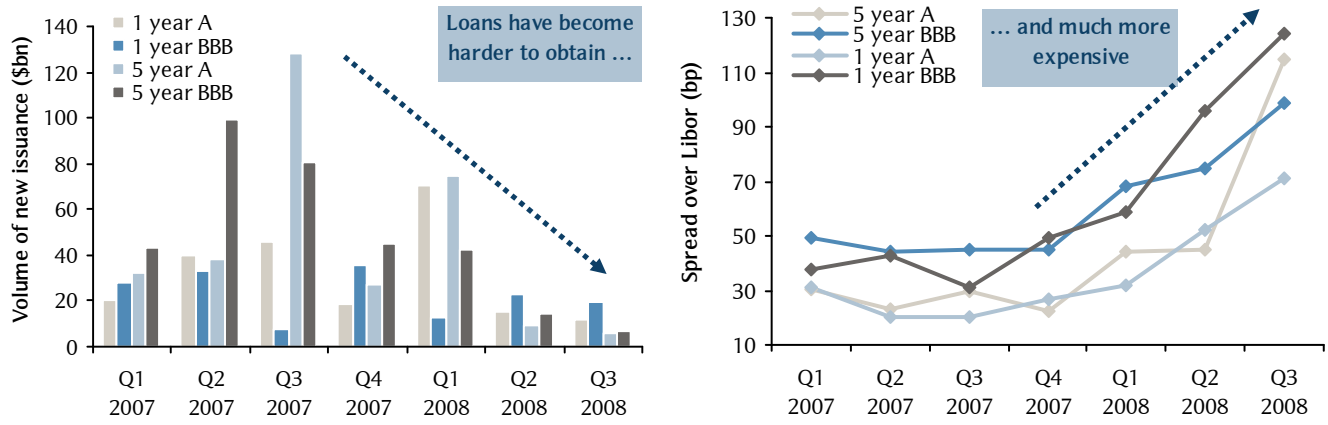
- **Flexibility due to pre-negotiated bank lines is decreasing**

We have flagged before that while many European corporates had pre-negotiated extensive credit facilities going into the crisis, evidence was emerging that these have to some extent been drawn. We believe this process is continuing; therefore, corporate flexibility, though still substantial, has been reduced.

However, even if corporates have undrawn credit lines, they might be unwilling to tap into them – potentially to keep this option open as a back-up in the future. Therefore, even before credit lines are fully utilised, corporates might want to issue bonds.

- **Access to loans has been virtually cut off and costs are sky-high**

Figure 103: Loan issuance volumes have dropped (left) while cost has risen (right)



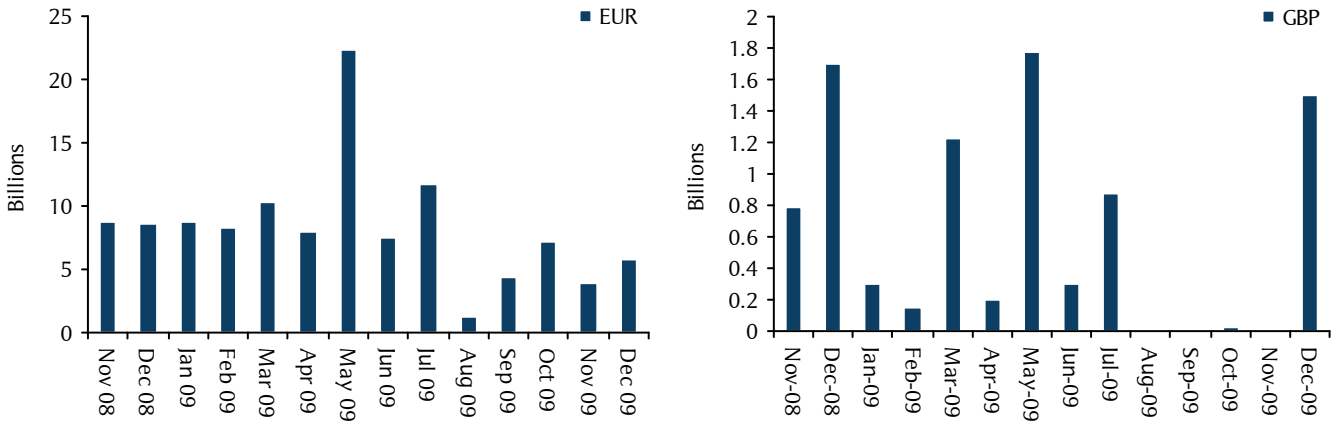
Source: LoanWare, Barclays Capital

- **Meanwhile, financing needs are high**

With the bond market not having been tested for lower-quality/less investor-favoured names, and with the loan market clearly drying up/prohibitively expensive, corporates will find it very challenging to meet sizeable 2009 redemptions (see Figure 104 for

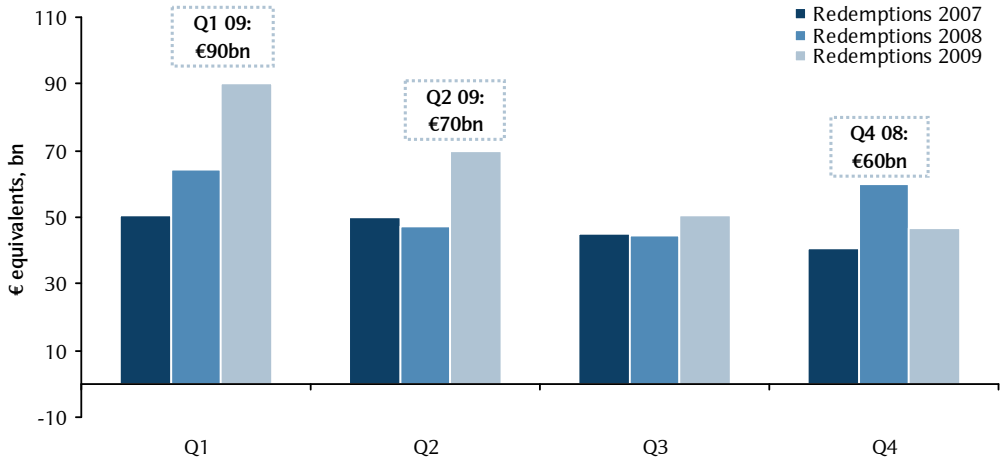
non-financials and Figure 105 for senior financials), aside from whatever ongoing issuance needs they might have.

Figure 104: Refinancing needs due to maturing debt over 2009: € (left) and £ (right)



Source: Dealogic, Barclays Capital

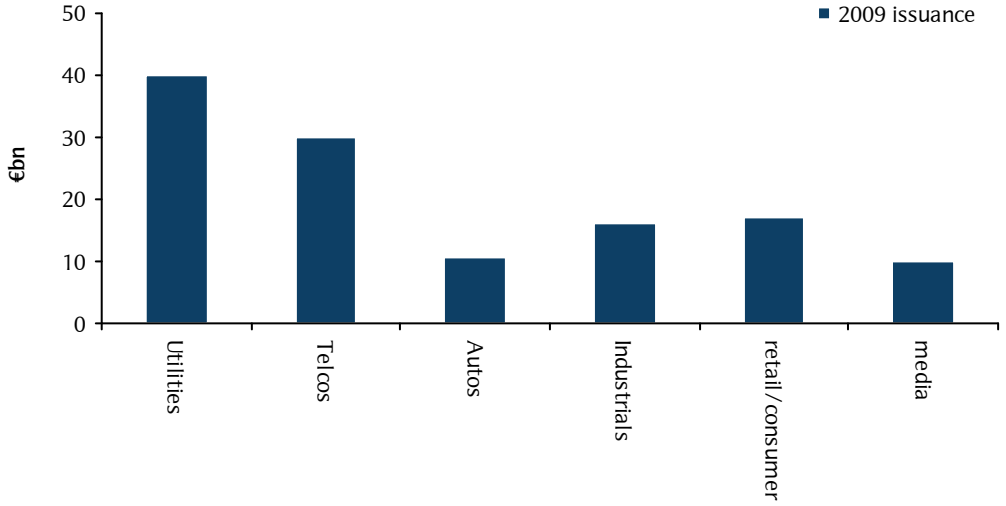
Figure 105: Upcoming redemptions schedule for senior financials – €160bn in H109



Source: Dealogic, Barclays Capital

Facing this difficult primary market, would-be issuers are likely to limit issuance as much as possible – at least until conditions improve. We expect IG bond issuance to be low, especially in sectors that either do not have pressing issuance needs (such as insurance) or are facing very limited investor appetite (such as consumers and other cyclical sectors). **Nevertheless, the possibility that some names will need to come to market but will unable to do so is a real risk for IG credit in 2009.**

Figure 106: Expected 2009 bond issuance by sector (non financials)



Source: Barclays Capital

Figure 107: Issuance needs vary across sectors. More than ever, issuance will depend to a large extent on market conditions

Non-financial sector	Issuance outlook in 2009
Utilities	We expect significant issuance, totalling **€40bn** in 2009, due to the sector's high capex requirements and, for some names, a need to refinance acquisitions. This is only slightly less than the 2008 issuance figure of c.€44.6bn (ytd) which in itself was high by historical standard. Part of the appetite for new issues was clearly due to the cheap levels at which the new issues came; typically mid swaps + 200-300bp range was the norm.
Telecoms	We expect credit investors to maintain the sector as a core holding in their portfolios and to keep a healthy appetite towards new issuance from large telecoms operators. We expect **€30bn** of issuance
Media	We expect an unusual high level of issuance from the sector – perhaps close to **€10bn** – and would recommend investors wait for attractive concessions to increase their exposure to some of the less-risky names in a sector where name selection is key.
Industrials	The level of issuance during 2009 is difficult to predict, as much will depend on market conditions. The more cyclical sectors (steel, building materials) are likely to require a recovery in credit markets from current conditions, if they are to be able to access the bond markets at a cost of debt that is not overly prohibitive. Issuance will be driven by refinancing needs, while certain names may look to opportunistically term out debt maturities. However, we expect M&A/investment driven issuance as being limited, with the exception of that linked to acquisitions carried out in H2 07 and 2008, as management's focus continues to turn to protecting cash flow and maintaining financial flexibility, with capex likely to continue to be trimmed back. Nevertheless, if market conditions allow, we would expect issuance to come above 2008's levels at above **€16bn**.
Autos	We expect auto issuance to decline given our expectations for a significant decline in registrations, investor appetite will remain low, and market conditions will likely remain difficult. Some issuers may also, like VW, choose to retain ABS transactions to post to the ECB, decreasing reliance on the bond market. On the other hand, certain factors do support a degree of issuance: European auto OEMS require regular capital market access to fund their financial services, and European governments could begin guaranteeing issuance in 2009. Depending on market conditions, autos may issue close to **€10.5bn** in 2009.
Consumers	We see scope for issuance to come above 2008's level and would look for a level above **€17bn**, as long as market conditions do not deteriorate further. Issuance from the more cyclical retail sectors is likely to continue to be challenging to achieve, in the absence of a material improvement in investor appetite. We view issuance as likely to be limited to meeting refinancing needs and opportunistically improving liquidity for those names which have short debt maturity profiles, due for example to a significant dependency on commercial paper markets. We believe most consumer sectors should be able to continue to access the bond markets, albeit at a price, given the relatively defensive business profiles of most sub-sectors within the consumer universe.

Source: Barclays Capital

Figure 108: We expect moderate financials issuance

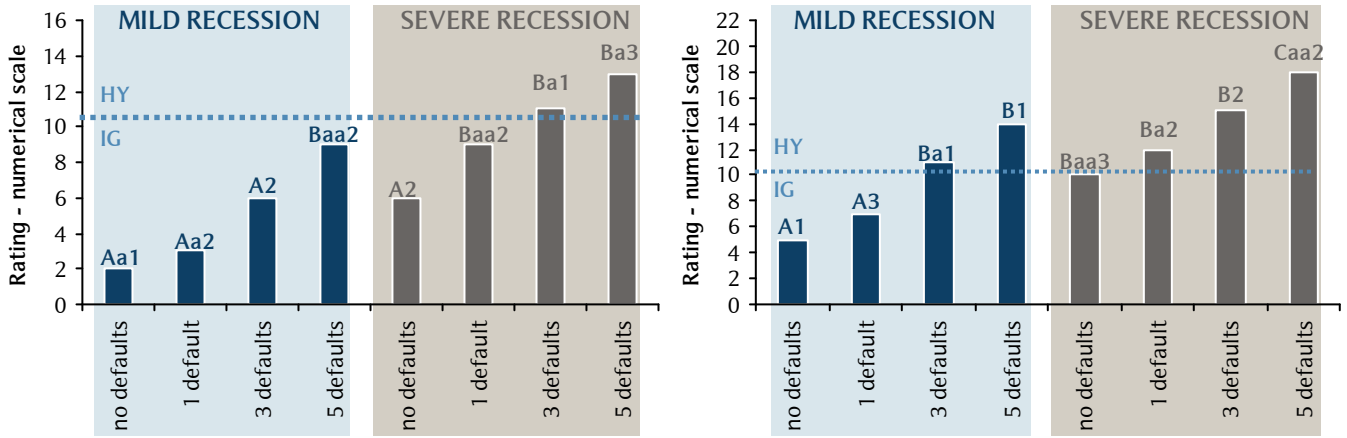
Financials sector	Issuance outlook in 2009
Banks	Although we expect bank issuance to be highly market-condition driven, we foresee certain factors that should dampen issuance volume. Firstly, ongoing writedowns should put the emphasis on the banks' quality of capital, namely that which has loss-absorbing features. Secondly, as we expect bank lending activity to remain constrained, issuance to support such lending should be limited. Finally, recent pricing trends indicate that government-guaranteed issuance might be losing its cheapness appeal, with banks therefore likely to reserve this source of funding for only the most attractive, high margin business in order to prevent locking in negative carry. Nevertheless, with the subordinated space still broken from a pricing perspective, we expect the bulk of the issuance which does occur to come to market in the form of (senior) government-guaranteed paper.
Insurance	2009 will be a difficult number to predict given market conditions and developments. 2009 Sub insurance redemptions should be <€5bn. This does not necessarily need refinancing if markets remain dislocated. M&A could pick up given AIG units for sale, troubled US insurers and asset disposals by distressed financials. Value of M&A could reach over €30bn seen in 2006/7. Part of this could lead to hybrid issuance depending on market conditions. However, there is currently little certainty on the M&A and nature of financing. Opportunistic issuance unlikely if markets remain dislocated. There is potential for over-tapping the equity markets for M&A funding and possibly offering to exchange dislocated tier 1 for high coupon senior product (as was recently done by QBE). We await to see if other insurers consider this strategy.

Source: Barclays Capital

5. CDO unwinds

As we highlighted in the introduction, we believe that an important (and as of now underpriced) risk stems from potential CDO unwinds (see *CDO unwind headwinds*, 16 October 2008). A number of these structures have already been affected by the recent spate of financial defaults. We believe pressures on CDO ratings are likely to worsen as default rates tick up and credit quality on underlying names in CDO portfolios suffers from adverse selection – since the highest spread names were chosen for a given rating. In fact, these rating downgrades could be severe, especially if there are further defaults. AAA tranches could be downgraded to sub-IG if there is a severe recession, with clustered defaults. Furthermore, if there is a severe recession, AA tranches will almost certainly be downgraded to sub-IG.

Figure 109: Tranche ratings in various scenarios: AAA tranches (left), AA tranches (right)



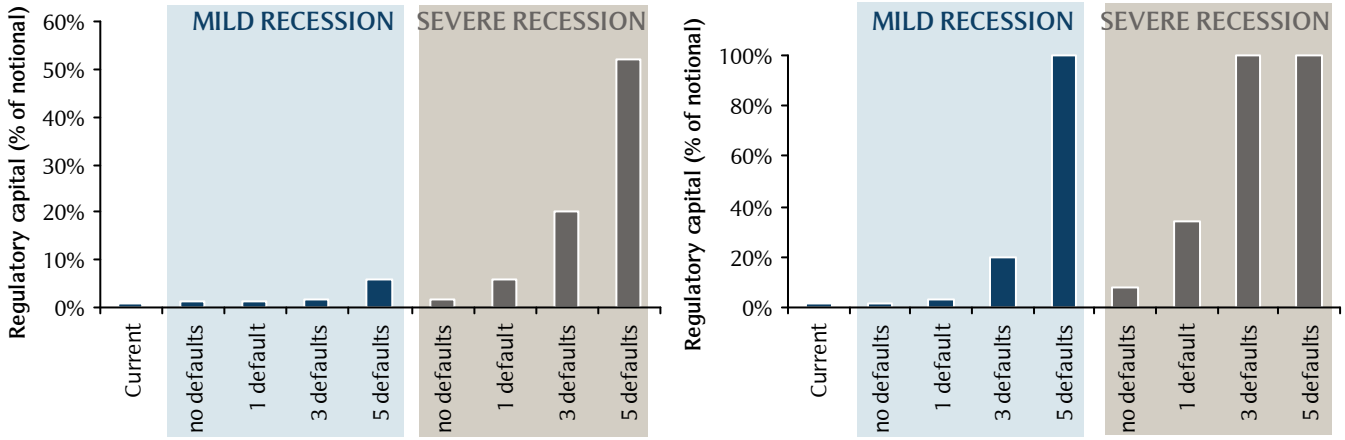
Source: Barclays Capital

Although CDO investors experiencing fundamental deterioration in their tranches will have a number of options, with approximately $1.2trn of delta-adjusted protection on the iTraxx and CDX indices, even moderate unwinds could put substantial pressure on spreads (see *CDO unwind headwinds*, 16 October 2008).

Another immediate effect of the downgrades is the increase in regulatory capital for the affected investors. It is clear that the increase in regulatory capital for CDOs will be extremely severe and could seriously constrain investor holdings of CDS tranches.

Furthermore, we believe names in CDOs, including some sovereigns, could come under substantial pressure and cause spreads to be wider than fundamentally fair spread levels.

Figure 110: Regulatory capital increases in various scenarios: AAA (left), AA (right)

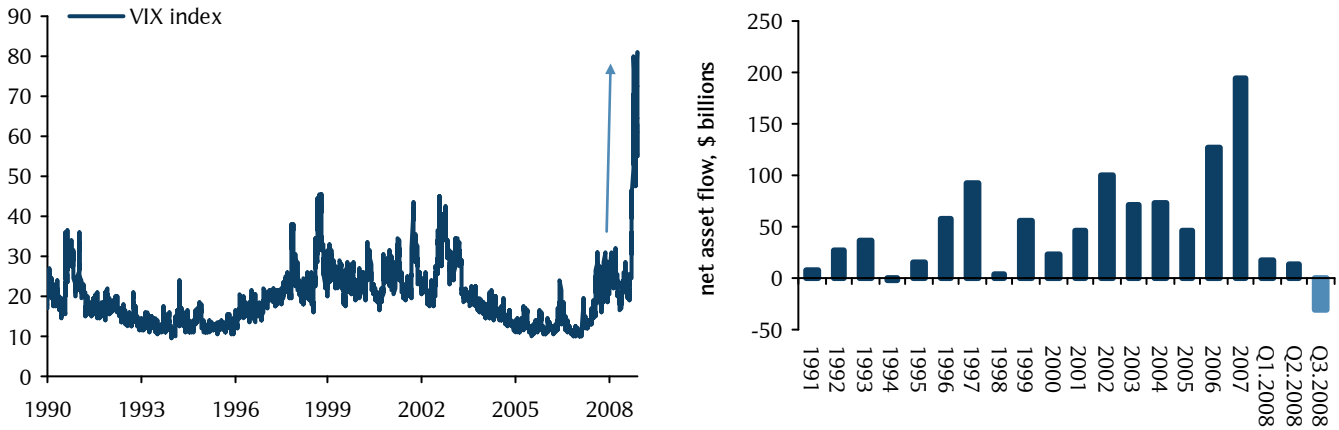


Source: BIS, Moody's, Barclays Capital

6. Deleveraging

Retrenchment of risk is occurring: performance has been dismal, and volatility has picked up substantially. Stop losses are being triggered, and redemptions are hitting hedge funds and money market funds, leading to unwinds in a low liquidity environment. These unwinds, in turn, are strengthening the deflationary spiral in asset prices. In such an environment, even if assets offer value on a fundamental basis, there is little demand for risk.

Figure 111: Volatility (left) has been driven partly by deleveraging (hedge fund flows, right)



Source: left: Bloomberg, right: Hedge Fund Intelligence, Global briefing, Oct 2008

The silver lining from policy actions: Are they enough?

We believe the recent central bank and government activism is the key positive right now. The recent actions have given rise to a few positive factors on European credit. However, while the actions themselves are positive, they are not enough, in our opinion. The key problem lies in the fact that the transition mechanism from healthier financials to

healthier lending to the real economy is broken. Governments lack the power to enforce an increase in lending – incentives and promises are proving insufficient amid deteriorating economy and asset prices.

1. The flood of liquidity: positive but money markets still tight

There has been extensive liquidity support on both sides of the Atlantic. In Europe, countries have provided liquidity support to their banks in two key areas: expansion of liquidity facilities and government guarantees on new bank debt issuance (Figure 112).

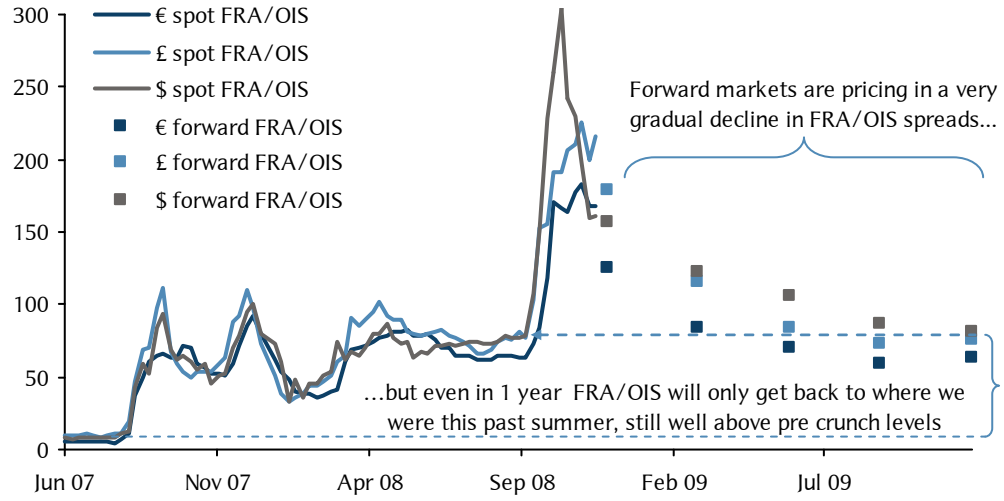
Figure 112: European liquidity supporting government actions

Country	Liquidity support
Austria, Belgium	Government guarantees a clearing house that will lend to banks on a collateralised basis
Denmark	Guarantee for all unsecured claims (but not Tier 1and Tier 2 debt, or covered bonds)
France	Government vehicle, collateralised with non-ECB collateral, to issue debt for banks
Germany	Guarantee for all debt and liabilities issued by companies in the financial sector
Ireland	Guarantee for all deposits and debt
Italy	Guarantees interbank loans
UK	Guarantee for new issuance of CP, CD and senior unsecured bonds and notes, to refinance debt or loans

Source: Barclays Capital

While these actions are certainly positive because they reduce the possibility of a systemically important financial institution defaulting due to funding problems, they do not solve the root of the problem, which lies within bank balance sheets and capital constraints. Indeed, money markets are slow to react to the recent deluge of liquidity – term funding remains extremely expensive, well above the levels seen before the Lehman bankruptcy. What is more, forward markets are pricing in only a gradual normalisation in money markets – it might take as long as one year to return to the levels seen pre-Lehman, and these levels themselves were very elevated.

Figure 113: Money markets remain tight and are pricing in only gradual easing



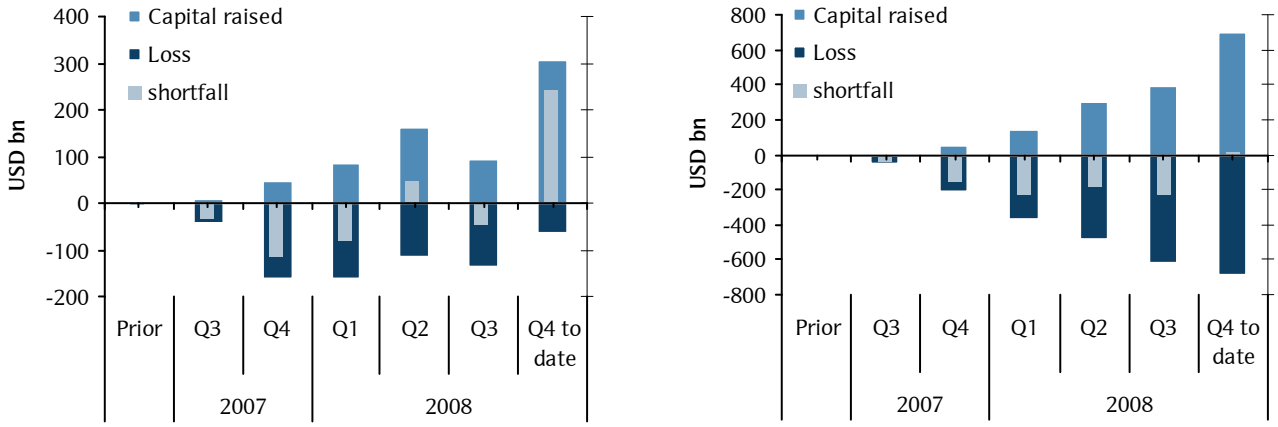
Source: Barclays Capital

In the US, the support includes numerous new programmes aimed at alleviating short-term funding problems for banks, such as the FDIC Temporary Liquidity Guarantee Program and the Federal Reserve Commercial Paper Funding Facility (CPFF).

2. Extensive bank bail-outs: Positive, but effect on real economy is questionable

There has been significant capital injection through various government programs globally. The capital injection has now taken the capital raised so far in surplus of the losses/write-downs recorded till now.

Figure 114: There have been significant capital raisings in Q4 (left), which imply that cumulatively, capital raised now matches the write-downs (right)

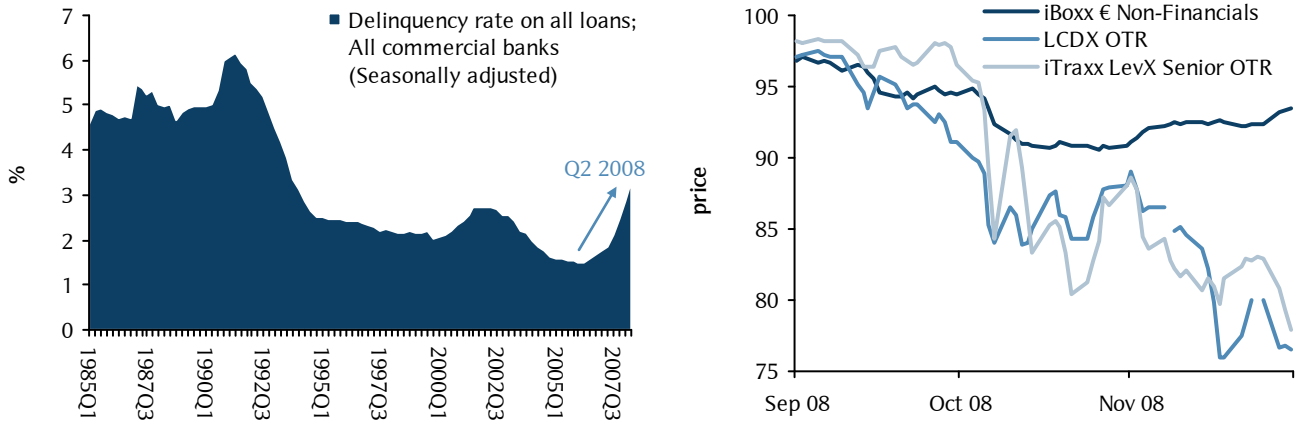


Source: Bloomberg, Barclays Capital

However, banks still have incentive to hoard capital.

- While not a current risk, there could be **more oversight over capital ratios** in the long term in order to protect the taxpayer who is now a stakeholder.
- **Asset deterioration**. Bottomless asset prices could lead to further rounds of loss-taking and capital-raising. There are a few key areas in which the risk of potential losses is particularly large – we believe these are loan books and commercial real estate.

Figure 115: Non-performing loan rates are climbing rapidly (left), IG bonds and leveraged loans have come off recently (right)



Source: Markit, iBoxx, Federal Reserve, Barclays Capital

Thus far, banks have suffered large losses, but these have stemmed primarily from mark-to-market hits on assets such as RMBS, CMBS, and other real estate-related securities. However, the proportion of non-performing loans will rise as the real economy deteriorates. Assuming cumulative NPL ratios of 5/10/15 over the next three years, with 30/75/40 loss ratios for mortgages/consumers/corporates,

respectively, **loan losses would amount to €400bn, or about a quarter of the current banking system's capital base.**

- **Raising private capital is difficult and expensive wherever possible;** banks are therefore hoarding the capital that they have. Moreover, banks that have not participated in government capital injections programmes are under pressure to raise capital elsewhere, quickly.

Therefore, while the real economy needs increased lending to consumers and corporates, the above factors are causing banks to hoard capital. This undesirable situation could persist for a while, in our view, as governments have limited power to force banks to lend more.

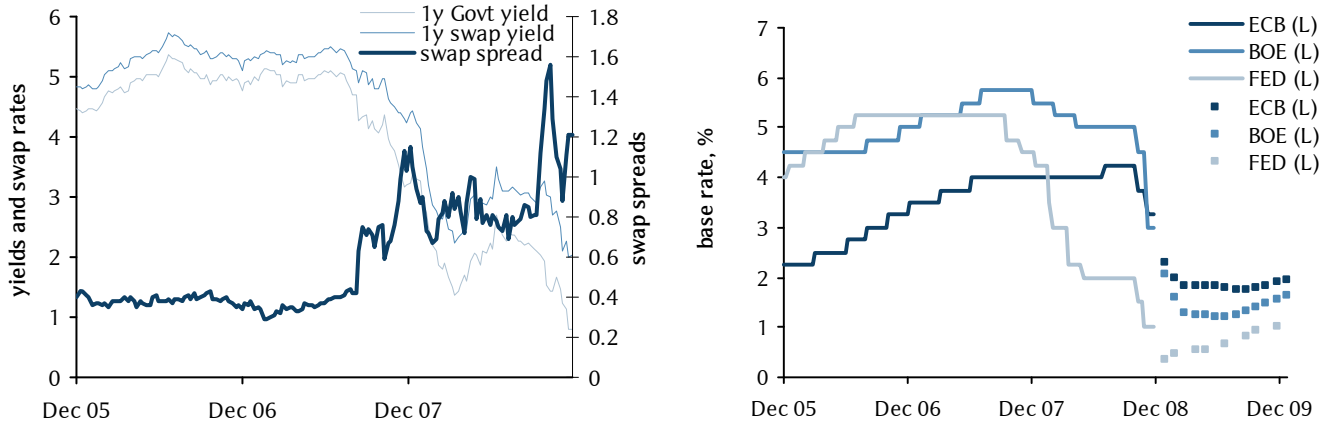
- While extra capital was frequently provided in exchange for a promise to increase lending, unless the government is the majority stakeholder, there is no explicit mechanism to increase lending. Moreover, even financials that have been taken over by the government have not increased lending so far.
- Another avenue governments can take is to encourage increased lending via various asset-buying schemes. The recent programme by the Fed, whereby it will buy $200bn of consumer, auto and small corporate loan-backed ABS, is a step in the positive direction. However, these incentives will be weighed by banks against those listed above.
- Finally, slumping economies and, in particular, growing unemployment, is dampening the demand side for lending to consumers and corporates.

Therefore, the effect of bank bail-outs on the real economy is likely to be slow and unclear at the moment.

3. Global rate-cutting cycle – Transmission mechanism still broken

In addition to liquidity injections and bank bail-outs, central banks have embarked on a global monetary policy easing cycle, which is designed to stimulate economies. Rates have been reduced aggressively recently, and cuts are expected to continue.

Figure 116: The policy mechanism is impaired: Swap spread are well above government rates (left); this will weaken the effect of the rate cuts that the market expects (right)



Source: Markit, Bloomberg, Barclays Capital

While this development is also a positive, the transmission mechanism remains broken. In fact, since rates have been lowered, the cost of borrowing for consumer has not

fallen much, and certainly, credit availability is diminished and is likely to remain so given the weakness in the banking sector.

4. Fiscal stimuli

Governments also appear to be planning fiscal stimuli to lift economies. However, in Europe these actions have been sparse so far and we have reservations about the ability of certain governments to implement aggressive policies given their already strained budgets.

How to position in 2009?

At the end of 2007, we laid out our view across sectors of European credit (see *European Investment Grade Outlook*, December 2007). Broadly speaking, in our macro trades and sector allocations, we recommended underweights on cyclicals (autos, consumer, etc) and overweights on relatively recession-proof, fundamentally stronger sectors (utilities, telecoms). As both the valuations and fundamental aspects of European IG credit deteriorated over 2008, these sectors allocations held up well.

Today, we stand on the brink of recession and reiterate these views. Even more so than in 2007, investors should be concerned about protection of capital and profitable positioning for a fundamental downturn – indeed, these are some of the factors that motivated our sector recommendations one year ago.

Here, we delve into our suggested methods of leveraging our macro views before getting more granular and suggesting trades at the sectoral and curve level.

Macro trade ideas

Index versus index trades

We recommend the following trades at the index level (we recommended the same trades one year ago but they continue to make sense, although entry points are, in some cases, less attractive):

- **Short Main versus senior financials:** We believe that 30% of Main could be downgraded to sub-IG in a worst case scenario, while financials should be anchored tighter by government support.
- **Short Hi-Vol versus sub financials:** Hi-Vol should deteriorate in a recession, while sub financials (as with seniors) should be anchored by government backing.
- **Short Hi-Vol versus Main:** We expect cyclicals to underperform going into a recession – Hi-Vol is substantially more exposed than Main. Moreover, Main will be biased tighter compared with Hi-Vol because it contains financials.

Shorts in cyclicals names versus sovereigns

The recent extremely sharp re-pricing in European sovereign CDS has led to the situation where some cyclical names are trading tighter than the corresponding sovereign CDS. This is particularly pertinent in the UK, where the AAA-rated sovereign has widened sharply recently, while the consumer credits have held in remarkably well in the recent volatility, leading to the situation where some BBB rated consumer credits are trading tighter than the sovereign. We recommend shorting these credits versus the sovereign for a positive carry.

Figure 117: UK consumer credits trading through the sovereign

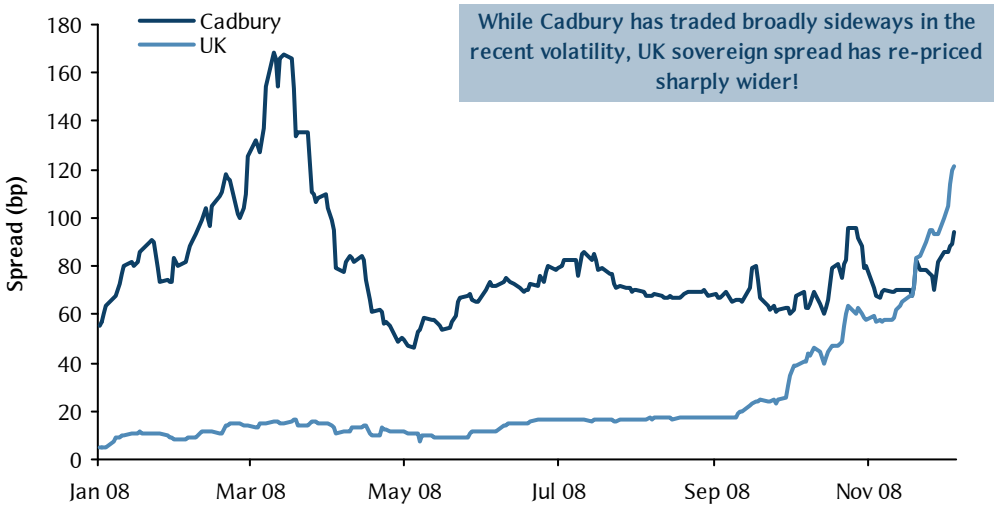
Name	Rating	Migration analysis – what is spread pricing in	View	Positive carry on the short credit vs sov trade
Cadbury Schweppes	BBB	No earnings weakness	Underweight	27
Compass Group PLC	BBB	No earnings weakness	Marketweight	5
Experian Finance PLC	BBB	Economic slowdown	Marketweight	14
Safeway Ltd	BBB	No earnings weakness	Marketweight	16

Source: Markit, Barclays Capital

We believe shorting one of these names – for example Cadbury – versus the sovereign offers particularly attractive value:

- Our migration analysis shows that the name is not pricing in any economic deterioration.
- Our fundamental analysts hold an Underweight view on the name.
- While in the March credit widening the name blew out in line with the market, this time round it has remained remarkably resilient and we believe it is waiting to re-price.

Figure 118: Cadbury is waiting to re-price wider in our view



Source: Markit, Barclays Capital

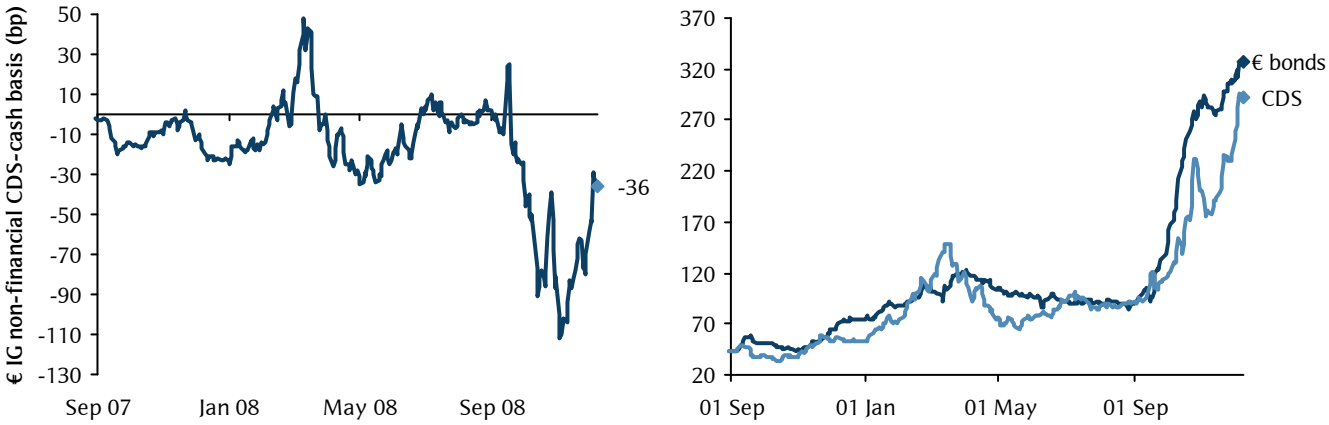
CDS/cash basis

We believe that with funding costs near 125bp for A-rated credit, the current levels of the basis of around -40 in € and -70 in £ do not present an attractive opportunity, in our view. However, on a longer-term horizon, the extreme volatility in the CDS-cash basis could lead to the re-emergence of compelling negative basis packages. As shown in Figure 119 (left), the basis has swung wildly over the past year reaching the unprecedented negative levels at the end of October and shooting up since then. **When the basis reached negative levels in the order of -100bp, the total cost of selected basis packages had fallen below par signalling extremely attractive opportunities for investors.**

We believe that the two key drivers of the basis – CDS swings and a rise in funding costs – point to two salient indicators of whether the negative basis trades are attractive. We recommend entering negative basis packages when either one or both of the following are satisfied:

- **The negative basis is significantly greater than the funding cost**. Given the fact that the CDS-cash basis should reflect funding and illiquidity premium, the basis below the cost level is a signal to take profits, if the outlook for funding costs is to stay unchanged.
- **CDS has experienced a period of sharp and consistent tightening**. CDS continues to be the more liquid cash product and is more volatile, therefore large and sustained movements in the CDS market tend to affect the basis significantly, while cash market takes time to catch up.

Figure 119: € CDS-cash basis has swung wildly recently (left) as cash and CDS have widened dramatically (right)



Source: Markit, iBoxx, Barclays Capital

Short forwards

We continue to recommend short forwards (5s10s notional neutral steepeners) at the index level (iTraxx Main on iTraxx HiVol) or on single, good-quality credits as the cheapest and the best method of executing an underweight view. We modelled and detailed the relative benefits of short forwards in *European Credit: Index forwards as cheap shorts*, 29 May 2008. Some of the key benefits of such trades include:

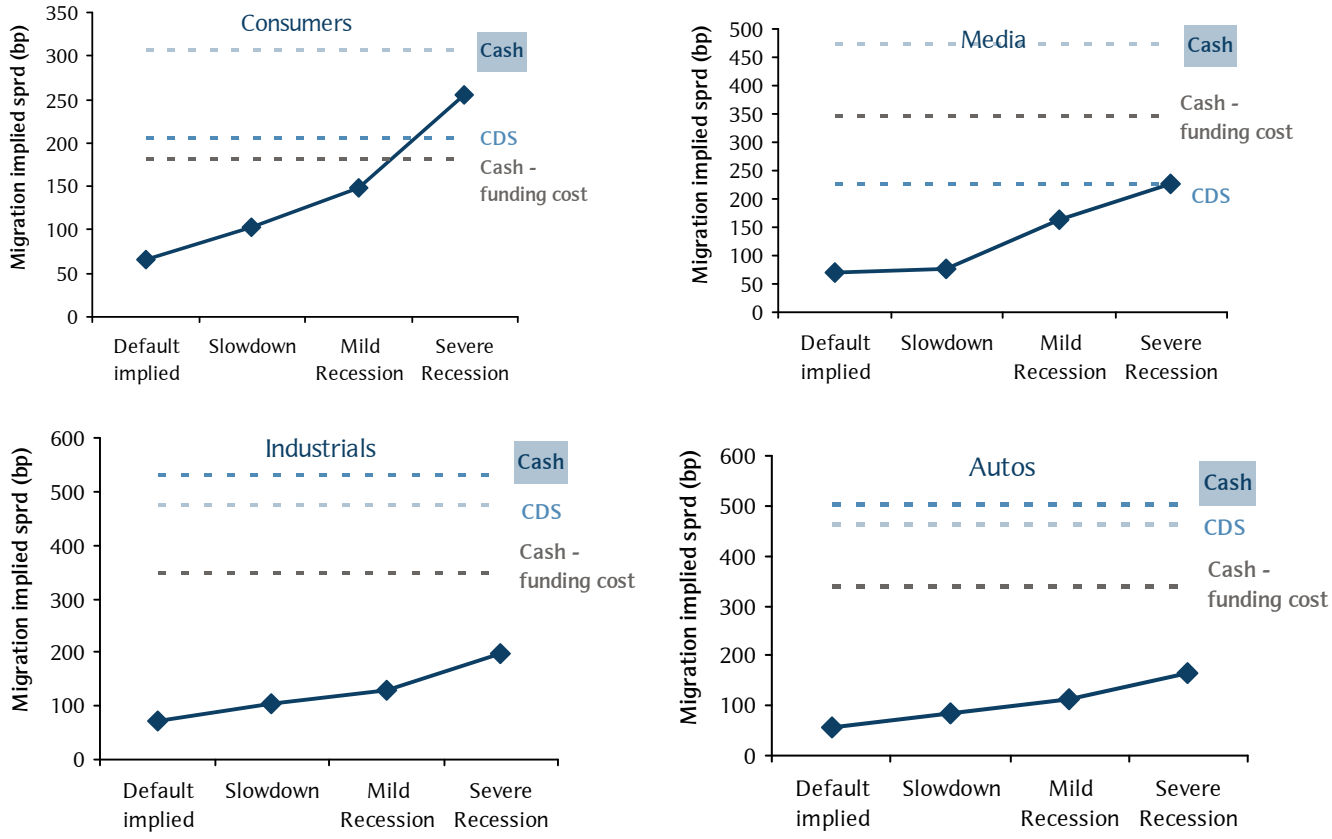
- An outright short is punitive in carry terms, eg: 200 bps/year on iTraxx Main S10, whereas a short forward is positive carry of 46bp at current levels.
- Short forwards are naturally convex because curves tend to flatten as they widen but steepen as they tighten. So, if spreads tighten the curve, steepening should offset some of the losses incurred due to the trade being net short.
- Under the current curve shapes, the roll down on the short forwards is marginally positive, as 5s10s are downward sloping,

We believe that while the risk of further inversion does exist, given the current extremely inverted 5s10s curve, we recommend using short forwards to enter short position in credit into spread tightening.

Sectoral

In order to distil our fundamental sectoral views into actionable ideas, we run our fundamental views through two filters. First, we use our migration risk model that we introduced in *European Credit: iTraxx Main at 200? Or 20?*, 1 May 2008, to determine the names and sectors most likely to suffer increasing leverage and consequent ratings downgrades in a recession. Second, we compare the fair spread that investors should demand, given such fundamental deterioration to current market pricing.

Figure 120: Our migration model, superimposed over current valuations, suggests that consumers are an attractive short – the sector is highly cyclical and is pricing in the least downside



Source: iBoxx, Markit, Barclays Capital

Below, we delve into our view on each sector, incorporating our fundamental sectoral credit view with the migration model results.

Consumers: The best short

In our migration analysis, we have argued that cyclicals could face significant rating migration because of earnings deterioration, and we have flagged consumers as the sector most exposed to ratings migration (iTraxx at 200? Or 20?, 1 May 2008). In fact, we estimate that due to their high leverage, the average rating of consumers within the Main could go to sub-IG in the event of a severe recession.

Consumers have not yet seen the ratings action that autos and industrials have experienced, but given our Underweight view on credit and our negative view on credit fundamentals, there could be further downgrades in this sector. We expect downgrades to be most severe in the more cyclical consumers (for example, electronics, DIY and retail), while more defensive sectors (such as food and beverage) could be more resilient to downgrades. We would caution that unlike other sectors, such as autos and industrials, larger consumer and retail names are much less capital intensive, which has allowed certain corporates to continue to benefit from still relatively sizeable levels of discretionary free cash flow. This gives them the means to prevent too aggressive a ratings deterioration through a reactive re-allocation of priorities (ie, termination of share buyback programmes, cut backs in capex). However the key risk we believe could be the sharp deterioration in earnings especially for cyclical consumer names that we now think can take hold.

A significant discriminating factor between retailers, and in comparison with other sectors, is their relative store ownership, which confers a significant level of asset backing and financial flexibility, given the relatively realisable sales value of these assets (ie, supermarkets, Kingfisher and M&S benefit from a significant level of store ownership compared with DSG and Next, which mostly lease their store network).

Media: Another good shorting opportunity

Although spreads levels have already widened, we expect the deteriorating economic landscape could pressure the operational performance of media issuers in 2009 because of rigid cost structures. We believe secular industry challenges (the internet, digitalisation) are likely to continue to pressure legacy models already suffering from the consumer slowdown. Our model suggests that media, especially in CDS, could widen substantially in 2009.

Autos: Cheap, but significant fundamental downside

As with industrials, we hold an Underweight recommendation on Autos but believe that widening is overdone is some pockets. Indeed, our migration model juxtaposed with market valuations suggests that autos are cheap. While the widening is likely somewhat overdone, we would hesitate to recommend outright longs here because:

- We expect significant declines in auto sales across most geographic regions could result in severe earnings declines. The declines could surpass already bearish expectations.
- Negative newsflow and poor sentiment is likely to continue. Despite a flurry of negative ratings actions through recent months, we believe the majority of names within the auto industry could remain subject to significant negative ratings action, as operating conditions and credit metrics continue to deteriorate into 2009.

We are therefore cautious on the sector, believing that selective opportunities could emerge based on overly cheap valuations and not fundamental strength.

Industrials: Cheap, but negative technicals

We believe that industrials, like autos, are pricing in a lot of downside that may be overdone against the risk of fundamental deterioration likely over the next year. However, we would not recommend an outright long here because of the risks of further earnings deterioration and covenant issues creating negative technical spirals within the sector (from loan hedging in CDS, for example). As with autos, we believe that selective opportunities will materialize. For example, while we retain an Underweight recommendation for now on ArcelorMittal and Lafarge, we nevertheless note that these names have substantially underperformed recently and may therefore be potentially attractive longs at some point during 2009 when technical pressure abates.

Utilities: Long

We move into 2009 with an Overweight recommendation on the Utilities sector based on their safe haven characteristics, stable earnings and cash flow, as well as their resilience to economic downturn. Clearly, the market environment for utilities will be more difficult in 2009 and potentially 2010 than over recent years, with many utilities having to adapt to demand weakness, increased competition and potentially increased bad debts. In addition, liquidity issues are expected to be at the forefront of investors and management's minds, given their significant capex plans (which we believe will be scaled back) and refinancing needs in some cases. However, we believe the utilities to be relatively well placed, with most having undrawn bank lines and cash that provide

sufficient liquidity until 2010-12 and many retaining access to the CP and bond markets. We view liquidity as strong and have not identified any utility as having a short-term liquidity issue.

Telecoms: Long

Despite the deteriorating economic backdrop, telecom operators generally delivered solid results in Q3 08, illustrating similar trends to previous quarters. Pockets of operational weakness are emerging (pre-pay mobile, corporate telecoms spending), but the combination of relative revenue stability and strong cost controls (both opex and capex) are allowing cash generation to remain solid. Furthermore, large telecom operators benefit from strong levels of liquidity, and recent issuance suggests that investors are prepared to provide further support to the sector. Therefore, we retain our Overweight recommendation because we believe that telecoms will continue to outperform in 2009. Our favoured names are Telecom Italia, Telefonica and Vodafone.

Curves

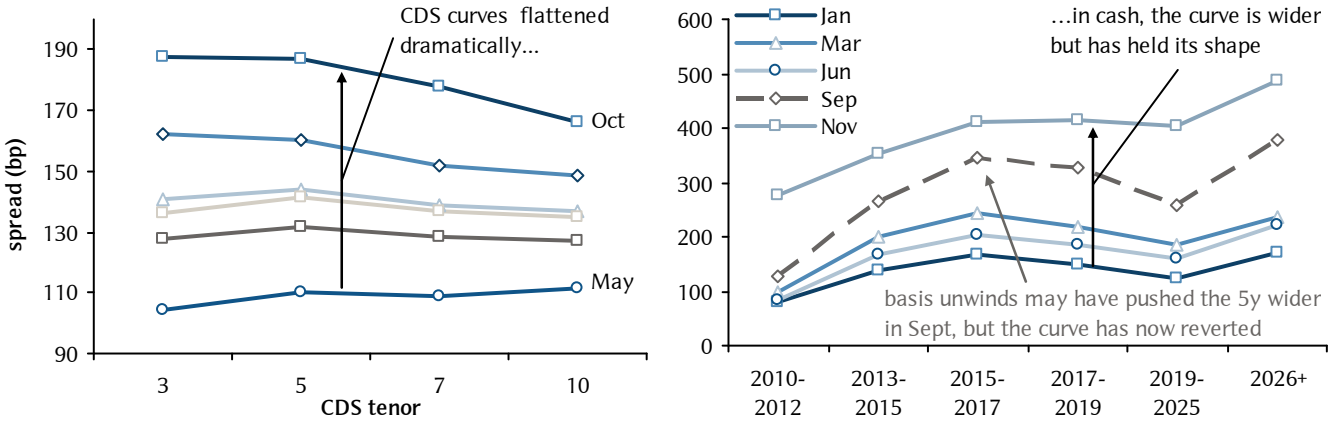
Cash, CDS

Credit curves in cash and CDS widened until October and remain relatively flat. The CDS curves have flattened dramatically- the likely key drivers of this move were:

- Steepeners were a crowded position, and in October many players capitulated.
- A perceived increase in jump to default risk also contributed to the dramatic flattening in CDS.

In cash, the curve actually steepened.

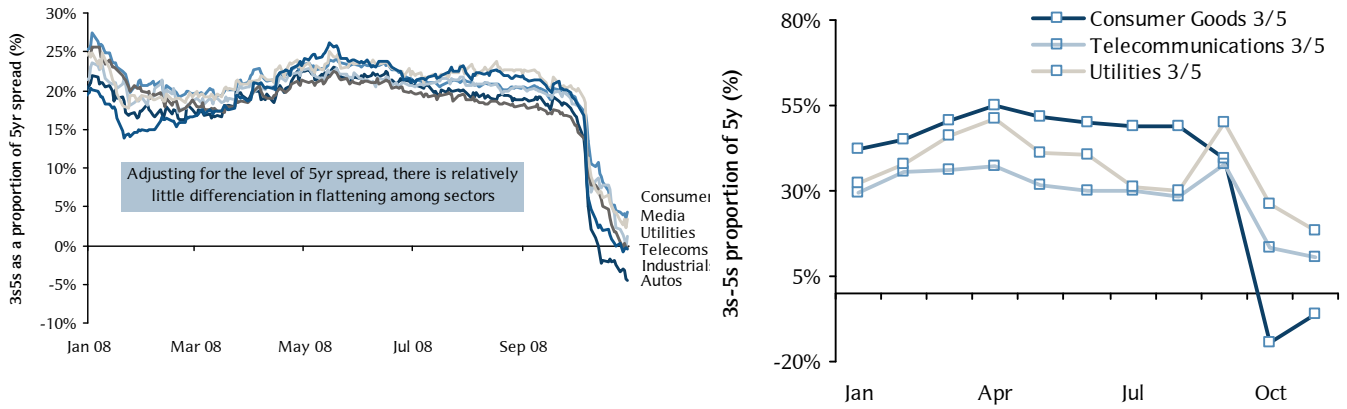
Figure 121: Many factors moved curves this past fall: CDS flattened (left) and cash steepened (right)



Source: Markit, iBoxx, Barclays Capital

One of the factors that have contributed towards the dichotomous behaviour of the CDS and cash curve may be the unwinding CDS/cash basis trades. We believe investors deleveraged significantly during this period, shedding positions including basis. This would have caused the selling of bonds and of protection in the 5yr space more than the front end of the curve, as that space was more heavily populated by such basis trades – ie, driving cash steeper and CDS flatter.

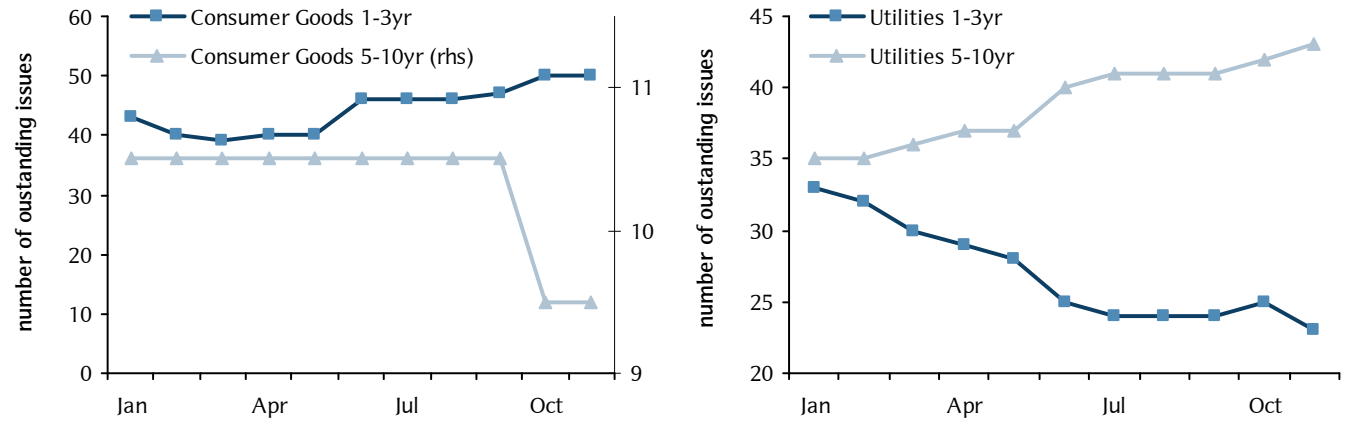
Figure 122: In CDS, there is relatively little differentiation across sectors; In cash, consumers have flattened more than telcos and utilities – partly on the back of the issuance-led repricing



Source: Markit, iBoxx, Barclays Capital

In cash, curve dynamics have been driven to a large extent by issuance. Below, we plot iBoxx eligible issues in each sector in various maturity buckets. Consumer issuance has been tilted towards the short end, with a substantial increase in the 1-3 year space. This has repriced that segment of the curve more and likely plays a part in the flattening shown in Figure 123. Compared that with utilities, where new issues have placed into the middle and longer (5-10) end of the curve. Consequently, repricing has taken place across the curve, leading to less flattening. We believe that in 2009 new issues will continue to come at a discount to not only CDS but also outstanding cash secondaries, which will, in the cash space at least, play an important part in curve shapes.

Figure 123: Consumers issuance (left) has come at the short end enhancing a 3/5 inversion; Utilities issuance has come in the longer end, and the curve has stayed relatively constant.



Source: iBoxx, Barclays Capital

European high yield and leveraged finance

Mahesh Bhimalingam, Eugene Regis

Neutral for 2009 – Credit picking is key

2009 will be an interesting year for high-yield (HY) and leveraged finance. The year is likely to see a combination of deteriorating fundamentals and cheap valuations. We expect the substantial slowing in eurozone economic growth to hurt earnings. Given the high leverage levels that have built up in HY corporates, this slowdown in earnings will hurt credit metrics. Many companies will be pressurised and defaults will tick up as more covenants could be breached – the reaction of banks to waiver requests will be key. We believe that defaults will rise from the current 1% to hit 6.5-12% on HY bonds.

The loan market is highly likely to continue to suffer from more technical pressure than HY. The threat of BWICs coming through TRS unwinds and bank offloading is likely to cap any rally. Although HY is better placed on that front, we believe that the spectre of HY fund redemptions could weigh in. That said, sufficient cash is held by real money investors to alleviate any redemption pressure. Given the difficult credit environment, we do not expect much primary supply in HY. There is likely to be some supply in the loan market – a combination of hung pipeline and some new deals, but we do not expect any jumbo LBOs.

That brings us to a key question: is this view entirely priced in or is there more downside? We firmly believe that HY valuations have overshot on the downside. HY now trades at c.50 price, 26% yield and a coupon yield of more than c.14%. This clearly compensates for the expected default rates, or even twice that even after assuming near-zero recovery and no capital gain. As such, we strongly believe that total returns in high yield for this year will be positive, although not sizeable (7-10%). Hence, we move to a Neutral stance for 2009 from the Underweight stance we have held for the past 18 months. We expect the crossover to peak at 1100-1200bp and then trade tighter.

Loans, as noted, will remain technical and given the CLO concentration in 2006 and 2007 issues (where defaults will be concentrated), we expect further technical fallout in 2009. We also expect loan defaults to be higher and more rapid than HY defaults as the universe is more levered and lower-rated at the issuer level. Expect loan recoveries to be lower than usual, but deals with a mezzanine tranche or HY bond underneath are likely to see good recoveries. Given that the coupon yield is only 9.5% and the potential CLO technical, we recommend a neutral stance on loans but with a substantial allocation to loans with subordination underneath. We retain an Underweight recommendation on loans with no subordination below.

Key recommendations

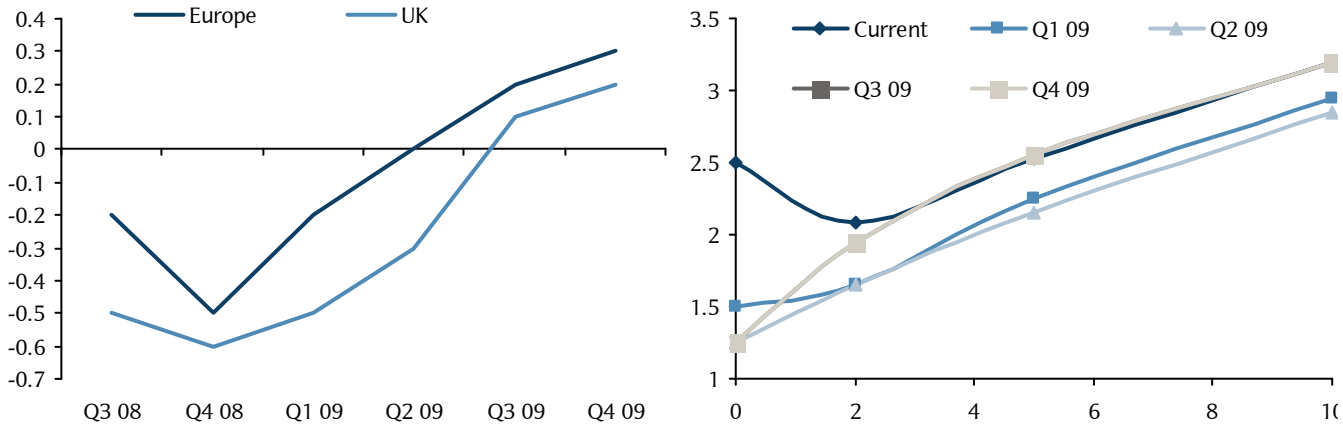
- Loans with HY underneath offer a substantial pick-up on a spread-per-unit of leverage basis. Investors can go long outright or versus a high-yield bond.
- Long crossover risk about 1100bp and short below 750bp.
- Distressed basis packages costing less than par offer substantial capital gain if the name defaults or stays till maturity. MTM risk on the package is to be noted.
- We prefer to be in the more stable top-line industries (Cable, Telcos) where severe price/margin declines are less likely (Packaging, Specialty Chemicals and Gaming).
- Buy names/bonds offering c.15% coupon yields with good fundamentals, eg, NTL, Cognis, SIG, etc.
- Selling front-end CDS protection on names not expected to default in 2009, eg, Virgin Media, Cognis, Iesy, NTC, etc.

Backdrop: Tightening credit and slowing growth

As we enter a global recession, growth will be the biggest driver of earnings and hence, performance

In our opinion, the biggest fundamental driver for European high yield in 2009 will be the slowdown in economic growth and resultant drop in earnings. Growth is expected to drop and then stall for both the eurozone and UK economies. Our economists expect -0.9% and -1.9% retractions, respectively, in these economies for Q3 08-Q2 09, as shown in Figure 124. This would imply a substantial drop in demand for HY corporates, especially in cyclical sectors such as basic materials, consumer and retail. Such a significant drop in demand, though tempered by dropping input prices in the recent past, is likely to lead to a substantial decline in earnings, bringing some companies into stressed situations like seeking waivers, breaching covenants or defaulting.

Figure 124: Barclays Capital European forecasts – Economic growth (left) and euro yield curve (right)



Source: Barclays Capital

Previously high input prices will still have an impact

It must be admitted that the effect of the drop in global growth is moderated to some extent by falling inflation and moderating input prices, especially commodities. That said, most input prices would have been negotiated as part of longer-term contracts and given that, on an annual average, these prices have fallen slower than spot, the price drops are unlikely to fully percolate into margins, at least until Q2.

Borrowers with additional exposure to emerging markets will be hurt in particular

The ECB is expected to have a very accommodative monetary policy for the next few quarters, but we believe that will not be enough to stave off a recession. The contraction in demand is global; as such, the Eurozone is limited in terms of drawing growth from somewhere else through exports, foreign earnings, etc. On that note, there are many European HY companies with emerging market exposure in Latam and Eastern Europe, and we expect these companies to feel the pressure as emerging market economies contract and some countries look towards increasing capital controls, as Argentina has done recently.

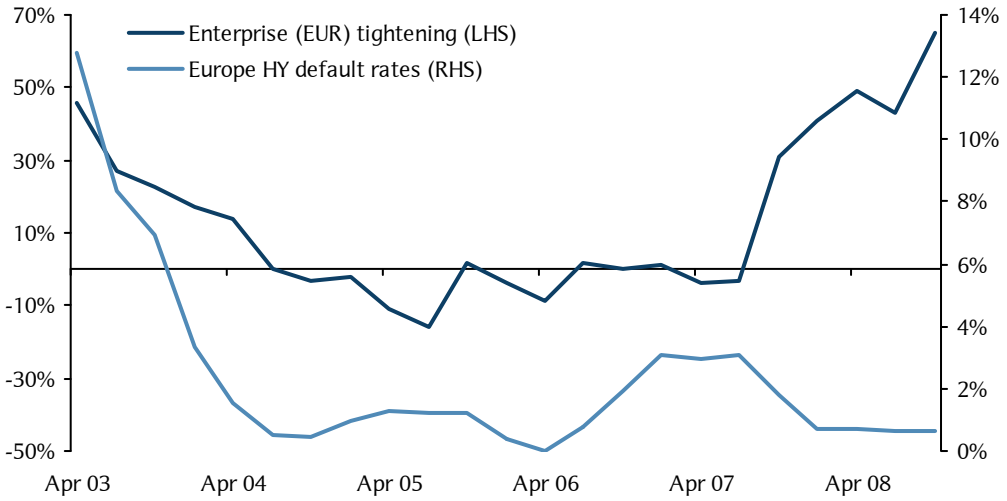
Rates cuts and a steeper front-end of the curve will help short-dated fixed rate bonds. Floaters could be affected due to falling Libor

In terms of the yield curve impact, our economists expect the ECB to cut rates by another 125bp by the end of Q2 09. This should benefit the front end of the curve significantly (Figure 124). The translation of this into Libor is still under question, but money markets are expected to improve, and we expect some of these rate cuts to translate into Libor drops, affecting floaters and loans. Rates beyond two years would not change that significantly over the longer term, given that inflation will come back to the fore later on. As such, we expect short maturity HY bonds to benefit from this yield curve dynamic, along with their stronger pull to par effect, while 2-7yr bonds should not be too affected by the yield curve, other than their roll down.

Lending standards are still tight and have generally preceded higher defaults

The other key macro economic driver will be lending standards, which have been tightening to record levels across Europe (Figure 125). The near 70% net tightening in lending standards is more than in 2002-03. Banks are tightening lending standards for new lending as write-downs and resulting losses are forcing institutions into capital raising or preserving ratios. With the CLO market in Europe inactive, the ability for banks to parcel off risk has also been stymied. Thus, banks have to be very parsimonious with their funds as loans are staying on their balance sheets for now. Such tightening of lending standards has lead to a surge in defaults, as seen in previous cycles in the US. A detailed study is available in *Q3 Loan Officer Survey – unabated tightening*, 11 August 2008.

Figure 125: European enterprise lending standards vs HY defaults



Source: ECB, Moody's

This is the first true cycle European high yield is experiencing – the 2001-02 default spike was for very different reasons

A quantitative approach in forecasting defaults using historical data in Europe would lead to unrealistically high default rates, given the limited history and the skew due to the high default surge in 2001-02. Moreover, the current high yield universe is much larger and much more diversified than 2002 when it was a largely start-up telecoms and technology that dominated. Finally, the reasonably healthy liquidity profiles should keep a lid on otherwise high default rates in Europe. These dynamics are discussed in the later section of this article: "Defaults – Ready for takeoff?".

Fundamentals – Expect deterioration

Commodity costs and inflation eroded fundamentals in 2008. Recession and deflation in 2009 will not help

Fundamentals are the key variable driving high-yield in 2009. Top line numbers are clearly going to be driven by growth as well as by the macroeconomic environment. Also, producer prices have been rising rapidly ahead of consumer prices, driven by record commodities prices. Even with the recent bursting of the commodities bubble, the time lag effect is keeping PPI levels elevated and still eroding margins with consumers also more price sensitive in a recession.

Deflation is a new issue to look at in relation to its effect on fundamentals

Deflation is a new issue for 2009 and will also adversely affect fundamentals. While input costs are falling, end prices will also have to keep reducing while debt and interest costs stay the same. Ultimately, margins will still be squeezed and corporates cannot rely on inflation to effectively devalue their debt burdens or push through price rises.

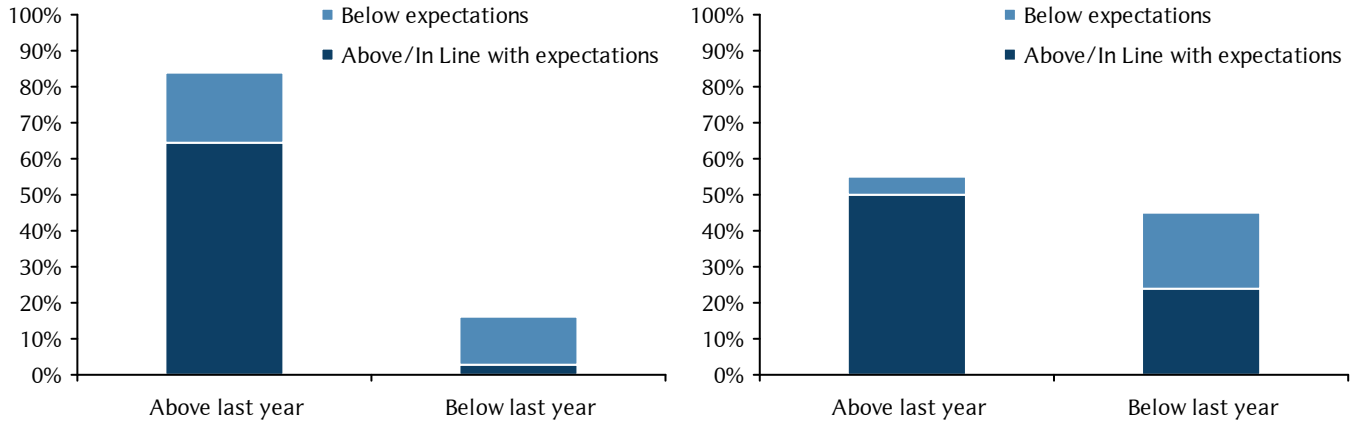
Corporates have less financial flexibility and are seeing higher cash burn rates

As highlighted in previous studies[14], lending standards are exceptionally tight across the globe. This affects fundamentals in ways not foreseen when many deals were priced. Corporates cannot refinance or borrow their way out of any adverse situation when financial institutions are hoarding liquidity for themselves. With many high-yield borrowers relatively small and term financed, initially we would not be so concerned – but with cash burn rates among some corporates ramping up, liquidity for these borrowers is decreasing.

2009 will be the year of fundamental credit picking

In the absence of a primary market, fundamentals increase in importance exponentially. There have been no new issues in 2008 and we expect little primary issuance in 2009. Given that much of the technical unwind has already occurred, bringing trading levels to new lows, credit should increasingly revert towards trading to fundamentals on secondary names in 2009.

Figure 126: Barclays HY coverage universe – Results in H1 08 vs H2 08



Source: Barclays Capital

Post Q3 has seen deterioration in fundamentals with basic materials companies seeing falls in demand and warning of covenant breaches

High yield fundamentals generally held up for the first half of 2008 and even into Q3 09 for the generally accepted cyclical credits. Leverage levels remained in check and although there were always some idiosyncratic problems, meeting covenants were not an issue even if the outlooks remained uncertain. Post Q3 however there has been a fundamental change in the demand outlook across industries with many of the more basic companies (steel, chemicals, paper) reporting a precipitous drop-off in demand for the Q4 period leading to warning of potential covenant breaches. As Figure 126 shows, 45% of HY borrowers reporting stated EBITDA numbers below their previous year's equivalent as well as below our analysts' expectations. This compares with 16% in the first half of the year.

How this demand decline plays out will be crucial for 2009 – we have seen end user (consumer) demand falls and destocking by intermediate users in the chain

The analysis of this demand decline we feel is crucial to how high yield plays through 2009; undoubtedly an element of the demand decline has been driven by a slowdown in end-consumer demand for traditional products of basic products (autos, construction, 'white' goods) but there has also been severe destocking of inventory across the chain by traditional intermediate purchasers of basic products ahead of year end and in anticipation of lower prices. This demand decline has led to severe price drops in commodity products and margins in many industries through October and November which we feel will result in a very weak Q4 reporting season.

February's results season will give further colour

How much of the demand drop off is down to destocking and how much is due to real end demand decline is ultimately hard to analyse and will probably take until February to see the extent of the rebound in demand as fiscal and monetary stimuli take hold. If the end demand declines remains weak then we ultimately believe the price and margin squeeze

[14] *European Credit Alpha: Projecting the Cycle (The Q4 Senior Loan Officer Survey: Record tightening) 7 Nov 08.*

being felt at the top end of the commodity chain will work its way down the value chain and affect the more consumer driven industries.

Fundamentals are set for a leg down, especially given the oncoming recession

Given what we have observed so far in 2008 (particularly in H2), we expect fundamentals to deteriorate in 2009. The credit crunch and a shrinking economy will result in HY borrowers being not able to de-lever, with some seeing cash outflows. We would expect this to be amplified among the more cyclical sectors, given that these are more closely correlated to the overall economy.

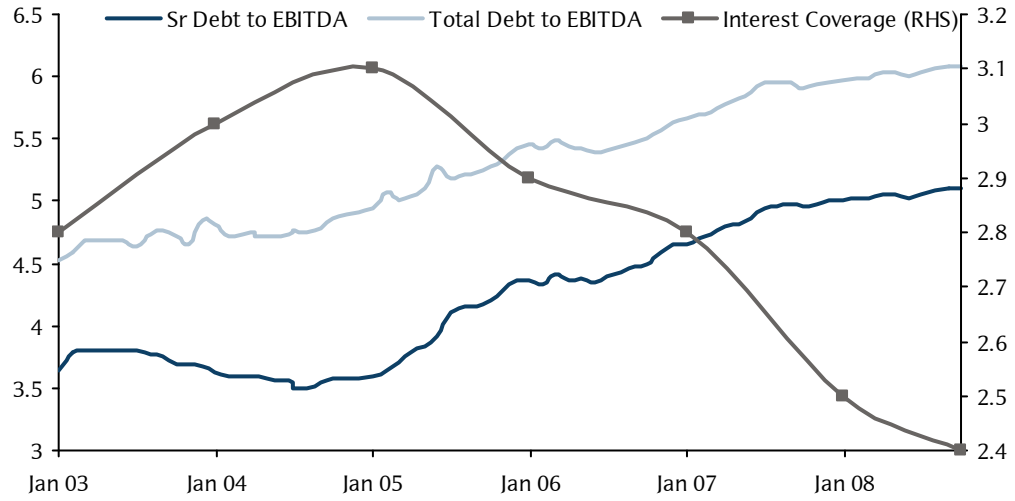
We prefer stable top-line industries such as cable and telecoms

Against this backdrop, on a fundamental basis we prefer to be in the more stable top-line industries (Cable, Telecoms) or those industries / companies where severe price / margin declines are less likely to occur (Packaging, Specialty Chemicals and Gaming). Should the demand decline be more fundamental driven and the stimuli fail to work, ultimately we expect that even the "more stable" industries will suffer.

Fundamentals in the loan market have also deteriorated

In the loan market, it is harder for us to track fundamentals on an individual level given that most borrowers trade on a private documentation basis. However, Figure 127 shows deteriorating fundamentals at the aggregate level in S&P's European Leveraged Loan Index (ELLI). The relative scarcity of new issues entering the index as well as refinancings/other exit events is effectively making the index a proxy for credit quality in that particular universe.

Figure 127: S&P ELLI – Constituent fundamentals

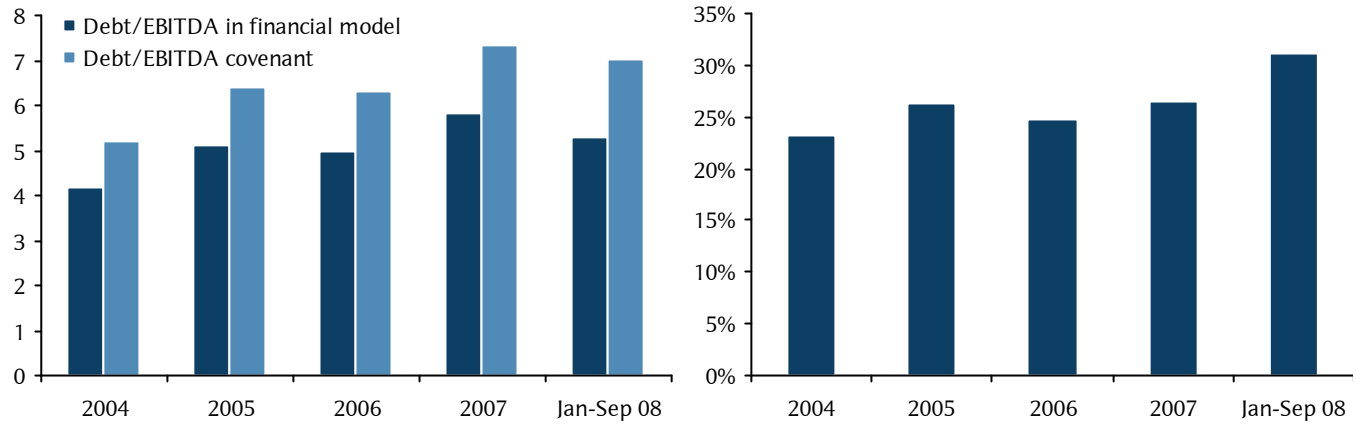


Source: S&P LCD

Credit quality in the loan market worse than HY

While much of the increase in leverage and fall in coverage can be attributed to buyouts in 2005-07 at ever stretched multiples, 2008 showed signs of deterioration. While a deterioration in fundamentals is not a jump-to-default event, the technical unwind has effectively realigned the loan market: 85 is the new par, and weak borrowers who have breached covenants/have little headroom trading in the 40s and below, whereas previously such borrowers would still have traded close to par on expectations that another sponsor would acquire the business and try to turn it around. We expect this dispersion to continue because it is unlikely the ELLI will change significantly on entry/exit events. Also we would note that deterioration in covenants could arguably be of more significance to the loans universe, given that leverage has been higher among loan-only borrowers.

Figure 128: Covenants when issued: Leverage headroom reflecting Year 1 (left) and average (right)



Source: S&P LCD

Loose covenants in 2004-07 gives stretched borrowers more flexibility...

Covenants, or lack thereof, could be a saving grace if fundamentals continue to deteriorate. Intuitively, we would expect more companies to break their covenants and/or default given our growth forecast. However, as Figure 128 shows, 2004-07 generally had higher debt-to-EBITDA covenants and headroom under those covenants in the 25% region. The looser covenants of the previous era essentially give leveraged borrowers much more flexibility under their eroded fundamentals than they had before.

...flexibility to stumble on and underperform with little pressure to change

As such, making the coupon payment, regardless of where the metrics actually are, becomes more important. Rather than waves of defaults in this recession, it is possible to see a universe of underperforming corporates with lax documentation stumbling on and not sorting out their problems. This would put a cap on expected defaults.

The key is liquidity: if cash burn rates stay high and lending standards tight, corporates cannot refinance out of trouble

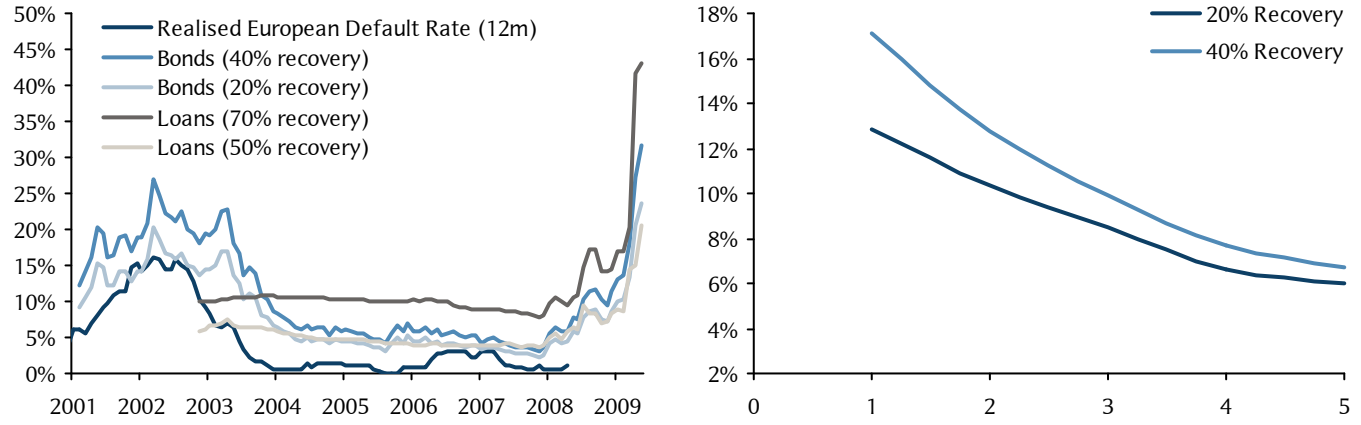
Liquidity for such corporates becomes increasingly important and an extension to fundamentals. Whilst many are term funded with significant maturities in the loan and bonds markets not hitting until 2013 onwards, if fundamentals on such names deteriorate such that cash burn rates increase, banks are not in a position to lend new facilities given tightening lending standards. There will be more fees for covenant waiver requests, restructuring of amortisations (once revolving loans are fully drawn down) and, for some of the weaker credits with lower liquidity, default.

Defaults – Ready for takeoff?

Defaults are still low, but the market is pricing in a surge over the next 12 months

Currently, defaults are 1% in the European universe, with 2006-08 showing an exceptionally low level of default activity. This would be the first round of defaults to actually chime with economic conditions – the previous default cycle was linked to overfunding unviable TMT-type credits with poor models. On current spreads, Figure 129 shows expected default rates of 43% for loans and 32% for bonds at the standard recovery rates of 70% and 40%, respectively, in 12 months. If we reduce recovery rates to 50% for loans and 20% for bonds, we get implied defaults for loans at 21% and bonds at 24%. We would argue that these implied numbers are more driven by the exceptional levels of market volatility and a lack of funding than anything else; we expect realised default rates to be lower. A quick look at Figure 129 tells us that, on average, the implied default rates are about 6% higher compared with the realised default rate. That is compensating for mark-to-market volatility and funding costs (compared with CDS).

Figure 129: Implied defaults for leveraged loans and HY bonds (left) and crossover S10 (right)



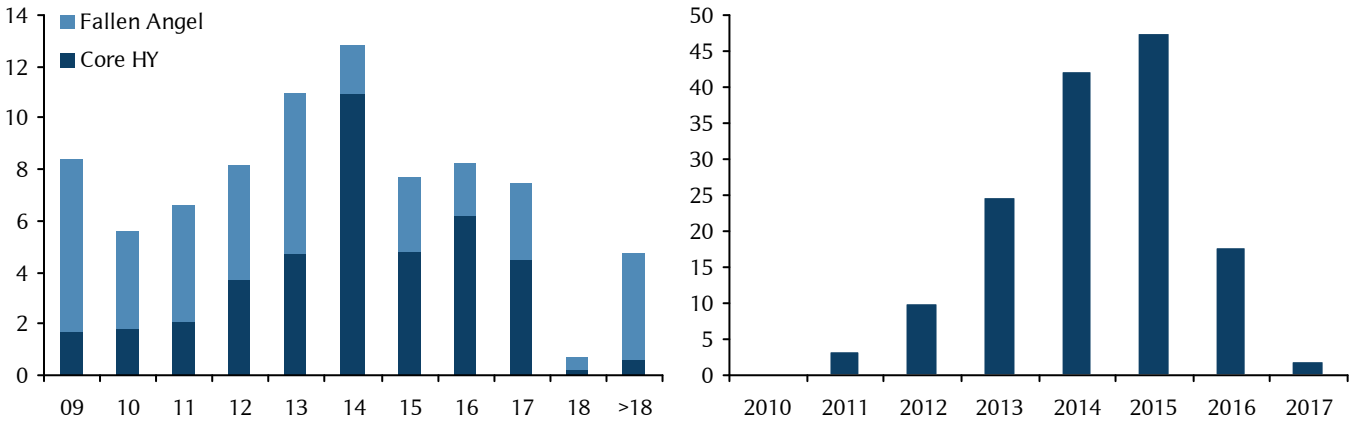
Note: Implied default are obtained from spreads a year ago and used to predict default rates 1 year forward. Source: Barclays Capital

The CDS market (which is unfunded) is better at pricing in default probabilities. For 2009, the Crossover index prices in a 14% default rate at 20% recovery and an 18% default rate at 40% recovery. Some of the difference can be attributed to the better rating of crossover constituents, but we believe even these numbers are too high for 2009.

We expect lower default rates than currently implied, given the absence of a maturity driven funding crunch

On the surface, the prospect of a maturity driven funding crunch looks low (Figure 130). Names with committed facilities and long drawn-out maturity profiles should have enough balance sheet liquidity to hold out against a maturity-driven funding crunch. S&Ps ELLI Loan indices are not showing significant redemptions until 2013. Also, while the 2009 onwards numbers for bonds are still considerable, many of these maturities are fallen angels that we expect would still have the ability to prefund maturities, albeit at higher spreads. There are very little core High yield redemptions until 2012, reflecting the fact that the LBO issuance boom started from 2004.

Figure 130: € HY Index (left) and S&P ELLI maturity profiles (right)

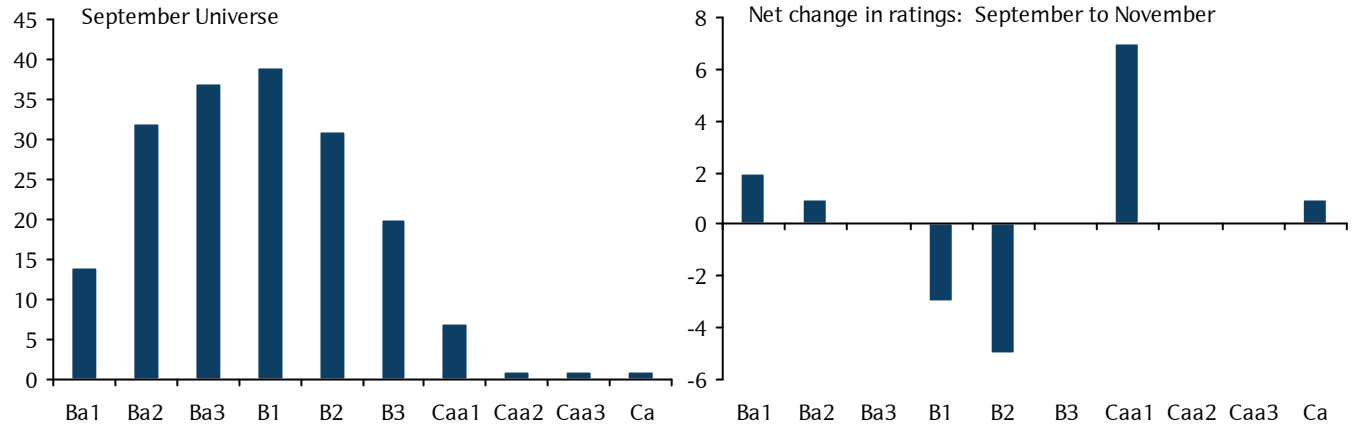


Source: Barclays Capital/S&P ELLI

Defaults will be about earnings

Hence, defaults are going to be based more on earnings in 2009 and the recent results season we detail in the "Fundamentals – Expect deterioration" section clearly showed results slippage, which has resulted in significant ratings downgrades (Figure 131).

Figure 131: Moody's high-yield universe – Ratings transition from September to November 2008



Source: Moody's/Barclays Capital

In two months, there are seven more Caa1 rated corporates, mainly drawn from B2 and above

Since the Moody's High-Yield universe was included in our *European Default Outlook 2009*, 24 September2008, using September data, there have been some significant changes: more fallen angels have entered at the Ba category, and the decline in B1 and B2 rated borrowers corresponds directly with an increase in Caa1 borrowers. As in our original default outlook, we are concentrating on our "weakest links" – names rated at B3 and below. Default probabilities of B3 names are twice that of B2 names and it will also be harder to refinance once companies get into trouble. However, the key change is that, in line with deteriorating fundamentals and our view that the agencies are now more stringent than in prior eras, we now believe all names below B3 names even the ones which have stable outlooks are "weakest links" making it 37 names.

Headroom will be lower, lenders reluctant to waive covenants

Clearly, covenant breaches and defaults in 2009 will be more of a concern. For those companies with looser covenants, poorer liquidity and higher cash burn rates will affect fundamentals. Clearly, we would expect covenant headroom among LBO credits to be declining and waiver requests to increase. However, lenders may not be as acquiescent as before – though more thought will clearly be given to covenant waivers.

Fallen angels will find it hard to issue pre or post downgrades in such tight conditions

The big issue will be funding for fallen angel corporates. With lending standards exceptionally tight and solid investment grade corporates still offering large spreads through CDS levels for vanilla transactions, fallen angels will find it tough to fund maturities after a downgrade or on the way towards a high yield rating. This was experienced by the likes of ABB, Alcatel & Ericsson in the previous cycle, and in such extreme tightness of lending standards, some names may effectively be pushed closer to default when they could well have been viable had they received term funding.

We revise up our defaults baseline forecast to 6.5%

Taking the 186 corporates that Moody's has designated speculative grade, there are 37 rated B3 and below (looking at S&P ratings for names at B2 and above, we can add three names in which the S&P rating for them is at B- or below). We stress these names by a 30% drop in EBITDA and see which will struggle to pay their interest or hit covenants. From this weakest link universe, we believe there are 12 default candidates equating to a 6.5% default rate.

If all possible surprises go, in addition to all weakest links, defaults will hit 12%

In terms of additional surprises that are not default candidates but can come under pressure if earnings drop even more than 30%, we see 10 possible surprises: 7 are B3 and below and 3 are B2 and above. For these to default, there would have to be a monumental collapse in fundamentals across all sectors over 2009. Ultimately, we see this as unlikely, but if all possible surprises and weakest links were to default, there would be a 12% default rate.

Crossover to have a much lower default rate than HY

The Crossover has three surprise candidates, meaning that in the base case it will have 0% default rate, but in a pessimistic case it will have 6% default rate. The key reason for the lower default rate is that the Crossover is of much better quality than the overall High Yield index and the names in the Crossover are bigger, more benchmark type credits which are unlikely to have much of a liquidity problem in the near term, though they may face an earnings crunch.

Loan defaults will be a lot higher – maybe even double HY – as a legacy of poorer credit metrics

Outside of our bond default rate, we would be more concerned about defaults in the loan market. As Figure 127 shows, fundamentals in the loan market are taking a knock. Given that most names trade with private documentation, it is hard for us to ascertain where such credits are positioned and how many will default. Leverage in the loan market has been higher among loan-only credits compared with the bond market. For example, the median rating on crossover is BB- and B1 for bonds (using Moody's universe). However, LevX series 2 had 45% of credits rated B and 25% at B+ at the senior level on inception. Hence, defaults could well be much higher in the loan universe than our bond forecast, but it is hard to quantify. In the absence of banks extending credit and a plethora of investors in the market (CLO managers, hedge funds, cash loan funds, etc.) compared with before, defaults in loans will be more jump-to-default type events and harder to work through.

Supply – Something is better than nothing

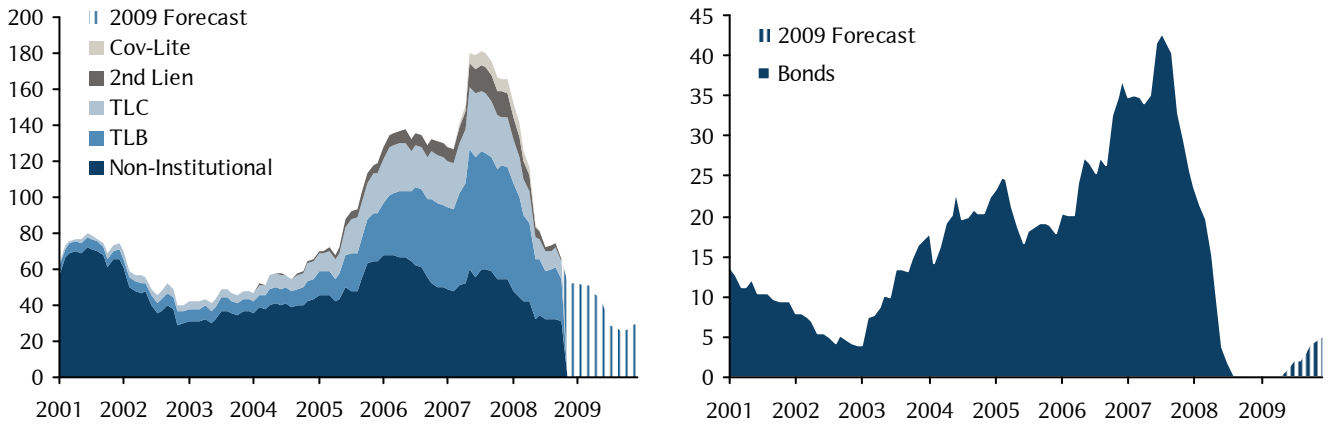
There was virtually no bond supply in 2008, but some loans came through and not just from hung bridges

We expect 2009 to be a year of rebuilding in leveraged finance. In fact, it will be something of a rebirth in high yield supply, given that (as time of press) no bond deals printed in 2008. As for the loan market, progress was made on hung bridges, but that was partly due to banks moving leveraged loan positions to accrual books from available-for-sale books or selling positions at substantial discounts. With the recent liberalisation in accounting rules, banks have been under far less pressure to sell positions on leveraged loans and make write-downs on them. Nevertheless, there were some new LBOs but these came with much tighter covenants, more equity contributions and, hence, lower leverage.

We expect a minor pickup in 2009 with €5bn in bonds and €30bn in loans being issued

This drop in supply is by no means a bad thing – it gives investors and lenders time to consider what sort of deals are viable in the first European recessionary period the leveraged finance market has actually faced. The shakeout of the account base, with the failure of some hedge funds that were active in the loan market, is going to give far more influence to the remaining investors than they had before. Ultimately, as shown in Figure 132, we expect HY issuance to return towards a total of c.€5bn and loans to print c.€30bn, mainly in senior + mezzanine or senior + HY transactions.

Figure 132: European leveraged finance supply by tier (12mth trailing sum, € bn)



Source: Barclays Capital/S&P LCD

The market will be slow with bonds being issued on a deal-by-deal basis… defaults and 'zombie' credits will change the dynamic of the loan market

Further reasons for a long period of retrenchment include not only the uncertainty derived from the recession but also default levels. 2004-08 saw issuance pumped out in a fast "originate and distribute" model with higher leverage, less equity and an exceptional volume of deals. As we wrote in "Defaults – Ready for takeoff?" we expect significant defaults in the loan market next year on companies that trade on a private documentation basis and/or covenant lite documentation. Survivors will also trade at a substantial discount, effectively as 'zombie' credits. From this, we expect the market to continue to realign and readjust on a deal-by-deal basis, for bonds in particular. Given where bonds are trading at the moment, we would expect the first few HY bond deals to be from repeat HY borrowers at BB-ratings and above. We do not see any opportunistic deals or new LBO deals reaching the bond market for at least the first three quarters.

Fallen angels will be the key source of new high yield bonds

There is a possibility of some issuance from an increased number of fallen angels. However, even among vanilla investment grade level and above, such borrowers are pricing at significant concessions to CDS levels and secondary bonds. If fallen angel borrowers are forced to refinance due to, say, pre-fund maturities, we would expect another spread premium to come on top of this.

Seniority is king

Also, we expect more senior-based deals with senior loans (and some senior + mezzanine deals) and senior-secured FRN-type deals in bonds. Clearly, given their performance, second liens are effectively shut for some time, while PIKs and toggle-notes (though these were more of a US phenomenon) are completely dead.

Redemptions and calls

€9.1bn in maturities will be more than the supply

We use the Barclays Pan European High Yield index to judge HY redemptions. As Figure 133 shows, we expect €6.9bn in scheduled maturities for 2009. A large portion of this is fallen angel redemptions like Ford, GM, Ahold etc.

The biggest core HY borrowers with 2009 redemptions are Boots, TDC and Colt. For 2010 the biggest redemptions are ISS, VNU, HCA and Waterford.

Figure 133: HY redemptions (€ bn)

	2009	2010
Scheduled maturities	9.1	5.6
Fallen angels	7	4.5
Pure high yield	2.1	1.1

Source: Barclays Capital

On the surface, we do not expect any bonds to be called in 2009. Why not? The overriding reason is liquidity.

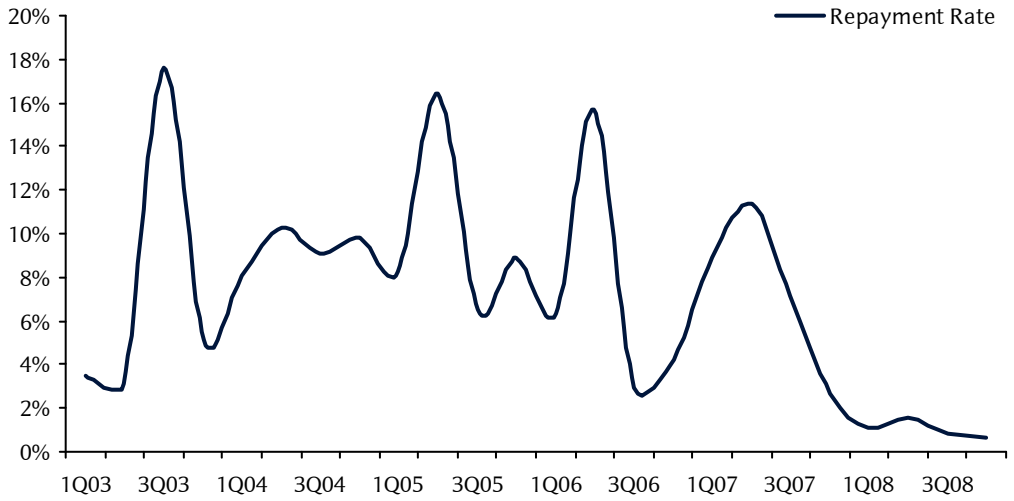
- Equity markets have seen a capitulation in 2008. We do not expect any IPOs for this group of companies. Also, the era of easy refinancing and restructurings of leveraged assets is over – these would have resulted in debt being bought back.
- Fundamentals amongst HY corporates have taken a knock in the second half of this year. As banks preserved capital in the credit crunch and hold onto it for the recession, HY corporate borrowers in a position to grow free cash flow and delever quickly will instead hang onto balance sheet cash to deal with the recession. We would expect cash burn rates to increase and banks to not be fully accommodative on financings for this group as well.

- However, there could well be exceptions to the rule in this scenario. For example, Wind has indicated that it may buy back portions of their PIK issue on the open market, through a tender or even through a formal call.

Repayment rates on loans will be low as refinancing is dead

The decline in primary loan market deals can also be viewed from the perspective of refinancing. Post Q2 07, the repayment rates on leveraged loans have slumped (Figure 134). This is direct fallout from the decrease in liquidity in credit markets as investors cannot issue at the tight levels they could previously. The direct consequence is that existing loans are not repaid as they would have been in an easier lending environment. Opportunistic refinancing has completely disappeared because the economics are no longer attractive. We expect repayments to stay low, below the current level (4%). Also, many of the original loans would have been on easier covenants – we expect new loans, even for well established borrowers, to be made at much tighter covenants, which means companies will have to think about the terms as well as the cost of their funding.

Figure 134: Repayment rates for European Leveraged Loan Index



Source: S&P LCD

A lack of refinancings and repayments will keep adversely affecting cash flow CLOs

This affects issuance levels as well. Net cash flows into loans portfolios at investors as well as CLO managers will stay low, with less cash generated to be invested and less refinancing old debt, implying lower intrinsic demand. This lack of repayments also implies longer loan duration – previously, loans would price to a 3yr maturity, but this will extend much longer – and much less negative convexity in a loan portfolio.

Technicals – More pressure to come

Technicals will still have a large influence on valuations in 2009

Although fundamentals are deteriorating, we believe it is a longer-term story and some of it is already priced in. What is not priced in, or difficult to price, are the technical factors. We believe they are four-fold, three negative and one positive

Real money redemptions and hedge fund unwinds

Real money funds are increasing cash holdings – AMG fund flows have seen heavy outflows

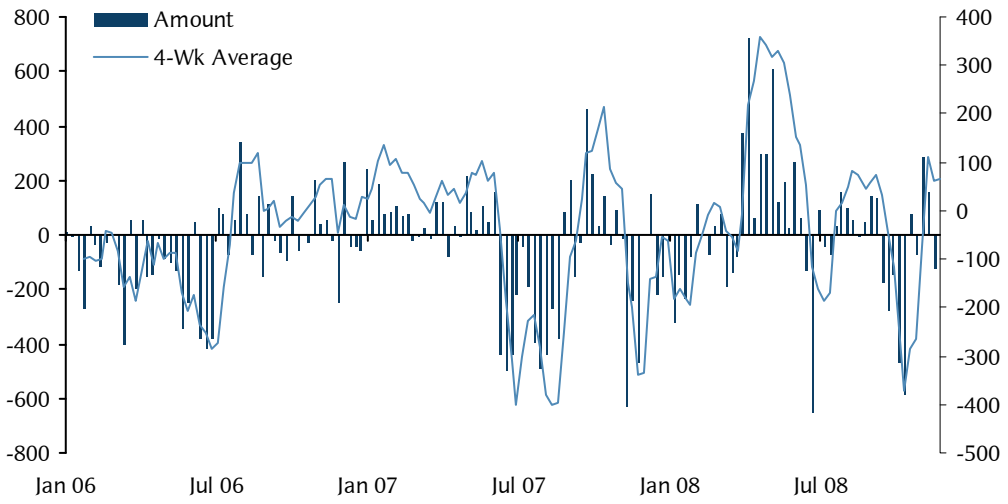
A key driver for HY bond prices will be real money fund flows. Given that HY and other risky assets have underperformed significantly over the past few months, there has been a flow into safer assets like Treasuries. This has led to real money fund managers off-loading in advance and hoarding cash to meet these foreseen redemptions. The cash balance some funds carry varies anywhere between a low of 5% to a high of 40%, the average between

10-15%. We believe the spectre of redemptions will be present at least in H1 09 (Figure 135). As economic bad news comes to the fore, risky asset classes see substantial outflows. Given that we believe the next two quarters will have negative growth and there will be more bad news to come, we believe the retail investor will stay risk averse, and, as such, there will be redemption pressure, halting a substantial rally despite low prices.

Hedge funds will have a lower presence as leverage unwinds continue

Although a substantial portion has already occurred in 2008, hedge fund unwinds are still likely to be a driver of credit asset classes in general. Given that leverage in general will be unwound and funding facilities for hedge funds through prime brokerage and TRS facilities will remain under pressure, we see less net buying from this community in 2009.

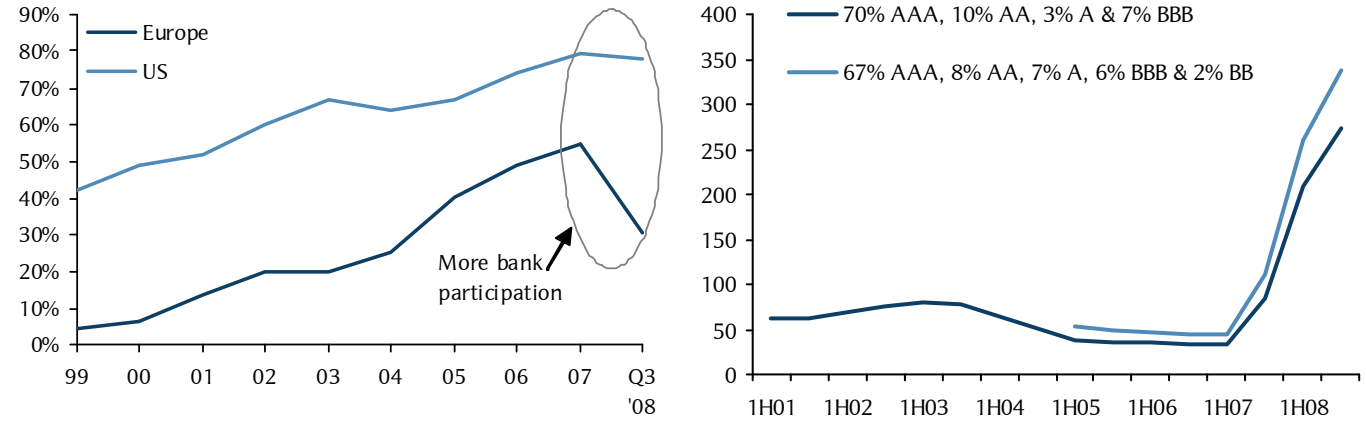
Figure 135: US high yield mutual fund flows



Source: AMG

Lack of new securitisation

Figure 136: Institutional investor participation (left), Average all-in costs for European CLOs (right)



Source: S&P LCD

The structured bid will again be lacking, CLO volumes will still be low

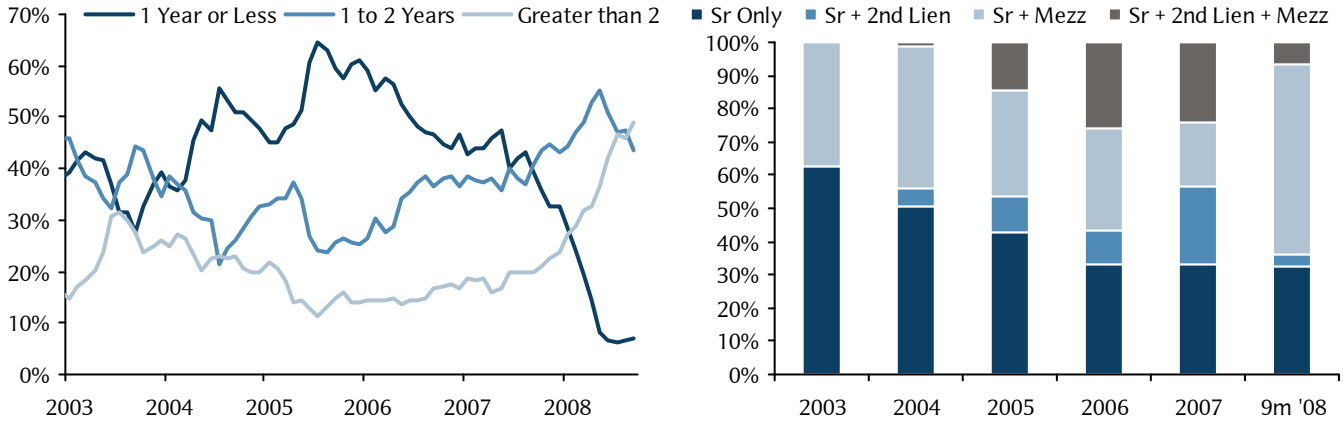
The securitisation market was a key driver of performance in loans over the past 2-3 years. About 45% of the primary loan market was institutionalised (Figure 136), following the pattern in the US where, at the peak, c.80% was institutionalised. Most of the institutionalisation was driven by securitisation, with CLOs accounting for more than 65% of institutional participation. It is very unlikely we will see a recovery in CLO activity despite loan spreads widening quite substantially due to the following:

- Given the stress on bank balance sheet, they cannot hold any unsold tranches or run large warehouses. As such, the entire waterfall structure needs to be sold as quickly as possible. Prior buying commitments will be sought before printing new deals.
- Costs of printing a CLO are at all-time highs (Figure 136) with the spreads on all tranches – especially AAA – ratcheting up, making printing a deal onerous.
- Lastly, the performance of existing CLOs will come under the scanner, and we believe it will not be rosy, as highlighted in the concentration risk highlighted below

The CLO investor base will see further consolidation in 2009 which will ultimately make the survivors stronger and able to dictate more terms

This does not mean the CLO market is dead by any means. 2009 is likely to see further consolidation among the investor base and the potential for further hedge funds/CLO investor collapses. What will be left standing are stronger investors able to take advantage of opportunities to buy into deals with much higher concessions to the market than before, perhaps offsetting the higher costs of funding that CLOs will face. Before this seemingly optimistic scenario can happen, there will have to be a further shakeout in the investor base. This has clearly been highlighted by the downgrades of widely held credits such as Ineos and LyondellBasell to CCC – we would expect some forced selling to result and further failures in the investor base if downgrades snowball rapidly. CLOs will be much more of a buy-and-hold investor base, with cash flow for them less dependent on early redemptions and refinancing (as detailed above).

Figure 137: Share of ELLI based on credit age (left), European loan issuance structure (Right)



Source: S&P LCD

Potential fallout of concentration in CLOs

The heavy concentration of 1-2yr vintages in CLOs will be problematic

One important consequence of the securitisation glut in the past two years is that most CLOs have a substantial concentration of 2006-07 vintage loans. A quick glance at Figure 137 shows that more than 50% of the index is 1-2 years old, clearly highlighting the concentration of those vintages in CLOs. Why are those vintages a problem?

- They are comprised of deals with substantially high purchase multiples, low equity participation and, hence, high leverage.
- As also shown in Figure 137, they are formed of a senior only and senior+ 2nd lien structures with no mezzanine or HY underneath. This would imply lower recoveries than usual – some my be 40-50% – due to the capital structure in addition to their higher leverage.
- Given that defaults are going to pick up next year, we believe most of the defaults will be in the 2006-07 vintages, which should create a substantial deleveraging impact on secondary prices.

New Year effect – New budgets and cleaner balance sheets?

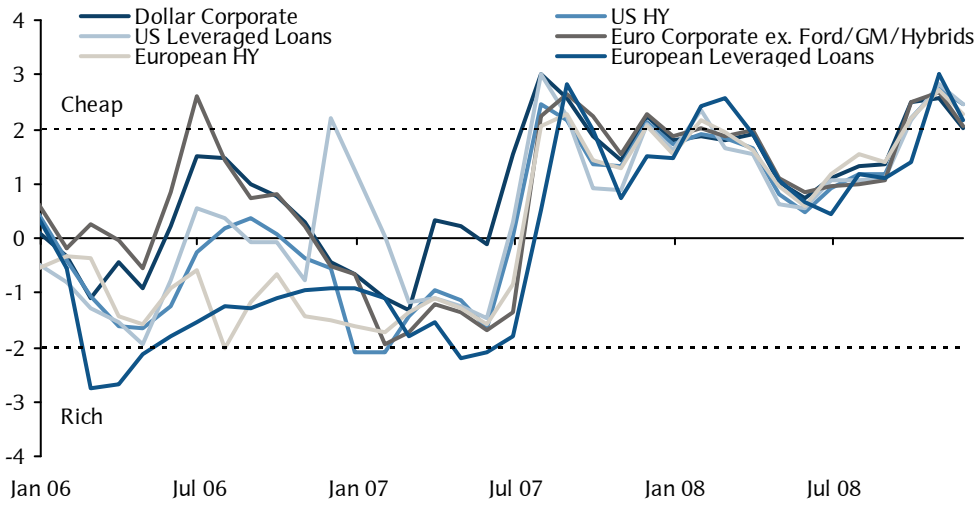
Although we cannot quantify the new year effect, we believe that some of the cash waiting on real money funds will be put to use in the new year. In addition, new budgets for dealer desks should help liquidity in the secondary markets in January. So we would expect a positive technical at the beginning of the year, though we are not sure how long it will last!

Valuations – Clearly cheap, but by how much?

Technicals have driven the market wider, as we revert to fundamentals, it may not necessarily tighten

High-yield credit looks exceptionally dislocated to us. Technical factors have driven the market to a new clearing level, with the Barclays HY index currently aggregated at a price of 52. With fundamentals also beginning to show signs of deterioration, we would expect technical factors to be a presence but abate and valuations to then be increasingly influenced by credit fundamentals. This will lead to a more disjointed market with pockets of value opening across names as the market gradually reverts towards a more fundamental outlook.

Figure 138: 12mth normalised spreads



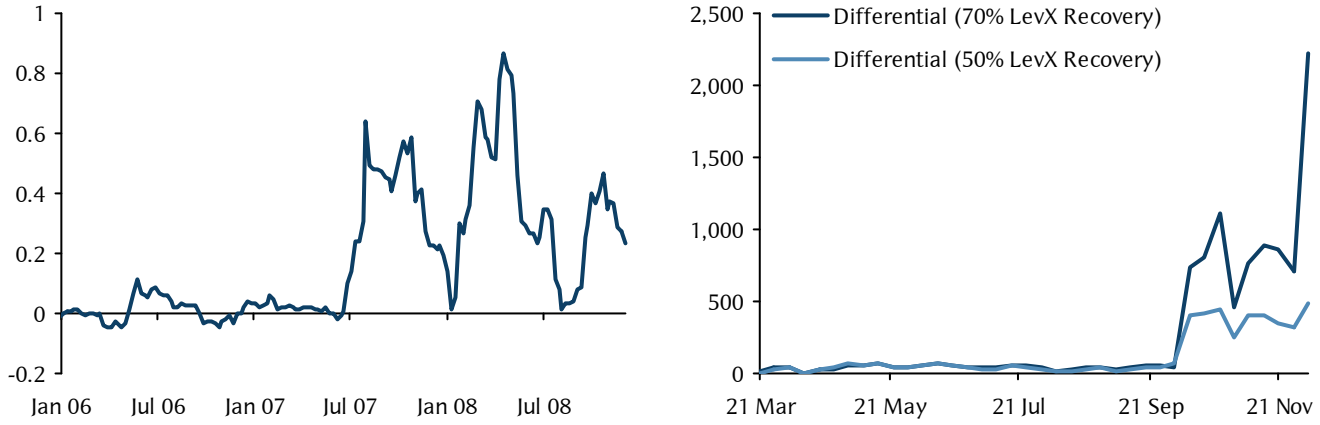
Note, Normalised spread = (spread – 12mth average)/12mth standard deviation. Source: Barclays Capital

We believe current HY prices offer a good entry point for 2009 but performance will be volatile

As Figure 138 shows, European HY has hit 2 standard deviations on a normalised basis, along with other assets and this clearly highlights a buying opportunity on a purely volatility adjusted basis. We believe that the beginning off the year presents a good entry point with prices at 50 and nearly 25 % defaults priced in as shown in Figure 129. Current levels should more than adequately pay even for our worst case defaults. But that said, given that illiquidity and funding costs will still be onerous and fundamentals continue to deteriorate, we would not move Overweight yet.

Leveraged loans have seen a lag in their widening compared with other asset classes, with their normalised peaks coinciding with unwinds of MV CLOs and the presence of BWICS in Q1 and Q3 08. Though there was a richening in the middle of the year, driven by some spread tightening, absolute spreads were still wide relative to the troughs of 2007. Ultimately, we would expect some sort of mean reversion but with significant variance between various names and structures.

Figure 139: 3mth rolling beta of leveraged loans to HY, LevX vs Crossover (bp, right)



Source: Markit, Barclays Capital

The loan market looks clearly dislocated relative to bonds

This variance is clearly displayed in Figure 139, which shows the extreme dislocations in the loan markets and underperformance relative to high yield. Loans are effectively trading like bonds. This volatility is arguably much more extreme for such instruments because they generally didn't move away from par until mid-2007. In *European Credit Alpha: (De)leverage Finance*, 21 October 2008, we covered the technical unwinds the loan market had seen via BWICS following the default of the Icelandic banks, which then lead to TRS unwinds, more BWICs and so on. Even with 50% recovery, LevX series 3 is paying c.500bp more in spread than the Crossover index (c.2000bp more at 70%).

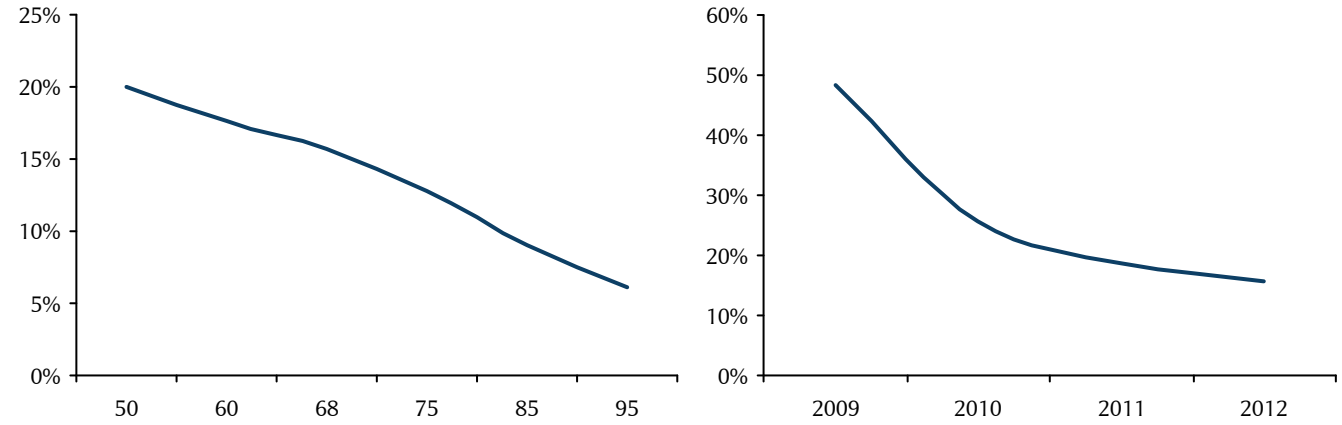
Loans on a spread-per-leverage basis are trading wider than some bonds and are worth a look at, as are second lien notes with a bonds underneath them

This has led to some loans trading wider on a spread per unit of leverage basis than the bonds subordinated in capital structures. Hence, for investors who are unleveraged and not mark-to-market sensitive, we would buy 1st-lien loans on sound credits with a 2nd lien or bonds underneath either outright or versus bonds, moving up the capital structure for a higher spread. We would also look at buying second lien notes for borrowers with a bond underneath them to cushion a blow upon a default. Second liens have been hit by expectations of lower recovery rates, but we would differentiate between those credits with no subordinated debt instrument under the second lien and those that have one. We would also buy senior-secured notes versus bonds for issuers that use them – many would have been in TRS/CLO portfolios and hit by unwinds. These notes should behave much the same as a loan. In the Alpha piece highlighted above we have shown such relative opportunities between senior loans and bonds exists in names like FS Funding, Grohe, KDG, Wind, Cognis and Impress.

There are potentially rich returns available for long only investors prepared to take MTM volatility

Figure 140 shows more detailed analysis of outright long positions of assets trading at distressed levels. The largest potential payoff is much greater if the loan/bond actually gets called ahead of schedule, given the short holding period. Clearly, this is unlikely given the need for capital preservation, yet for unleveraged investors who are not MTM sensitive, the projected IRR of buying a loan trading at €68 today is 16.47% if the loan is simply held to maturity. Numbers are similar for bonds trading at similar prices.

Figure 140: Projected annual IRR of distressed loan to maturity (left, price) and call date (right)

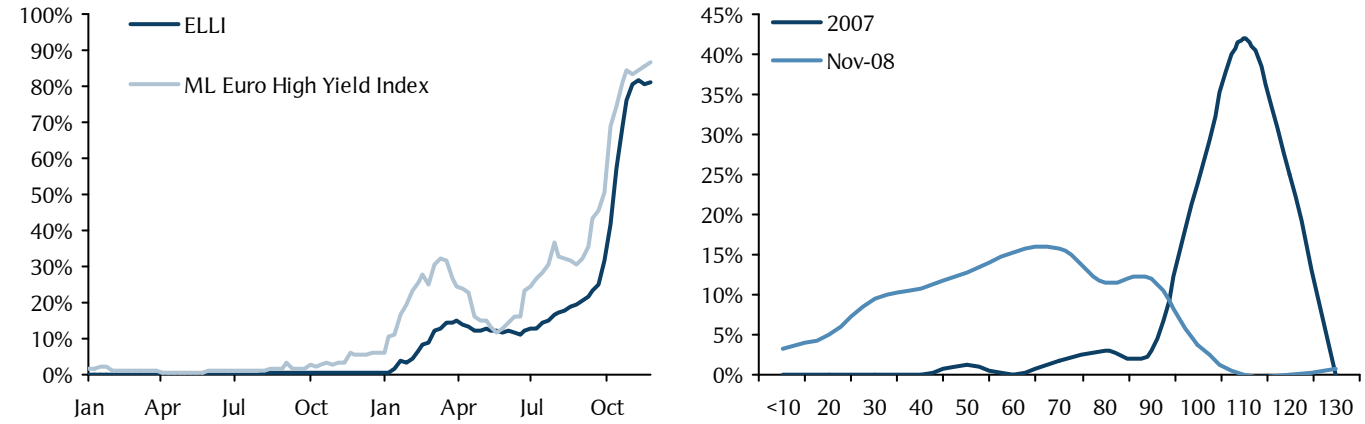


Source: Barclays Capital

The universe of credits trading at distressed levels is now extensive, providing more opportunities

Figure 141 gives a clear indication of the breadth of the distressed universe. According to S&P's LCD service, 80% of their European Leveraged Loan Index and Merrill Lynch's Euro High Yield index are trading at distressed levels. A market trading with such parameters is clearly not functioning normally, even in an environment of expected defaults – we would expect these levels to come down, but slowly. The HY index has also seen a much broader based distribution compared with YE 07. With many names trading in the 30-70 level amidst an index calculated to be trading at 52, some credits are clearly cheap on a price-to-fundamentals basis. This could arguably be seen as reality hitting an overly optimistic market or the market over-compensating for its past mistakes in demanding too low a spread level for credits that have been over levered. But for investors prepared to do their homework and go long on an unleveraged basis (given funding costs), there are plenty of opportunities available.

Figure 141: Price distribution of European High-Yield (left), % of loans and HY distressed



Note: ELLI Distress Ratio is the percent of performing loans trading below 80. Merrill Lynch European High Index Distress Ratio is the percent of performing high-yield bonds with an option adjusted spread of 1000 or more. Source: S&P LC, Barclays Capital

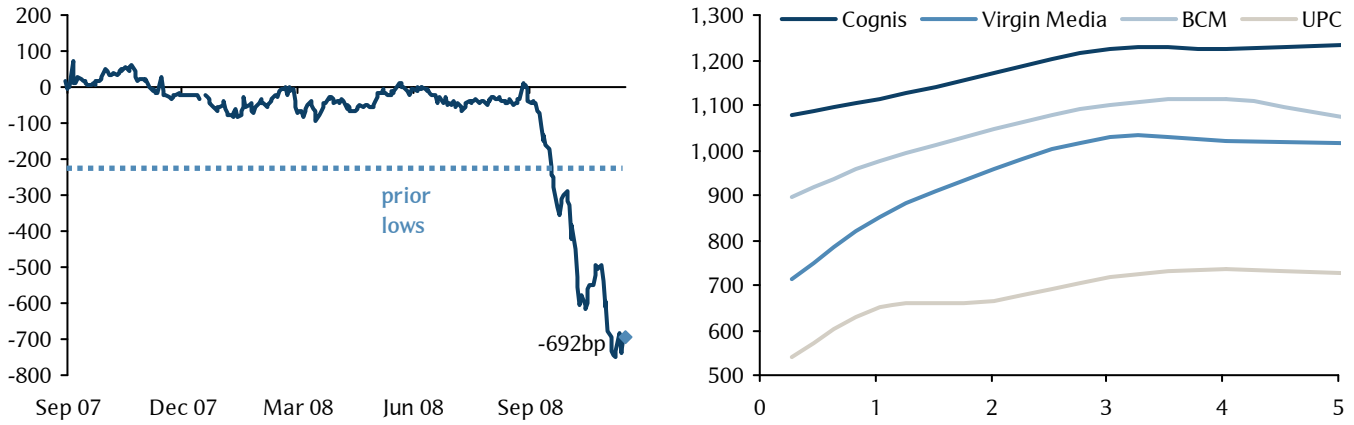
Basis trades could also work and distressed basis trades in particular offer potential option-like payoffs

Opportunities still exist in basis trades, which unleveraged investors and those less sensitive to mark-to-market risk can take advantage of. The basis is currently c.-700bp (Figure 142). Since September, cash has substantially underperformed CDS. Initially, this was driven by money market capitulation, but this has been driven increasingly by fundamentals, with bonds being marked down on a combination of a poorer fundamentals environment exacerbated by illiquidity and real-money redemptions/hedge fund liquidations. More details on distressed basis trades (on credits with the package costing less than 100) can be found in *European Credit Alpha: (De) leverage Finance*. We recommend such trades on names which can default as well as ones which will most likely not default as the package pulls to par in either case.

Curves are flat to inverted – even on some names unlikely to default in 2009

We would also sell short-dated protection (6mth and 1yr tenures) on credits that we do not feel will default in 2009 such as TMT/cable names, as also shown in Figure 142. Curves on single-name CDS have flattened to fully inverted (for the more distressed names). However, front-end liquidity is now making it harder to execute this particular trade.

Figure 142: Maturity matched Cash-CDS basis (left), selected HY CDS curves (right)



Source: Markit, Barclays Capital

Debt exchanges could significantly affect short-dated CDS – avoid selling protection on companies with short-maturity profiles

However, the prospect of debt exchanges, while currently a US phenomenal hangs over the European market. If the value of the new package on an exchange results in any sort of loss of principal amount, it will count as a default and potentially trigger the CDS. We would view debt exchanges as more likely if fundamentals continue to deteriorate on companies – particularly those with relatively short-dated maturity profiles and unwilling to pay a premium in the market to refinance. Hence, trading any short-dated protection should be executed from two points of view:

- We would sell protection on companies who have longer maturity profiles, flatter curves and strong fundamentals. Exchanges are unlikely for such names unless fundamentals deteriorate rapidly.
- For names with short-dated instruments in their maturity profile we are already seeing a lower basis (more negative) between short-dated bonds and their corresponding CDS levels as the market begins to make assumptions on refinancing ability. We would be cautious on selling short-dated protection on such names while refinancing uncertainty exists as the prospect of a loss of principal could trigger the CDS.

Conclusion

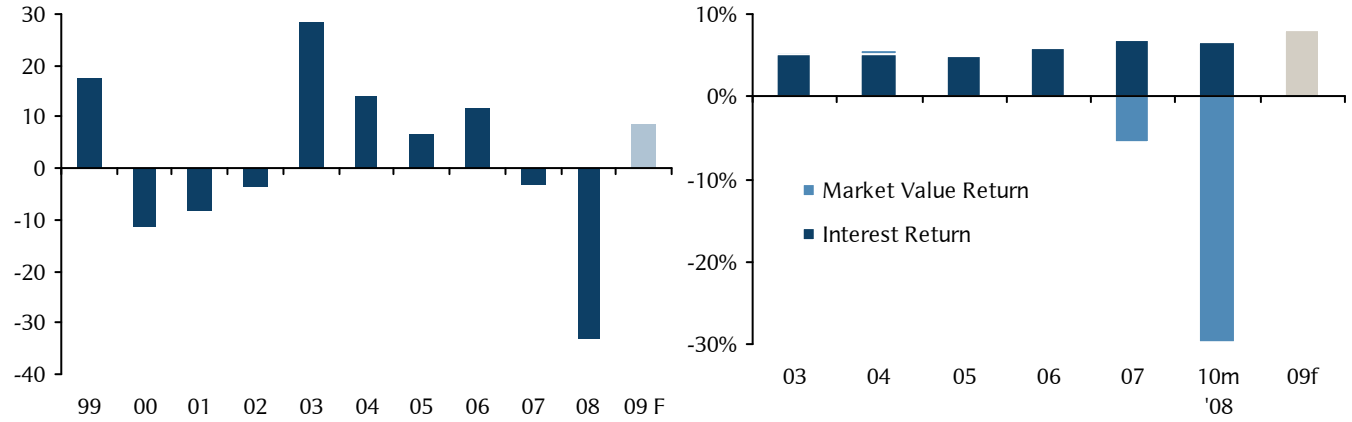
Cash high yield

We have a very strong conviction that returns will be positive this year. As such we move to neutral stance on European High Yield for 2009

Clearly we are in for volatile times in European HY and leveraged finance. However, we do not believe that the market is on the edge of a precipice given that current levels look to already price in most of the downturn. However, this does not make us bullish – valuations have overshot on the way down and are overcompensating for default risk. We expect fundamentals to deteriorate and defaults to increase. However, with the pan European Index marked at 50, there is room for some upside given a coupon yield of 14%. We have always believed that the bottom of HY will be in the low 50s and we have reached that price. Even if we assume our worst case default rate of 12% and 0% recovery on those names, we still end up in positive returns, as those names are already in the 20-30s. As such, despite the recessionary environment and default risk, we

expect European HY to return 7-10% for 2009 in an extremely volatile year (Figure 143). We have a very strong conviction that returns will be positive this year and hence move to a Neutral stance on European High Yield for 2009.

Figure 143: Pan-European HY Index total returns, S&P ELLI Returns



Source: Barclays Capital

Leveraged loans

Defaults on loans will be higher than bond; loan only deals will have lower recoveries and there are still some BWICS and CLO unwinds to come. Returns will be driven by coupon

Loans have been floored by technical factors and we expect loan defaults to be higher and more rapid than HY defaults due to higher leverage and lower ratings at issuer levels. Loan-only structures will see lower recoveries than usual than those deals with a mezzanine or bond underneath them – we would recommend an Underweight on loans with no subordination in their corporate structures. Given under 70 cash loan prices, we believe that loans will initially see a downtick due to further BWICS and later due to CLO unwinds as defaults pickup before they see a recovery. We believe that loan prices by end of 2009 will not see much of a movement. However, the coupon return on loans will be substantial at around 8% given the low prices. As such, we believe that all returns on loans for 2009 will be largely driven by the coupon and on mark to market basis there will only be a minor pick-up. As such, we are neutral on loans with a substantial allocation to names with subordination underneath (Figure 143).

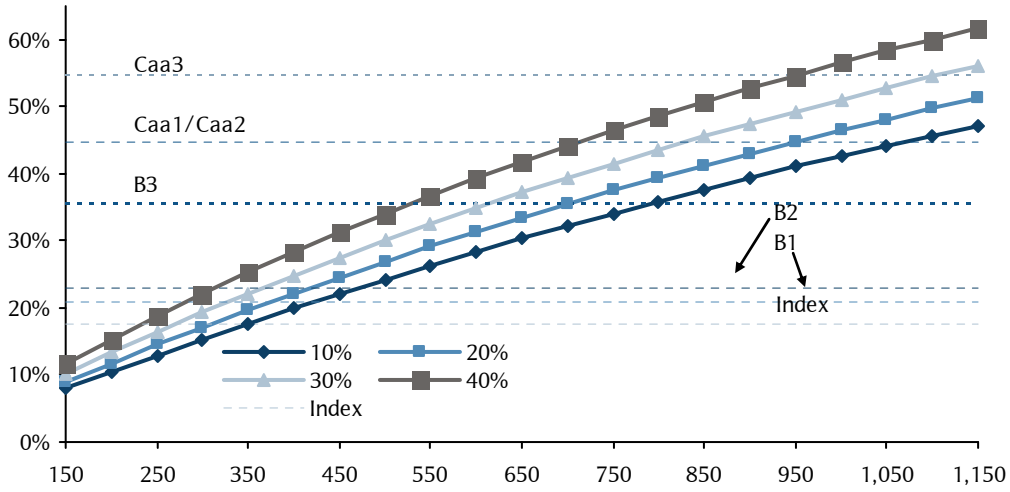
Crossover

Clearly, mark-to-market risk is inherent in the current crossover level of c.1000bp, and we are close to our target of 1100-1200bp for the index. Series 10 should not go above this target of 1200 due to a combination of:

- Lower DV01 sensitivity to high-yield names when they start trading upfront as elasticity of the index relative to those single-name spread moves reduces
- The current crossover cap of 25 points plus 500bp running for individual issuers means that substantially stressed names will drop out by the next roll. We expect the crossover series 11 will be a totally different animal to series 10 due to the sheer number of upfront credits potentially up for replacement if current levels hold (19 out of 50 S10 credits are current trading at over 1000bp in 5yr CDS).
- Since we expect a significant number of fallen angels to be eligible for inclusion, the elasticity of the Crossover will be high to these low spread names; if they widen significantly, Series 11 could go a lot wider after the roll.
- On an implied ratings basis, Series 10 has a 17.52% cumulative probability of default with c.300bp ratings fair value (Figure 144), a lower level than B1. However,

current spread levels imply 51% cumulative default probability which we believe is unlikely. Or putting it another way, the index is pricing in a downgrade from B1 to CCC- at the issuer level for the whole index. As such, we believe that rating and default downside is adequately priced in at these levels.

Figure 144: Default probability vs Crossover spread (Series 10)



Source: Markit, Barclays Capital

We recommend long risk above 1100bp and shorting below 750bp

Hence, we still expect our 1100-1200bp range target to be hit but would go overweight/long via the crossover beyond 1100bp as we believe that at such a level it prices in more than adequate default and downgrade risk. Post any rally we expect it to trade towards the 700-800bp region. If the index tightens below 750bp we would recommend buying protection.

Asian credit market

Puneet Sharma, Magdalena Malinowska, Aziz Sunderji, Asian Credit Research Team

We have held a bearish stance on Asian credit throughout 2008, in line with our view on the European high grade credit market. Today, valuations have corrected significantly in both Asia and Europe. In cash credit space, for example, spreads appear to be "optically" pricing in a depression. At the same time, there have been a number of policymaker initiatives – both in Asia and globally – that have attempted to alleviate the economic downturn.

However, despite cheaper valuations and policy initiatives, real credit deterioration is set to take hold in 2009, with rising negative rating migrations and defaults, which would be accompanied by large swings in credit spreads. Amid economic uncertainty, combined with a weakening banking sector, credit deterioration could be worse than historical precedents. As consumer demand wanes, earnings are likely to drop sharply, while ensuing capacity adjustments will likely lead to a tick up in unemployment. Although this is set to be a global phenomenon, the spill-over into Asia is inevitable, and amid this real deterioration, we believe credit spreads are likely to suffer further volatility.

Accompanying this real deterioration, we expect to see a weakening in the Asian banking sector, in the face of asset quality pressures, softer commodity prices and a decline in global trade amid a slowdown in western consumer demand. We also expect sharp currency movements, negative liquidity spirals in some pockets ***and an uptick in developed country sovereign credit spreads if policymakers cross the line of prudence in "saving the system".*** *Completing this pessimistic outlook is likely to be negative CDO technicals.* ***While some of the fundamental downside is being priced in, we would argue that uncertainty premiums are not yet sufficient to counter the risks faced by Asian credit investors.***

As a result, we remain bearish on Asian credit in 2009, in line with our view on European IG credit, but we do acknowledge that the magnitude of the expected spread widening is now smaller than the two to three times that we had forecast previously. We retain our fair value forecasts of 400bp on the Asian IG/Australian indices (barring any sovereign credit deterioration) and 1200-1400bp on the Asian HY index. We would wait for a significant overshoot above these levels or a clearer outlook on the turnaround before turning bullish on the Asian CDS space. In the meantime, we would use any substantial spread tightening to reset shorts. Sovereign credit volatility could in fact lead to higher levels than our targets on the Asian IG CDS index. In terms of positioning, our recommendations are as follows:

- *Australia versus Asian IG is a cheap way to take a bearish position on sovereign credit risk.*
- *Asian HY versus European Crossover should perform.*
- *In sectoral terms, industrials would be a high conviction short for 2009, while we consider the energy sector has widened excessively.*
- *We also like non-cyclical sectors such as gas utilities and telecoms, as well as senior financials.*

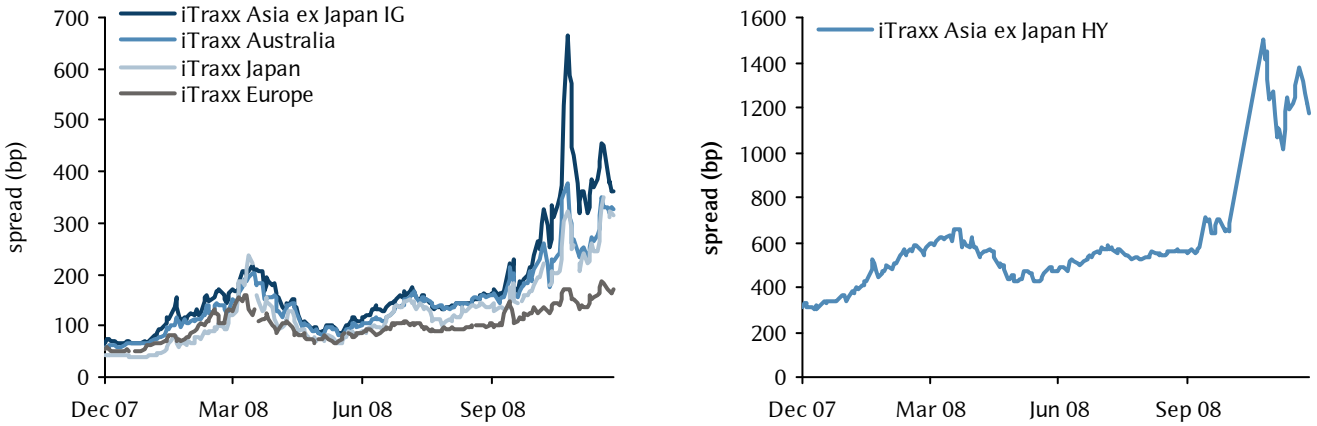
We remain bearish on sectors exposed to a weakening global economy such as industrials, refining & petrochemicals and shipping.

Asian credit spreads have repriced significantly…

Asian credit had overshot our forecasts briefly due to sovereign repricing

Our forecast for Asian credit to reprice significantly wider (see *Asian Alpha Anticipator*, 26 Sep 08) has been realised and, in some cases, exceeded for short periods of time. Importantly, investors now recognise a risk premium between European and Asian credit – which was not the case as recently as May 2008. This premium has been driven to a large extent by repricing of sovereign credit risk (see *Asian credit market brief: the beginning of the end?*, 24 Nov 08).

Figure 145: Asian credit has re-priced dramatically



Source: Markit, Barclays Capital

Globally, spreads are now beginning to reflect some of the deterioration that we had forecast previously. In Europe, for example, optically, credit spreads are pricing in the worst economic scenario, with cash pricing in a great depression!

However, we believe that credit spreads, especially in CDS, are still insufficiently wide for us to recommend an entry point in Asia, in our opinion. Current levels are pricing in a severe recession but offer too little uncertainty premium over and above the fair value spread that investors should demand, given slowing growth and deteriorating fundamentals, and the risk that the downside could be worse than historical precedents.

Moreover, IG cash is only cheap when funding costs are not taken into account. When funding costs are subtracted from the bond spread, cash is only marginally cheaper than CDS! This is clearly most relevant to leveraged investors, but is also significant to real money investors given that funding costs broadly equate to opportunity costs. Moreover, apart from funding costs, there should be an illiquidity premium priced into cash bonds.

Sovereign risk and CDO unwinds currently not fully factored into valuations

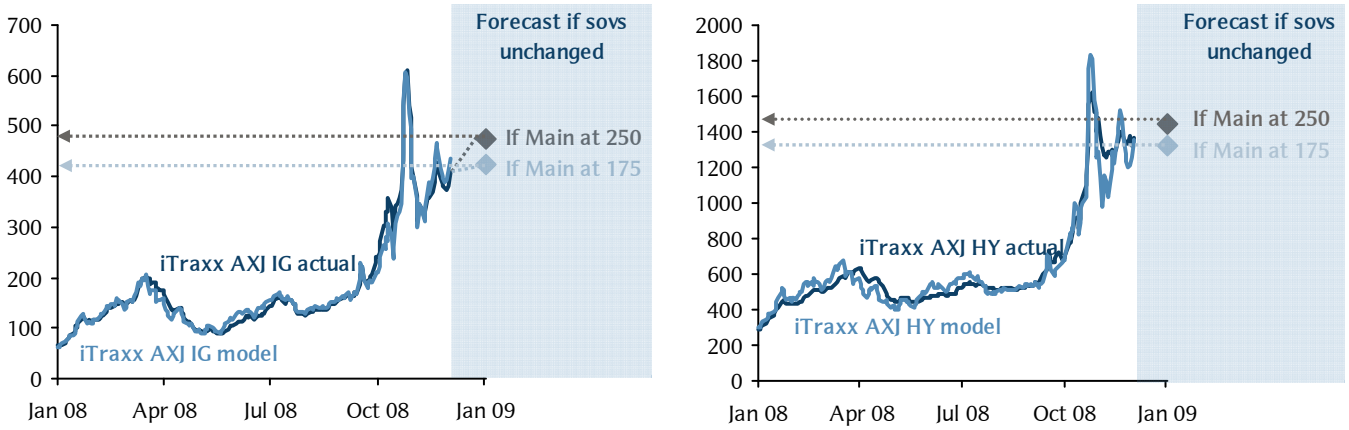
Furthermore, we believe there are additional risks that have not been factored into valuations, which will keep spreads at elevated levels as they are increasingly recognised. Sovereign risk continues to rise as nations implement aggressive fiscal packages and the cost of financial bailouts rise – these will eventually strain fiscal positions and raise the floor for credit spreads. Another important risk emanates from the potential for CDO unwinds.

We believe that European credit spreads are likely to trade near 200-250bp over the next three to six months. We use a simple but robust model[15] of European credit, Asian credit and sovereign spreads over 2008, to forecast that the iTraxx AXJ IG will reach 440bp and the iTraxx AXJ HY will hit 1,370bp if Main remains at 200bp. As shown in

[15] *We use a bivariate regression of each of the Asian indices on the sovereign (contribution of sovereign spread to that index) and credit (iTraxx Main).*

Figure 146, with Main between 175bp and 250bp, IG could hover round 420-480bp, and HY around 1320-1470bp if sovereigns stay unchanged. However, sovereign spreads are a very significant driver of spreads in Asia and could affect the indices meaningfully, thereby causing an over/undershoot in the case of Asian IG/HY indices.

Figure 146: The dynamic relationship between Asian and European credit (left); our projections for possible spread widening in Asia given our European forecast (right)



Source: Barclays Capital, Markit

In the remainder of this section, we take a closer look at the risks that we believe will weigh on Asian credit over the next 12 months. We weigh these against some recent positive developments, such as aggressive and supportive policy actions. Finally, we assess how much is priced into credit and recommend positioning for 2009.

Negative factors affecting Asian credit

In the current environment, we see many factors still weighing on credit, both from a fundamental and technical perspective.

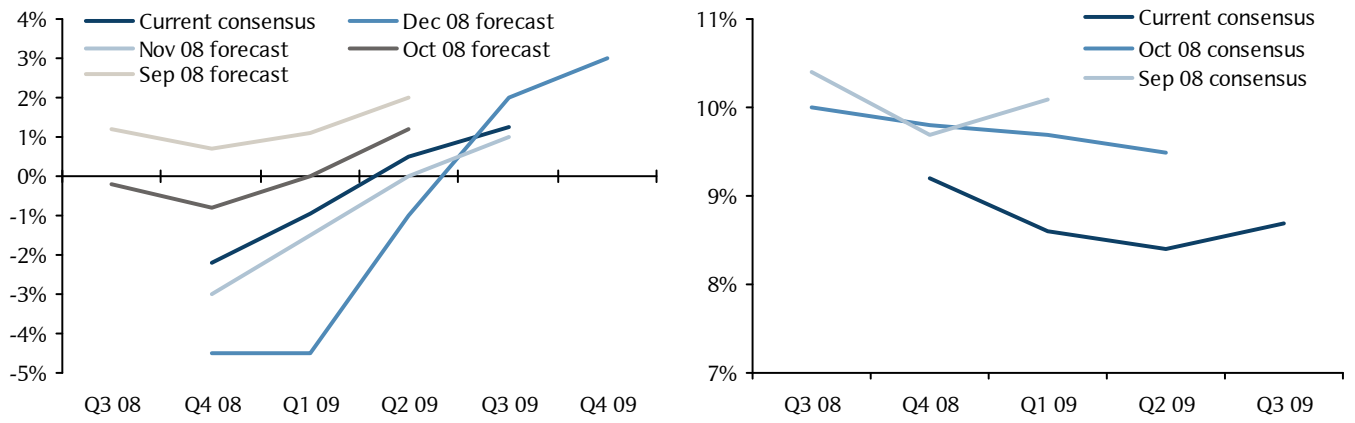
1. Fundamental credit deterioration set to accelerate

An increasingly worrying outlook

The world economy appears to be hurtling down a steep slope and all the major indicators are painting an increasingly worrisome picture. In the "EM Asia economic overview" section of this publication, we examine the key macro factors faced by Asia. Here, we briefly summarise the key headwinds for credit.

- **Growth**. Many well-developed economies have entered a period of recession, while growth in emerging markets is slowing fast. Our economists now project Asia ex-Japan GDP growth of 7.2% in 2008, slowing to 5.2% in 2009. The weakening Asian growth will likely be driven by the emerging global recession and region-wide credit restraint. This comes despite the emergence of some positive factors: the decline in commodity prices and easier monetary and fiscal policies (the latter are expected to contribute roughly 1.5% to Asia ex-Japan GDP growth in 2009).

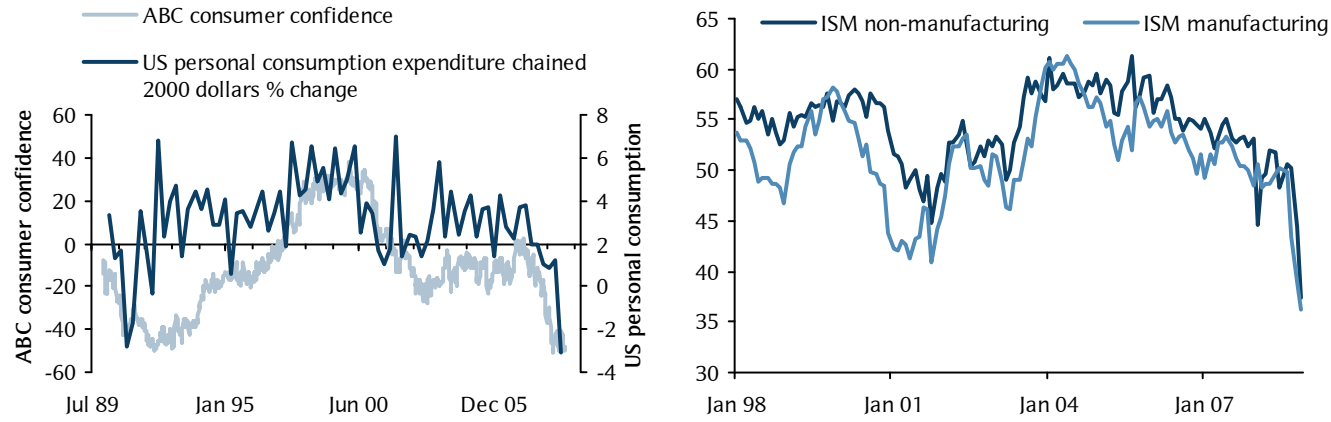
Figure 147: Growth forecasts for the US (left) and emerging markets such as China (right) have fallen



Source: Bloomberg, Barclays Capital

- **Consumer spending.** This has fallen sharply and is now a drag on growth as credit has seized up and confidence has plunged. In Asia, weaker employment/rising unemployment, faltering real wage growth, falling asset values and tighter credit conditions are set to take a further toll. We expect this to be particularly pertinent in countries with more developed labour and capital markets rather than for those with greater reliance on agriculture.

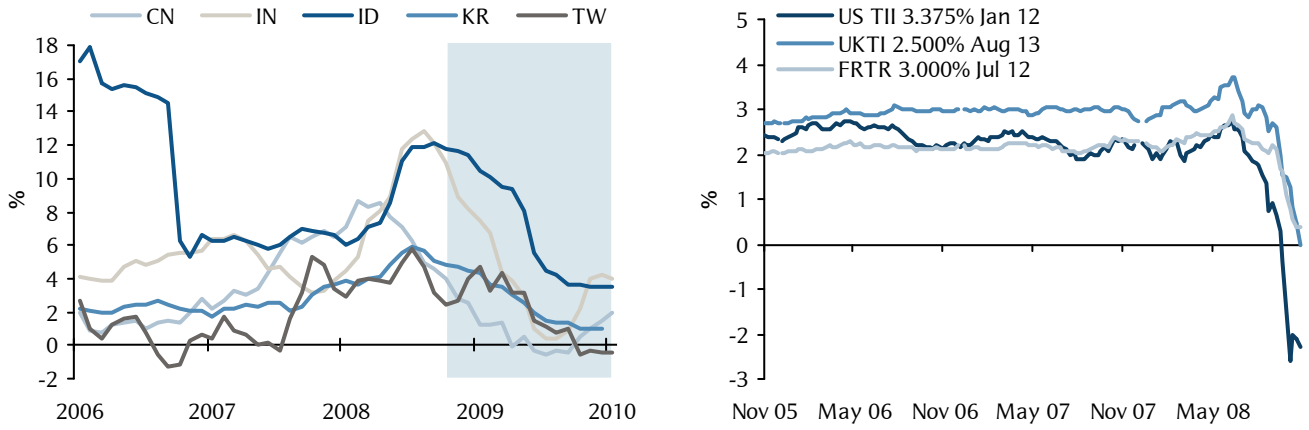
Figure 148: Consumer spending has fallen off sharply (left) and confidence has plunged



Source: Bloomberg

- **Inflation**. Inflation has fallen off a cliff and we believe that if deflation materialises globally, we could see not only a severe recession, but even some probability of a depression. This is also a problem in Asia – inflation is falling rapidly across the region, with some countries such as Taiwan and Singapore likely to experience temporary bouts of deflation by mid-2009. Our economists now project region-wide CPI inflation of 4.7% in December 2008, falling to 2.0% by December 2009. However, excluding India and Indonesia – two higher-inflation countries – regional inflation would be just 3.2% in December 2008 and 1.2% in 2009.

Figure 149: Inflation metrics have plunged across Asia (left); in the US, TIPS price in deflation (right)



Source: Bloomberg, Barclays Capital

We believe that the uncertainty on the current economic outlook, combined with a weakening banking sector, could cause a substantial rise in default rates and credit deterioration to be worse than historical precedents.

Severe rating migrations are likely

Rating migration set to be key driver of credit spreads

In such an environment, credit fundamentals will deteriorate significantly. The key mechanism is from slowing earnings, to rising leverage and finally in the IG space to intensifying ratings migration. We believe rating migration should be the key fundamental driver of credit spreads, as **investment grade investors get paid for downgrade risk, as opposed to default risk, in our opinion.**

Ratings migration in Asia

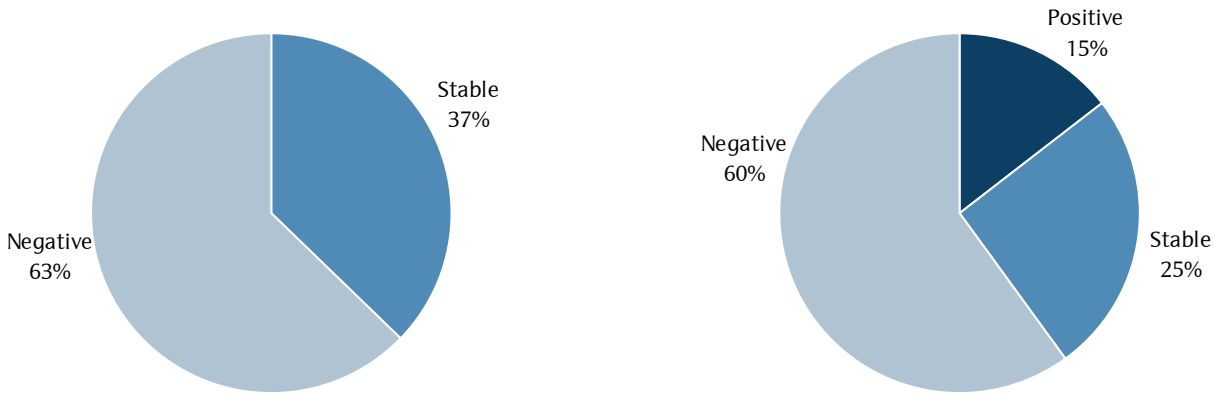
It is difficult to replicate our European ratings migration analysis for Asia, given the lack of historical data and the narrower issuer universe. However, in order to illustrate our analysts' views on Asian fundamental credit direction, we instead provide a summary of our expectations for issuer fundamentals over the next 6-12 months, with a bias towards the shorter end of this timeframe (see also *Asian Credit Alpha*, 11 Nov 08). Figure 150 reflects a simple aggregation of our views on the 55 corporate credits under our coverage (split broadly 55/45 between IG/HY) and 67 financial credits.

Financials are expected to show notable credit quality deterioration

For financials, the magnitude of deterioration in expected credit quality is notable. For example, last December 37% of our financial coverage universe carried a Positive credit view, and only 8% were seen as Negative. In our 2009 outlook, 63% of our issuers carry a Negative credit view, with the remainder seen as Stable. What a difference a year makes.

About 60% of our corporate universe now carries a Negative view (versus one-third in December 2007), including high yield, where we see 72% of the names under our coverage (50% in December 2007) as facing deteriorating fundamentals (and implicit rating risk). Perhaps more interesting is the investment grade corporate universe, where half have Negative views assigned (21% in December 2007), and where 18 of the 30 names covered have BBB-range ratings with two agencies – and arguably face the greatest risk of rating migration to sub-investment grade.

Figure 150: Credit views of financials (left) and corporates (right)



Source: Barclays Capital

Ratings pressure in Asia by sector

On a sector basis, we believe diversified industrials, refining and petrochemicals and shipping are the most vulnerable sectors to negative ratings pressure.

Figure 151: Rating risk for various sectors in Asia

Sector	Rating migration risk	Comments
Telecoms	Low and idiosyncratic	We do not foresee much scope for negative ratings action among Telcos in 2009. We believe such actions will be driven by idiosyncratic risks relating to specific issuers.
Commodities/Natural Resources (ex-Energy)	Low and idiosyncratic	While we expect a more challenging environment in 2009, issuers are approaching it from a position of strength, and we expect ratings to remain largely unchanged in the near term. Negative rating actions are likely to be issuer-specific, and will be increasingly likely as the benefits of elevated commodity prices recede.
Primary energy/utilities	Low and idiosyncratic	Given our relatively comfortable view on this sector, we expect negative rating pressures to be isolated to a couple of names.
Banks	Elevated; dependence on sovereign ratings for supported banks	The vast majority of rating outlooks on individual banks across the region remain Stable, but we believe a pick-up in negative rating action in 2009 is almost certain. Korean financials are particularly vulnerable; ratings in Japan, India, China, Hong Kong and to a lesser extent Australia are also likely to come under pressure. **The "interventionist" approach adopted by most governments in the region links the ratings of large systemically important banks to sovereign ratings – any downgrade to sovereigns could have a knock-on impact to the banks.**
Diversified industrials	Elevated	We believe rating risk exists among diversified industrials and is centred on the more cyclical companies.
Refining and petrochemicals	Elevated	In light of the earnings prospects, we are concerned that credit metrics for some companies in this sector are getting closer to the rating agencies' downward triggers – we view rating action as a risk in this sector.
Shipping	Elevated	Not surprisingly, rating risk is elevated – other than a Stable outlook by Moody's for MISC, the rating agencies are unanimous in assigning Negative Outlooks to the shippers under our coverage.

Source: Barclays Capital

2. Worse-than-expected earnings could lead to further credit quality deterioration

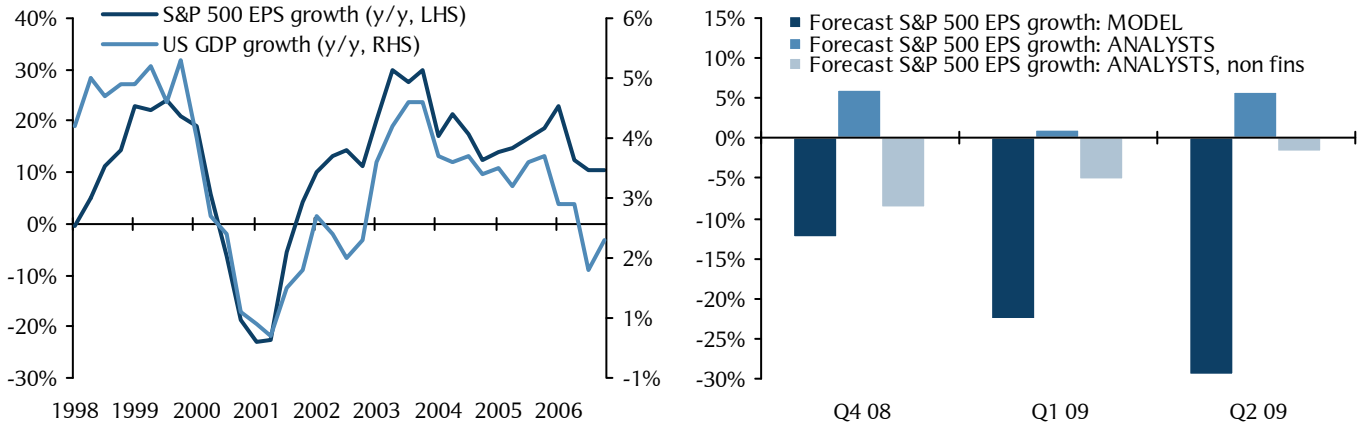
Sentiment likely to be affected by earnings missing overly bullish analyst forecasts

Actual earnings declines are a key driver of deterioration in credit fundamentals and ratings migration, as explained above. However, *expected* changes in earnings, and the extent to which these expectations are realised, are also likely to severely affect sentiment, as **many credit market participants look to consensus equity analysts for**

earnings guidance. As the economy deteriorates, we believe that earnings expectations are currently overly optimistic – the scope for disappointment is large.

We believe that optimistic global earnings expectations will translate into pressure on credit and sentiment worldwide. Using a simple growth-earnings model, we estimate the potential level of such disappointment for the US, as an example. Earnings and economic growth are highly correlated, as shown in Figure 152 (left). Using this relationship, we compare the earnings expectations priced into economic growth forecasts, versus analyst earnings expectations. **We believe that earnings expectations are currently over-optimistic – the scope for disappointment is large, as the economy deteriorates.**

Figure 152: Corporate earnings growth tends to be highly correlated with economic growth (left); analyst earnings expectations are too bullish relative to those implied by growth (right)

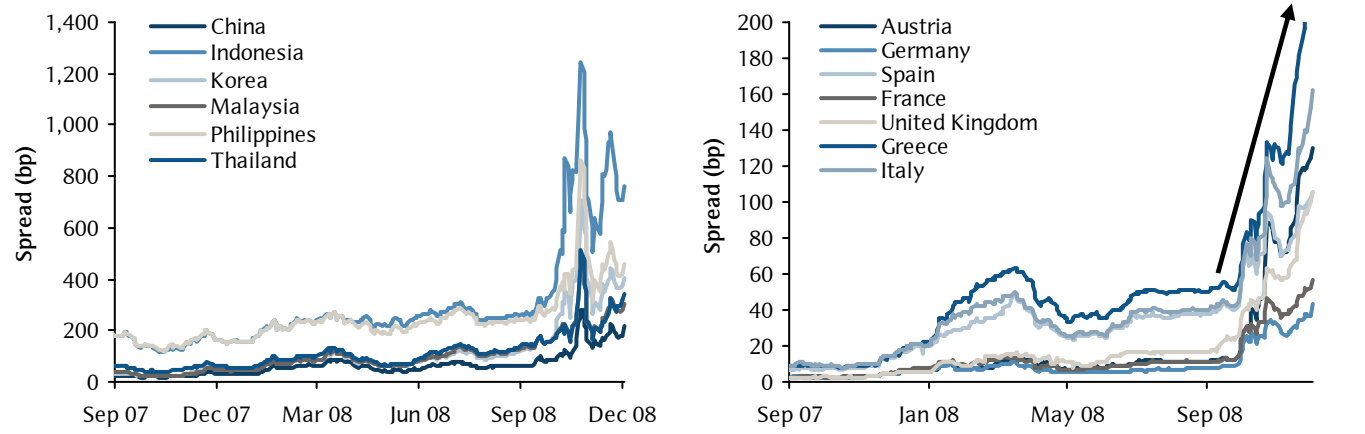


Source: Bloomberg, Barclays Capital

3. Sovereign risk is rising – knock-on effects on corporate ratings

Since the near market meltdown in September, global sovereign risk has spiked sharply. CDS levels have risen across the board – Asian countries experienced a particularly sharp re-pricing in October (Figure 153, left), while European sovereign risk has spiked more recently and is now at all-time highs (Figure 153, right).

Figure 153: Asian sovereign risk has spiked and retraced somewhat (left); Western European sovereign risk is at all-time highs (right)



Source: Markit, Barclays Capital

Assessing the price credit investors will pay for sovereign risk based on a simple hypothesis

We strongly believe that credit should react to a complete re-pricing in sovereign risk, since it is a key factor affecting corporate creditworthiness. While we are in the process of developing a more robust framework to incorporate sovereign risk in credit, we instead use a very simple model of the sovereign impact on corporate creditworthiness to understand and assess this effect. The essence of this framework is that corporate ratings can be decomposed into "sovereign" and "pure credit" components. We believe that at times of stress, the sovereign can always seize the assets of the corporate if needs be, although exceptions could arise. As such, sovereign creditworthiness provides a floor to credit ratings. Additionally, the corporate rating will be affected by the "pure" credit component related to name- and industry-specific fundamentals, which can in turn be affected by implicit or explicit government support.

The following model of corporate ratings formalises in very simple terms the relationship between corporate creditworthiness (rating) and sovereign creditworthiness:

Sovereign – credit risk model

$$Rating_c = f\left[Rating(Sovereign_c) + Rating(Pure\_Credit_c)\cdot(1 - Govt\_\sup port_c)\right]$$

Where, for any given corporate *c*, the rating ($Rating_c$) is affected by the following factors:

Figure 154: Factors affecting the corporate rating

Factor	Definition	Impact
$Rating(Sovereign_c)$	Creditworthiness of the sovereign of corporate c	Floor of corporate creditworthiness. The higher the sovereign risk, the lower the rating of the corporate.
$Rating(Pure\_Credit_c)$	The effect of purely name- and industry-specific risk factors on the corporate's creditworthiness	This is the "pure" credit risk – the higher this risk, the lower the corporate rating. **Crucially, we believe this is the real risk that credit investors wish to take exposure to!**
$Govt\_\sup port_c$	Degree of government support for the corporate c (%)	Implicit or explicit government support for the corporate – the higher the support, the lower the impact of "pure" credit component and the higher the rating of the corporate c.

Source: Barclays Capital

Implications of a deterioration in the sovereign rating – a simple parallel hit on corporate rating for non-financials

In the present environment, we have seen government activism increase dramatically, with financial bail-outs occurring on both sides of the Atlantic. This affects two factors in the above model – the sovereign creditworthiness, $Rating(Sovereign_c)$, and the government support, $Govt\_\sup port_c$. The limit cases and the resulting corporate rating with minimum/maximum government creditworthiness and support are presented in Figure 155.

It is clear that the implications for credit ratings are diametrically different for financials and non-financials:

- Financials received extensive government support. Therefore, the creditworthiness of the sovereign and financials should converge. Indeed, we strongly believe that in ***Asia specifically, the ratings of strong and large financials are closely linked to their sovereigns – with any negative rating actions on sovereigns impacting credit negatively.***

- Non-financials have not experienced a material increase in government support, and given the budget limitations that European governments face, they are unlikely to do so. However, they are still exposed to the risk of increased sovereign creditworthiness. ***In fact, for non-financials where the increase in government support is negligible, the deterioration in sovereign creditworthiness (as measured by the sovereign rating) would cause a parallel and equal shift in corporate ratings!***

Figure 155: Implications of the model – sovereign creditworthiness deterioration to translate into a parallel hit for non-financial ratings!

		Government creditworthiness	
		Maximum $Rating(Sovereign_c)$ = AAA	Minimum $Rating(Sovereign_c)$ = B
Government support	Maximum (100%) - financials	AAA	B
	Minimum (0%) – non-financials	AAA + $Rating(Pure\_Credit_c)$	B + $Rating(Pure\_Credit_c)$

Source: Barclays Capital

Is the impact on spreads therefore also parallel? Not really

Parallel shift in ratings due to deterioration in the sovereign rating would cause an exponential widening in credit spreads

We believe that the key point is that the parallel shift in ratings due to deterioration in the sovereign rating would cause an exponential widening in credit spreads. This is because the fair value spread rises exponentially as ratings drop – spreads jump particularly strongly below IG.

To illustrate the extent of this impact, in the European IG section, we have presented an analysis of various notch downgrades of European sovereigns and their impact on the fundamental migration-risk fair value of credit. For example, fair value of European credit (iTraxx Europe Main index) rises by as much as 100bp if corporates are downgraded by two notches due to sovereign downgrades (over and above the pure credit deterioration we forecast from weak earnings)! **While we resist making specific value judgements at this point in time, what is clear is that sovereign credit risk currently appears to be the most underpriced risk in the credit markets – both in Europe and Asia.**

Among the 12 EM Asia sovereign credits covered by our economics team, six have Negative 6-12 month credit views assigned to them. Of these, we see risk of a one-notch rating downgrade for Indonesia and Thailand, with risk of a Negative rating outlook for Korea, Malaysia and Pakistan.

4. Refinancing and execution risks remain, though are relatively limited in Asia

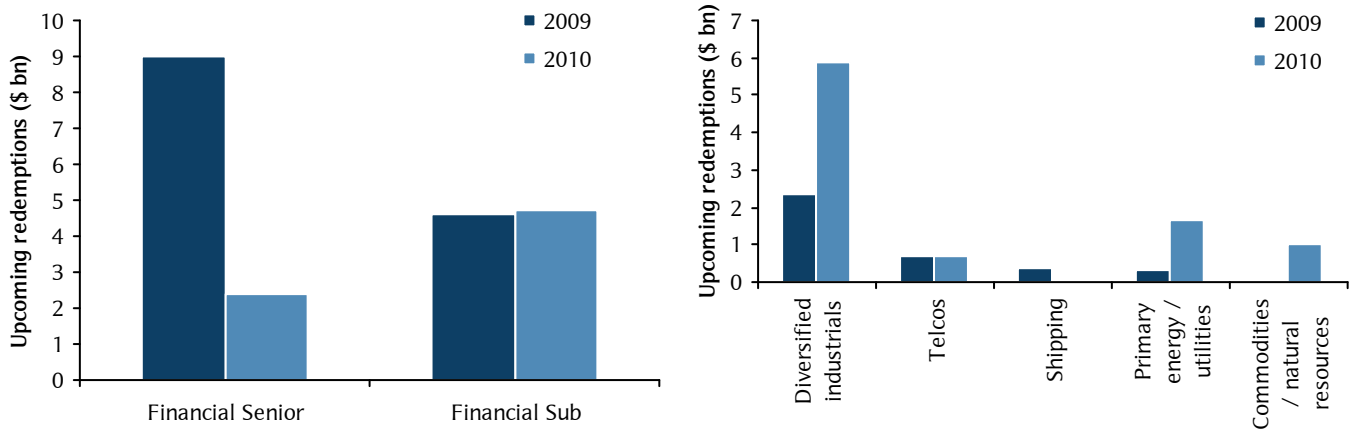
Large reliance on short-term debt means that refinancing risks exist for Asian corporates

While USD bond redemptions remain low for Asia ex-Japan corporates in 2009, refinancing risks exist due to the large reliance on short-term debt (for some corporates) and ongoing capex. Unlike in Europe and the US, where we have seen limited availability of funding, especially for lower-rated corporates, and an exorbitant cost of funding for those better-rated corporates that can tap the markets, Asian corporates generally have the ability to pay down/refinance bonds using other alternatives. At the moment, we believe access to alternative funding is still available for the majority of Asian issuers, particularly in investment grade.

- **Refinancing needs covered in short term.** In general, refinancing needs in Asia are relatively limited, as shown in Figure 156, with the largest concentration of

redeeming bonds in senior financials and diversified industrials. Our fundamental analysts believe that in most sectors, corporates have adequate liquidity for the next six to nine months to cover these needs.

Figure 156: USD-denominated Asian bond redemptions calendar: financials (left) and non-financials (right)



Note: Upcoming redemptions for financials refer to USD fixed-rate bonds and include Japanese financials. Redemptions from corporates include fixed rate bonds and CBs and FRNs of issuers with existing USD fixed-rate bonds. Source: Barclays Capital

- **Covenants far from being breached.** Moreover, we believe most corporates under our coverage are within their debt covenant limits and are not in immediate danger of triggering accelerated debt repayments, although the level of public disclosure on financial covenants varies across corporates in Asia.

However, if the situation does not normalise over the next six to nine months, we might see refinancing risks gather force for some corporates in the latter part of 2009. **As we stated previously, earnings declines could be larger than expected and may lead to some negative surprises; as such, the risk is that corporates caught up in this may enter a negative liquidity spiral.** This could be particularly true for diversified industrials and utilities/commodities, where refinancing needs in 2010 are significantly larger than in 2009.

Refinancing risk by sector

While overall refinancing risk is low, ongoing expansionary activities and a potential pick-up in M&A could drive near-term financing needs for commodities, natural resources and refining companies. Nevertheless, even in these sectors, we do not foresee large risks.

Figure 157: Liquidity by sector

Sector	Refinancing risk	Comments
Banks	Low	Among banks, we are not concerned about excessive supply. While access to local market alternatives will keep supply pressures subdued, rising issuance would signal an improvement in market conditions. We expect that the region's already low reliance on interbank borrowing and other wholesale funding sources (bond issuance, etc) is likely to be reduced further.
Diversified industrials	Low	We are broadly comfortable with the liquidity outlook for companies under coverage in this sector. In most cases, existing liquidity and an assumed 50% reduction in LTM operating cash flow, should be sufficient to cover ST debt and expected 2009 capex. Additionally, a number of credits have publicly disclosed, available undrawn committed facilities. Those companies that have not disclosed this information are expected to also retain access to the loan market, if required, reflecting their well-established track records and strong banking relationships.
Primary energy/utilities	Low	We believe liquidity and refinancing risks are low for this sector, given the relatively small proportion of short-term debt, strong balance sheets, government ownership and access to funding alternatives.
Telecoms	Low in higher-rated corporates, higher for lower-rated corporates	Funding needs appear to be light in telecoms, reflecting a combination of an expected moderation in competition and capex spending, and manageable levels of short-term debt. Some risk exists in lower-rated telcos, which are projected to be in a net funding deficit position in 2009.
Commodities/Natural Resources (ex-Energy)	Low overall; higher for issuers that have capex financing needs	Corporates in this sector are generally well-positioned liquidity-wise with a combination of strong cash balances, manageable short-term maturities and healthy cash-generating abilities. However, we believe that M&A risk in this sector is sizeable, as higher-rated issuers seek to capitalise on the generally lower asset valuations and, therefore, among these corporates, funding for expansionary investments is a concern.
Refining and petrochemicals	Low overall; higher for issuers that have capex financing needs	We note an increasing reliance on short-term debt among Asia ex-Japan refining and petrochemical companies. This is likely to increase pressure on refinancing although to a large extent, this short-term debt relates to trade financing and should be rolled over, assuming normal business conditions. However, importantly, we see several of these companies requiring further debt financing in the pursuit of their large capital expansion plans.
Shipping	Moderate to high risk for lower-rated corporates	Our analysis of liquidity positions reveals adequate levels of liquidity for the next 12 months for higher-rated issuers. Lower-rated issuers are dependent on facility rollovers, asset disposals.

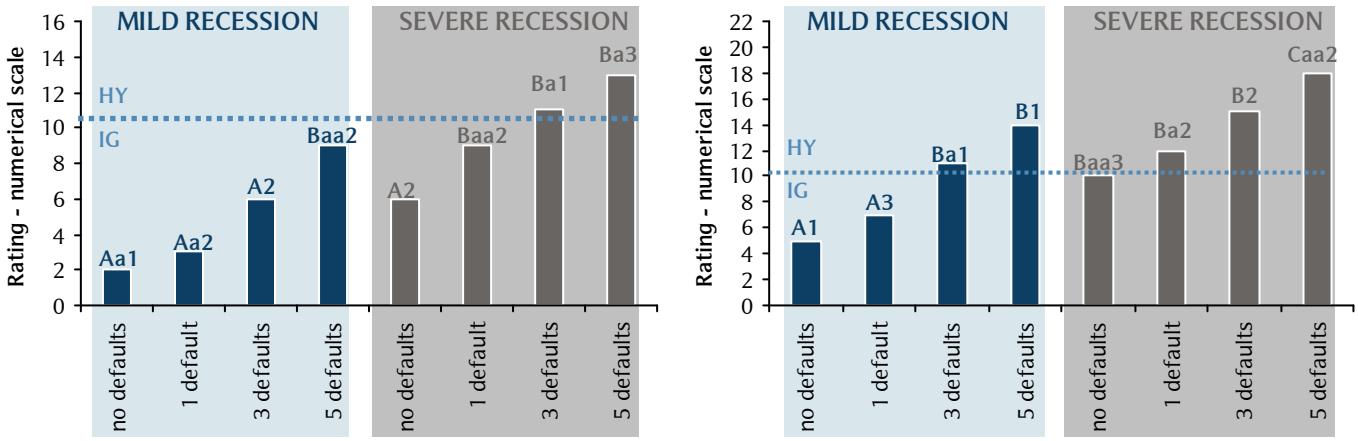
Source: Barclays Capital

5. CDO unwinds

Pressures on CDO ratings are likely to worsen as default rates tick up and credit quality suffers

As we highlighted in the introduction to this article, we believe that an important (and as of yet underpriced) risk stems from potential CDO unwinds (see *Asian Credit Market Brief: View update and CDO headwinds*, 17 Oct 08). A number of these structures have already been affected by the recent spate of financial defaults. We believe pressures on CDO ratings are likely to worsen as default rates tick up and credit quality on underlying names in CDO portfolios suffers from adverse selection – since the highest spread names were chosen for a given rating. In fact, these rating downgrades going forward could be severe, especially if we see further defaults. AAA tranches could be downgraded to sub-IG if there is a severe recession, with clustered defaults. Furthermore, if we do see a severe recession, AA tranches will almost certainly be downgraded to sub-IG.

Figure 158: Tranche ratings in various scenarios: AAA tranches (left), AA tranches (right)

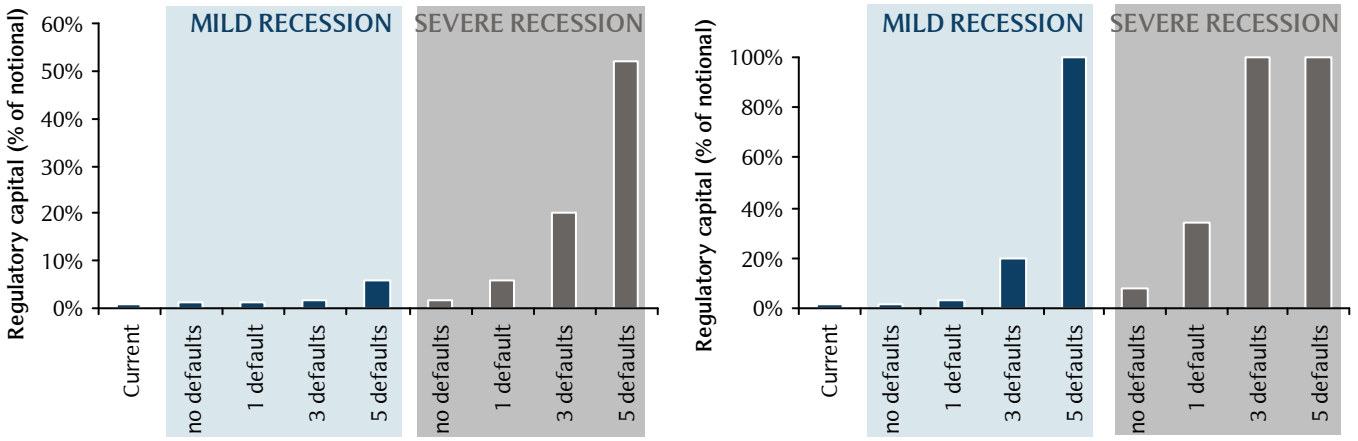


Source: Barclays Capital

Although CDO investors experiencing fundamental deterioration in their tranches will have a number of options, with approximately $1.2trn of delta-adjusted protection on the iTraxx and CDX indices, even moderate unwinds could put substantial pressure on spreads (see *CDO unwind headwinds*, 16 October 2008).

Another immediate effect of the downgrades is the increase in regulatory capital for the affected investors. It is clear that the increase in regulatory capital for CDOs will be extremely severe and could seriously constrain investor holdings of CDS tranches going forward. **The risk here could be from some of the Asian banks with heavy exposures to structured products. Furthermore, we believe names in CDOs including some sovereigns could come under substantial pressure and cause spreads to be wider than fundamentally fair spread levels.**

Figure 159: Regulatory capital increases in various scenarios: AAA (left), AA (right)



Source: BIS, Moody's, Barclays Capital

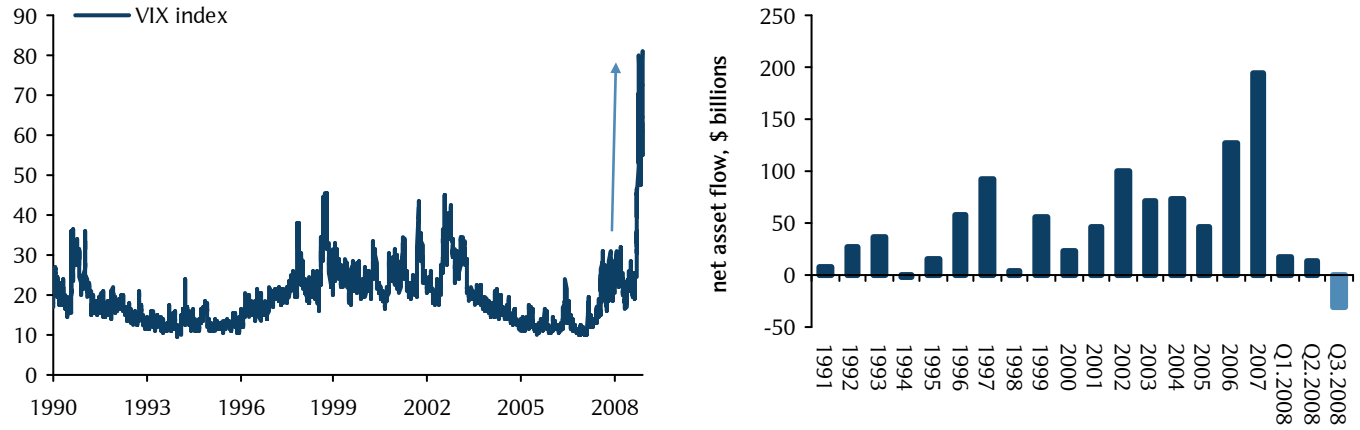
6. Deleveraging

Even if assets offer value on a fundamental basis, there is little demand for risk

Retrenchment of risk is occurring – performance has been dismal and volatility has picked up substantially. Stop losses are being triggered and redemptions are hitting hedge funds and money market funds, leading to unwinds in a low liquidity environment. These unwinds are in turn strengthening the deflationary spiral in asset prices. In such an environment, even if assets offer value on a fundamental basis, there is little demand for risk. **This is why we argue that cash bonds could continue to remain cheap to CDS as the**

funding costs element could stay high given an opportunity cost or scarcity value attached to having cash in a deleveraging environment.

Figure 160: Volatility (left) has been driven partly by deleveraging (hedge fund flows, right)



Source: Barclays Capital, Bloomberg, HFRI

Positive factors for Asian credit… the silver lining of policy action?

Though government initiatives are positive, the transmission mechanisms are broken

We believe that the recent central bank and government activism is the key positive in the market currently. However, while the actions themselves are a boon, the key problem lies in the fact that the transition mechanism from healthier financials to healthier lending to the real economy is broken. Governments lack the power to enforce an increase in lending – incentives and promises are proving insufficient amid the deteriorating economy and asset prices.

1. The flood of liquidity: Positive, but does not target the root of the problem

We have seen extensive liquidity support globally:

- In Asia-Pacific, the governments in Australia and Korea have been proactive in extending support to banks, particularly with respect to access to liquidity. This is not surprising given these banks' structural reliance on wholesale funding. Other countries have also moved to strengthen deposit insurance schemes. These initiatives have mainly been designed to prevent putting their banking systems at a disadvantage on the international stage. This was most evident in Australia, where despite a still comparatively strong banking system, the government was in effect forced to put measures in place to guarantee deposits and debts given that the major banks derive a large proportion of their term funding requirements from international capital markets.
- In Europe, countries have provided liquidity support to their banks in two key areas – expansion of liquidity facilities and government guarantees on new bank debt issuance.
- In the US, the support includes numerous new programmes aimed at alleviating short-term funding problems for banks, such as the FDIC Temporary Liquidity Guarantee Program and the Federal Reserve Commercial Paper Funding Facility (CPFF).

Figure 161: Major policy actions by Asia-Pacific governments

Country	Bank deposit guarantee	Bank bond guarantee	Major policy moves and accounting changes
Australia	All deposits up to AUD1mn per institution (above this, a fee is required)	Senior debt for up to 5 years. Fee 70bp for AA rated banks, 100bp for A rated banks	▪ Cash (policy) rate cut 400bp since September ▪ USD30bn swap line with Fed ▪ Established RBA term deposit facility ▪ Expansion of domestic market facilities: Allows banks to use residential mortgage-backed securities and asset-backed commercial paper of a related party as collateral in repo operations with RBA and removes restrictions on the substitution of collateral within an existing repo, with the exception of general collateral
China	NA	NA	▪ Since September, lowered benchmark lending rate by 189bp and deposit rate by 162bp; reserve requirement reduced by 350bp for small- and medium-sized banks and by 150bp for large banks ▪ Deposited CNYB30bn of Treasury's cash with commercial banks ▪ Announced CNY4trn fiscal stimulus plan, with CNY3trn for infrastructure, public housing construction and post-earthquake reconstruction
Hong Kong	All deposits	NA	▪ 200bp cut in base rate since September ▪ Established a Contingent Bank Capital Facility ▪ Liquidity assistance to licensed banks in Hong Kong. Measures introduced include: 1) expansion of eligible securities; 2) extension of duration of liquidity assistance at request of bank; 3) waiver of 5% penalty over Base Rate for use of Exchange Fund paper beyond 50% threshold; 4) foreign exchange swaps between USD and HKD of various durations upon request; and 4) upon request, will lend term money up to one month against collateral of acceptable credit quality ▪ Issuance of additional Exchange Fund bills to meet increased demand by banks
India	INR100,000 per person per bank	NA	▪ 150bp cut in repo rate, 350bp cut in cash reserve ratio since October ▪ May inject INR30bn (USD630mn) in seven public sector banks to bolster capital ratios ▪ Introduced liquidity-support measures and refinancing facilities ▪ Upon request, will provide FX liquidity to banks with foreign branches or subsidiaries through FX swaps in tenors of up to three months ▪ Extend period and increase refinancing limit for export credits ▪ Reduced provisioning requirement for all standard assets (except advances to agricultural and SME sector) to 0.4% ▪ Reduction in risk weights on banks' exposures to certain sectors
Indonesia	IDR2bn per person per bank	NA	▪ Kept policy rate at 9.5% at most recent meeting (November) [meeting tomorrow] ▪ SOEs not allowed to move assets among banks ▪ Government will buy bonds in secondary market ▪ Swap arrangements with PBOC, BoK and BoJ ▪ Extended FX swap tenor and abolished limit on daily balance position ▪ Banks can use high-quality assets to repo with BI ▪ Will allow DCF* method in security evaluation ▪ Will allow available-for-sale (AFS) securities to be reclassified as held-to-maturity (HTM) securities ▪ Banned FX purchases against the IDR if they are linked to derivative products ▪ Tightened regulation on purchases of foreign currency against the IDR through banks ▪ Enhanced liquidity facilities – eg, introduced overnight repurchase agreement facility ▪ Revised reserve requirement ruling to ease liquidity pressures by allowing commercial banks to use central bank debt and government bonds as secondary reserves ▪ Cut reserve requirement for foreign exchange deposits to 1% of total deposits from 3% ▪ Cut IDR reserve requirement to 7.5% of total IDR deposits from 9.08%

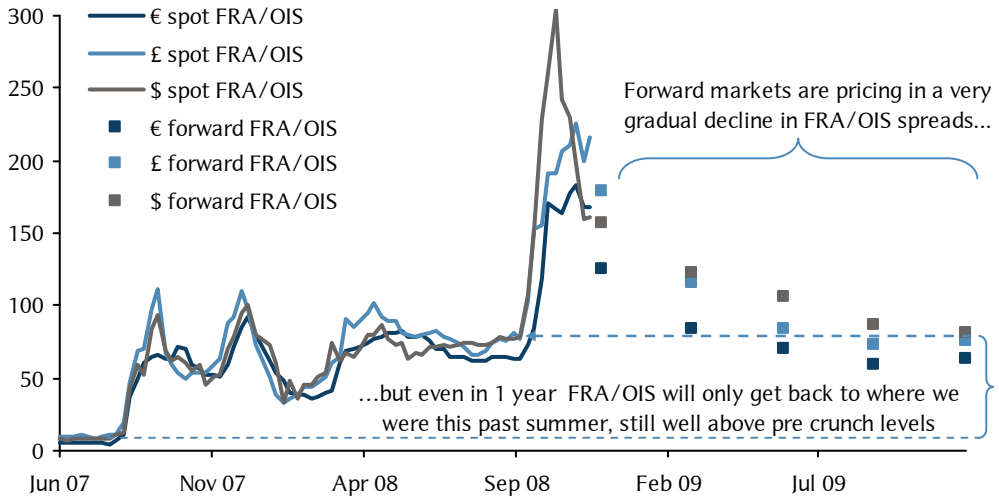
Figure 161: Major policy actions by Asia-Pacific governments (cont'd)

Country	Bank deposit guarantee	Bank bond guarantee	Major policy moves and accounting changes
Japan	JPY10mn per person per bank	NA	▪ 20bp cut in overnight call rate ▪ Introduction of Complementary Deposit Facility ▪ Unlimited swap line with Fed ▪ Reviving legislation that would allow capital injections into banks ▪ Flexibility in enforcing capital adequacy ratios ▪ Potential change in capital calculation** ▪ More flexible purchase of commercial paper under repurchase agreements to facilitate corporate refinancing ▪ Possible changes in the treatment of corporate debt as collateral, and considering ways to enhance flexibility in funds-supplying operations collateralised by corporate debt
Korea	KRW50mn per person per bank (including local foreign exchange deposits)	USD100bn of external debt	▪ 125bp rate cut since October ▪ USD30bn swap line with Fed ▪ Made available USD30bn of loans through FX reserves ▪ BoK purchase RPs, government bonds and early redemption of monetary stabilisation bonds ▪ Eased bank liquidity ratio requirement ▪ Broadened eligible collateral for open market operations ▪ Termination of currency swap between BoK and National Pension Service to increase FX reserves ▪ KAMCO may boost its capital next year in order to buy more bad loans from banks ▪ Setting up a bond fund to buy corporate bonds and ease liquidity problems ▪ KRW14trn stimulus package – includes aid to SMEs and low-income earners, spending on infrastructure, selected tax cuts and measures to support the property market ▪ Cut interest rates for lending on trade bills ▪ Removed limits on extending FX borrowings for working capital ▪ Plans to boost capital of state-run financial firms
Malaysia	All deposits	NA	▪ 25bp cut in overnight policy rate ▪ 50bp cut in Statutory Reserve Requirement
Philippines	PHP250,000 per depositor	NA	▪ Kept policy rate at 6% at most recent meeting (November) ▪ 200bp cut in reserve requirement ▪ Eased asset cover rules on FX deposits ▪ Established USD repurchase facility for banks to tap for dollar liquidity ▪ Allowed AFS securities to be reclassified as HTM
Singapore	All deposits	NA	▪ 0% appreciation of SGD NEER policy band ▪ USD30bn swap line with Fed ▪ Allowed AFS securities to be reclassified as HTM
Taiwan	All deposits	NA	▪ Cut discount rate by 87.5bp since September ▪ Guarantee overnight interbank lending ▪ Temporarily allowed insurers to recognise only 20% of paper losses on equity investments (down from 50%) when calculating risk-based capital ▪ Allowed AFS securities to be reclassified as HTM
Thailand	All deposits	NA	▪ Cut policy rate 100bp, to 2.75%, at 3 December policy meeting

*Note: *DCF – Discounted Cash Flow, ** Plans to allow banks without overseas operations to not deduct unrealised losses on stocks from Tier 1 capital. Banks can count tradeable securities towards their capital at face value instead of market value. Global banks can only exempt national and municipal bonds from mark-to-market. Source: Central bank websites, Bloomberg, Reuters*

While these actions are certainly positive, as they reduce the possibility of a systemically important financial institution defaulting due to funding problems, they do not mitigate concerns over deteriorating asset quality and pressure on capital. Indeed, money markets have been slow to react to the recent deluge of liquidity – term funding remains extremely expensive, well above the levels seen before the Lehman collapse. Furthermore, forward markets are pricing in only a gradual normalisation in money markets in the US and in Europe – it might take as long as one year to return to the levels seen pre-Lehman, and these levels themselves were particularly elevated. The longer this normalisation takes, the slower the global recovery will be.

Figure 162: Money markets remain tight and are pricing in only a gradual easing

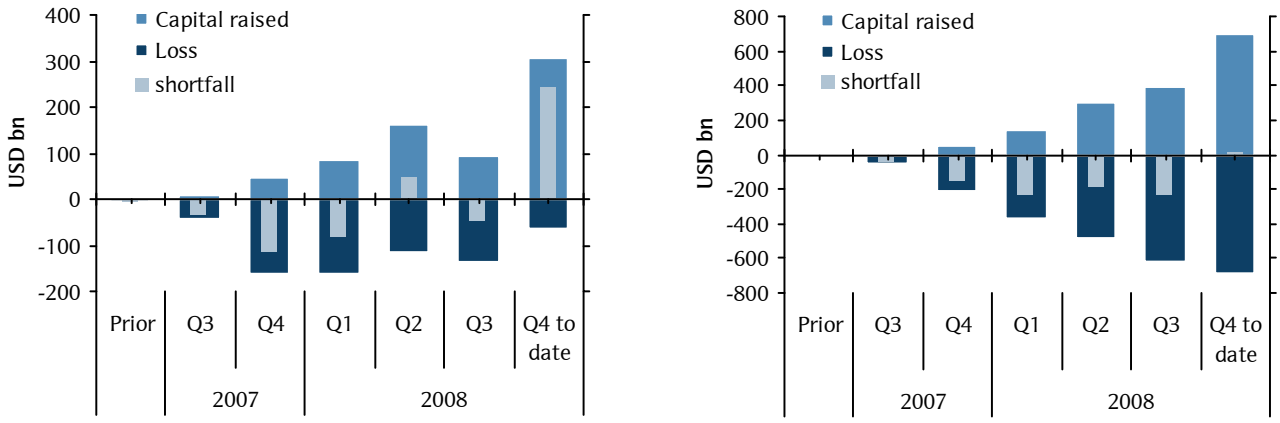


Source: Barclays Capital

2. Extensive bank bail-outs: Positive but real economic impact is questionable

There has been a significant amount of capital injected so far through the various government programmes globally. These injections mean that the capital raised now exceeds the losses/write-downs so far recorded.

Figure 163: There have been significant capital raisings in Q4 (left), which imply that cumulatively, capital raised now broadly matches the write-downs (right)



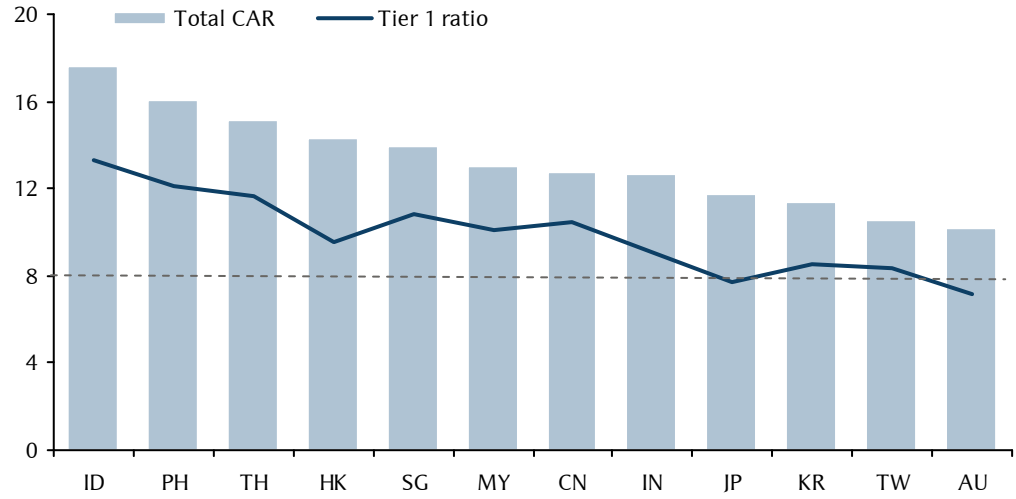
Source: Bloomberg, Barclays Capital

We still expect Asian banks to seek further capital injections

Despite the actions already taken, we still expect Asian banks to look to raise additional capital. But direct comparisons of regulatory capital ratios can be misleading given the different risk dynamics and regulatory interpretations across the region (it is up to each individual regulator to adopt Basel regulatory capital guidelines that are appropriate for its banks).

Importantly, outside of Japan and Australia, the prevalence of hybrid preferred securities (Tier 1) is relatively limited, which means that the quality of Tier 1 capital is generally high. The reliance of the region's banks on subordinated debt (supplementary capital, including LT2 and UT2) is also less than at many international peers, and capital refinancing requirements over the next 12 months are not particularly high.

Figure 164: Average Asian capital adequacy ratios (%)



Note: 1) The dotted line stands for the minimum CAR requirement of 8% by BIS. 2) TH, ID and CN are under Basel I framework. Source: Banks, Bank regulators

However, banks still have incentives to hoard capital:

- Asset deterioration. Bottomless asset prices could lead to further rounds of loss-taking and capital-raising. There are a few key areas where the risk of potential losses is particularly large – we believe these are loan books and commercial real estate.
- While not a current risk, there could be more oversight over capital ratios in the long term, in order to protect the taxpayer who is now a stakeholder.
- Raising private capital is difficult and expensive wherever possible – banks are therefore hoarding the capital that they have. Moreover, banks that have not participated in government capital injections programmes are under pressure to raise capital elsewhere, quickly – this is proving expensive and difficult.

Therefore while the real economy needs increased lending to consumers and corporates, the above factors are causing banks to hoard capital. This undesirable situation could persist for a while, in our view, as governments have limited power to force banks to lend more.

- While extra capital was frequently provided in exchange of a promise to increase lending, unless the government is the majority stakeholder, there is no explicit mechanism to increase lending. Moreover, even financials that have been taken over by the government have not increased lending so far.
- Another avenue governments can take is to encourage increased lending via various asset-buying schemes. The recent programme by the Fed, whereby it will buy $200bn of consumer, auto and small corporate loan-backed ABS, is a step in the right direction. However, these incentives will be weighed by banks against those listed above.
- Finally, slumping economies and in particular growing unemployment is dampening the demand for lending to consumers and corporates.

Therefore, the impact on the real economy is likely to be slow.

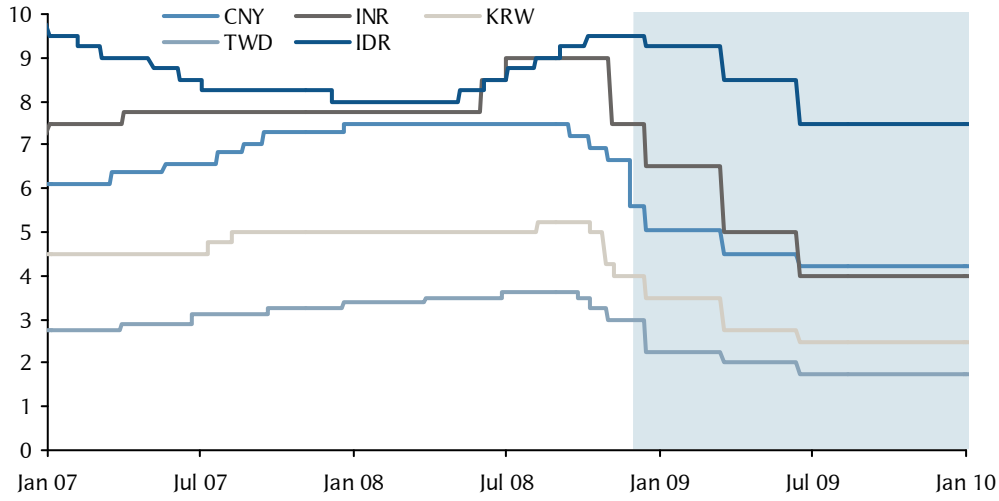
3. Global rate-cutting cycle – transmission mechanism still broken

The mechanism needed to transmit rate cuts to the broader economy has broken down

In addition to liquidity injections and bank bail-outs, central banks have embarked on a global monetary policy easing cycle designed to stimulate economies. Rates have been reduced aggressively recently, and cuts are expected to continue.

While this development is also a positive, we remain cautious for the same reason we gave for bank-bail outs: the transmission mechanism remains broken. In fact, since rates have been lowered, the cost of borrowing for the consumer has not fallen by much, and certainly, credit availability is diminished and likely to remain so.

Figure 165: Rate cuts are expected to be aggressive, and front-loaded (%)



Source: CEIC, Barclays Capital

How to position in this environment

Macro themes

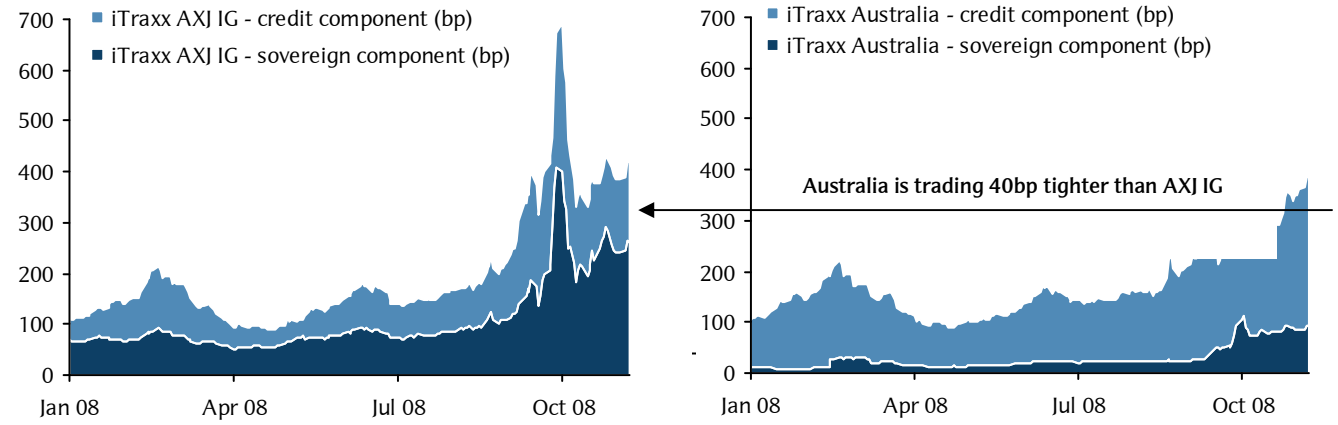
1. IG CDS: Sovereign versus credit risk play – iTraxx Australia versus iTraxx AXJ IG

We believe that playing the iTraxx AXJ IG versus the iTraxx Australia indices is effectively playing sovereign risk versus credit risk.

As we have argued above, sovereign risk plays an extremely important role in Asian credit, being one of the key drivers of spreads, but it appears to be a stronger driver of AXJ IG than of the Australian index. Conversely, for Australia, it is the credit risk which is the more powerful driver of spreads.

- In terms of absolute spread, the iTraxx Australia is trading only marginally tighter than iTraxx AXJ IG.
- Decomposing the indices into the "sovereign" and "pure credit" component, we show that sovereign risk has been the key driver of AXJ IG, with the "pure" credit component not widening by much (Figure 166, left). In contrast, for iTraxx Australia, the widening in the sovereign spread has been accompanied by a sharper widening in the "pure" credit part (Figure 166, right).

Figure 166: iTraxx AXJ IG and iTraxx Australia are trading only 40bp apart, but the relative contribution of the sovereign and the credit component is different (AXJ IG left, Australia right)



Source: Barclays Capital, Markit

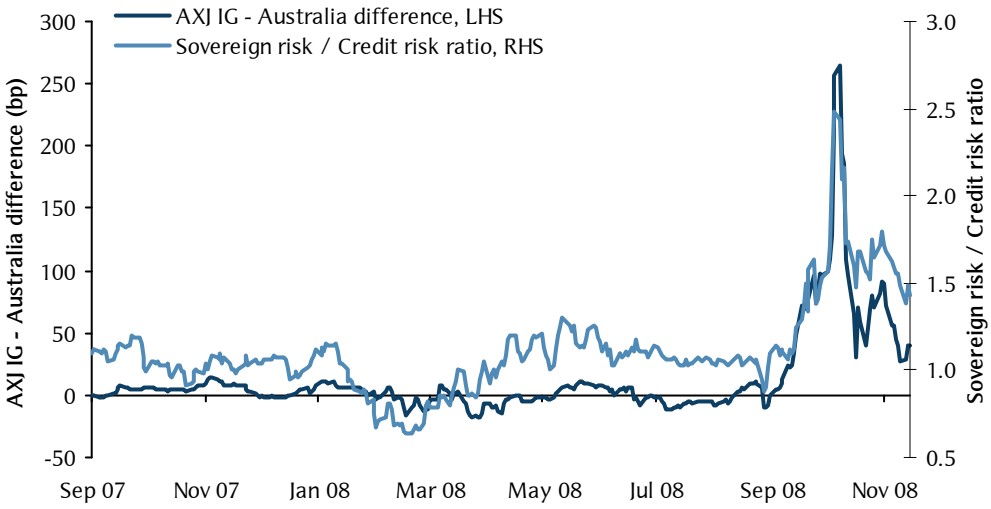
In fact, we believe that playing the two indices versus each other amounts to playing the sovereign risk versus the credit risk. In Figure 167, we plot two lines:

- The difference between the AXJ IG and the Australia indices (dark blue line, LHS, bp).
- The ratio of sovereign risk to credit risk (light blue line, RHS). As a measure of sovereign risk in Asia, we took the average of the sovereign spreads on all major Asian sovereigns[16]. As a measure of credit, we took the iTraxx Europe Main index.

We find that the relationship is very robust, particularly since Asian sovereign risk spiked towards the end of September. As sovereign risk increases proportionally more than the credit risk, AXJ IG underperforms Australia – this occurred particularly sharply in October this year. Conversely, as credit risk widens relatively more, Australia underperforms.

We therefore strongly believe that to express a negative view on sovereign versus credit, investors should consider buying protection on iTraxx AXJ IG versus iTraxx Australia for a relatively low carry.

Figure 167: The relative performance of AXJ IG versus Australia is strongly related to the ratio of sovereign versus credit risk



Source: Markit, Barclays Capital

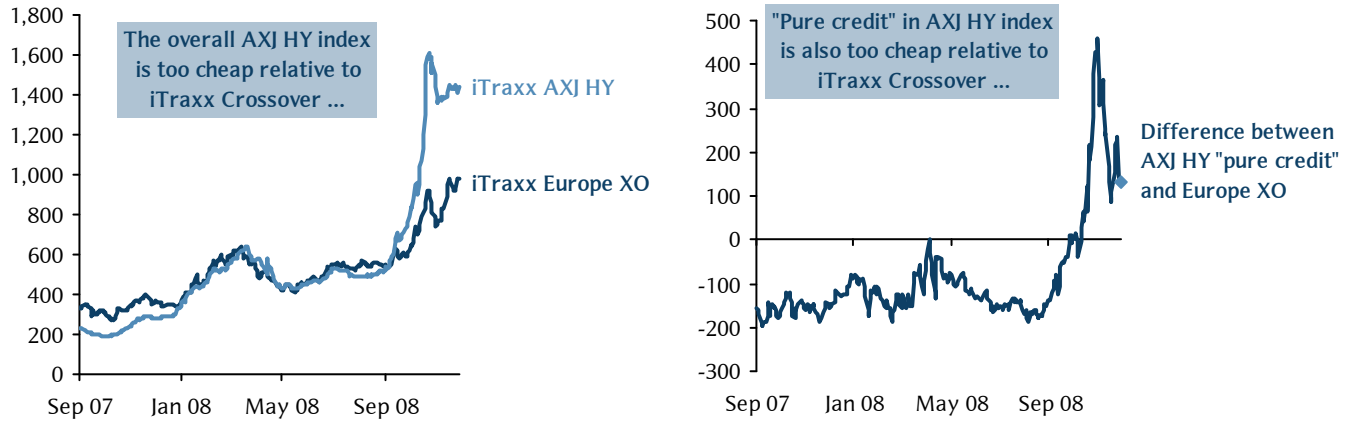
[16] *Australia, China, Hong Kong, Indonesia, India, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, Taiwan and Vietnam.*

2. HY CDS: Long AXJ HY vs Europe XO

Although Asian HY CDS is not pricing in default rates that are as high as for cash product, we believe it has re-priced too sharply in the recent volatility, particularly with respect to the European Crossover index. As a result, we recommend investors sell protection on the iTraxx AXJ HY versus the iTraxx Europe Crossover index:

- In terms of absolute spreads, the two indices have been trading broadly in line with each other since the beginning of the year, but since the summer, the AXJ HY has widened disproportionately (Figure 168, left).
- An important contributing factor to the Asian widening has been the sovereign risk. When the sovereign risk is accounted for, we find that the "pure" credit component for the iTraxx AXJ HY has also widened too much relative to the European Crossover – while "pure" credit in AXJ HY had traded approximately 150bp through iTraxx Europe XO from January to September this year, it is now 130bp wider (Figure 168, right).

Figure 168: iTraxx AXJ HY appears cheap versus iTraxx Europe Crossover on an absolute basis (left) and using "pure" credit spreads (right)



Source: Markit, Barclays Capital

However, the indices appear to be of similar quality – they are both on average Ba3 rated, although there is much greater dispersion in terms of ratings within the iTraxx Crossover, while the iTraxx AXJ HY is much more uniform.

In terms of sectoral split, the iTraxx AXJ HY appears to be better positioned – it contains a greater proportion of names from safer sectors such as governments, financials, utilities and telcos. iTraxx Crossover on the other hand is comprised of more cyclical sectors – particularly the consumer sector.

While we flag this as a potential theme to monitor, we believe that market technicals and sentiment as well as the relative sovereign concerns in both regions can drive spreads in the short term.

Figure 169: iTraxx AXJ HY is in greater proportion comprised of credits from more resilient sectors than iTraxx Europe Crossover

Sector	Vulnerability to downturn	Weight in iTraxx Europe Crossover	Weight in iTraxx AXJ HY	Relative weight: AXJ HY – iTraxx Crossover
Basic Materials	**Less resilient**	19%	10%	**-9%**
Consumer, Cyclical	**Less resilient**	26%	5%	**-21%**
Diversified	**Less resilient**	9%	10%	**1%**
Industrial	**Less resilient**	5%	0%	**-5%**
Technology	**Less resilient**	0%	15%	**15%**
Financial	**More resilient**	7%	15%	**8%**
Government	**More resilient**	0%	15%	**15%**
Utilities	**More resilient**	2%	5%	**3%**
Consumer, Non-cyclical	**More resilient**	7%	10%	**3%**
Communications	**More resilient**	26%	15%	**-11%**

Source: Bloomberg, Barclays Capital

Sector outlooks

While there is a large variation in sector outlooks…

Amid the volatility, spread performance by sector has been largely similar; however, we believe that each has a different fundamental outlook for 2009. This leads to some attractive potential sector-play opportunities.

We believe that there is a great differentiation among sectors in Asian credit from a fundamental standpoint. We like senior and selective LT2 paper in large banks that enjoy government support. We further like relative safe havens – telecoms, primary energy/utilities – on which our fundamental analysts hold a Stable outlook. We would steer clear of more cyclical sectors – industrials, consumers, refining and shipping. Our fundamental analysts' views are summarised in Figure 170.

Figure 170: Fundamental views on sectors

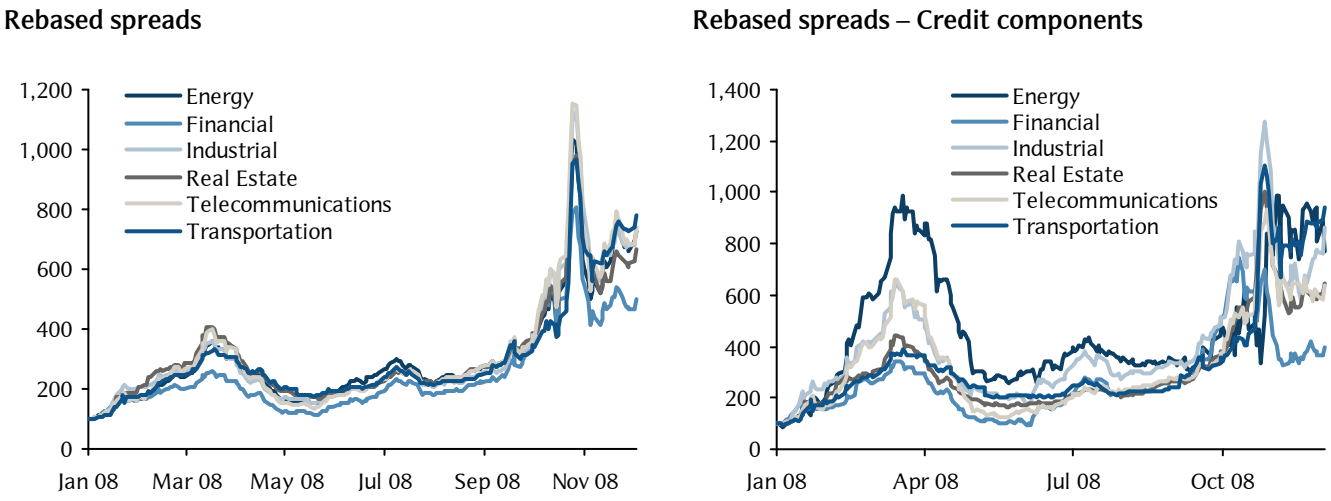
Sector	View	Comments
Telecoms	Stable	We expect the telecommunications industry to report generally stable operating performance in the next 6-12 months, supported by the utility-like nature of voice telecommunication services, and still low penetration rates in developing markets representing a source of future growth. Near-term negative developments in the sector are likely to be issue-specific rather than a result of broader industry dynamics.
Primary energy/utilities	Stable	Overall, we have a Stable outlook for Asia ex Japan primary energy/utilities sector, as most of the companies in this sector either benefit from government ownership or some form of industry regulations and a reasonable level of support can be expected given the strategic importance of most of these companies.
Banks	Negative	The deteriorating macro-economic backdrop does not bode well for the fundamental outlook for banks under our coverage in 2009. Earnings will be hit by higher loan-loss-related charges and lower revenues, while capital is also likely to remain under pressure. We prefer exposure to the largest players in each banking system, preferably with government ownership.
Commodities/Natural Resources (ex-Energy)	Negative	Overall, while we expect a more challenged environment in 2009, we believe the companies in this sector are approaching it from a position of strength. Notwithstanding this, the majority of the companies under coverage have negative credit views, reflecting various factors but predominantly company-specific issues.
Diversified industrials	Negative	Overall, we have a Negative outlook on diversified industrials. Among the diversified industrials, we believe cyclical exporters/manufacturers and transportation/leisure issuers are most at risk of underperforming operationally in the wake of falling demand globally, the key driver we see for the diversified industrials sector. Manufacturing companies also remain vulnerable to volatility in the movements of raw material prices.
Refining and petrochemicals	Negative	We have a Negative outlook on Asia ex-Japan refining and petrochemicals sector in 2009. We believe the sector is poised to underperform as a slowdown in global and regional economies will have a direct impact on the demand for refined and petrochemical products. This also comes at a time of significant new capacity coming on-stream in the region.
Shipping	Negative	We have Negative credit views on all issuers in the Asia ex-Japan shipping sector. We expect shipping companies to face a challenging year as operators cope with weakening demand, tight credit conditions and a significant increase in new shipping capacity. For lower-rated issuers, these factors are compounded by funding needs for capex commitments made in recent years and maturing short-term debt obligations.

Source: Barclays Capital

… there has been little variation in performance

Amid the extreme volatility seen recently in Asian indices, there has been little differentiation among sectors in terms of performance. As shown in Figure 171, left, sectors have performed relatively in line with each other, on a percentage basis, since the beginning of the year, with financials being the only distinct outperformer. As argued before, sovereign risk has been a much more important driver of performance – indeed, when "pure" credit risk is taken into account, there is much greater differentiation across sectors. We believe this gives rise to attractive sectoral opportunities in Asian credit.

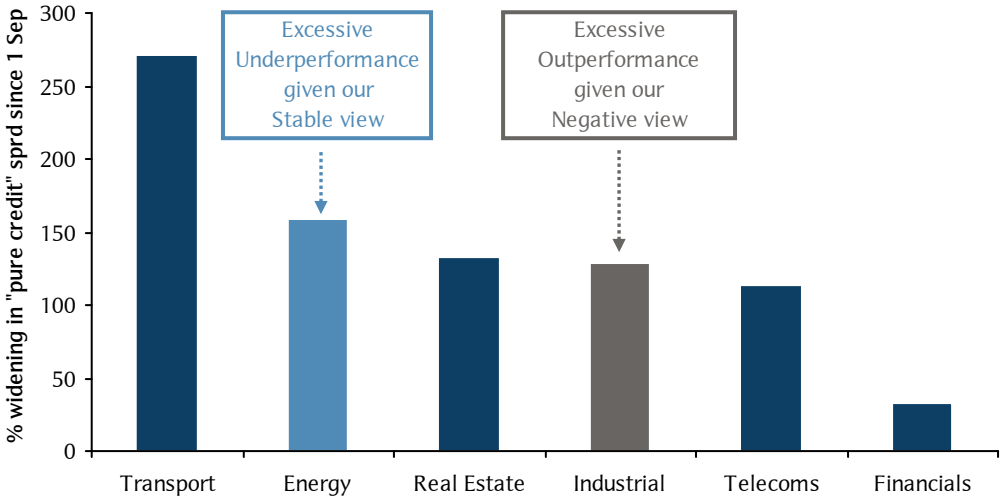
Figure 171: Rebased sectors in CDS, Jan 08 = 100



Source: Barclays Capital

In Figure 172, we present widening on a percentage basis since the beginning of September 2008. Taking into account our fundamental view as well as valuations, we believe that the industrial sector is a high-conviction short, while the energy sector appears to be offering relative value.

Figure 172: On a relative value basis, industrials appear to be pricing in the least risk, while energy is pricing in the most



Source: Markit, Barclays Capital

Asia-Pacific banks: Testing fundamentals

Jason Rogers

Against a backdrop of decelerating economic growth, 2009 will be a testing time for banks in the Asia-Pacific region. Having escaped relatively unscathed from the meltdown in US subprime mortgages and the ensuing turmoil in structured credit, investors' concerns are likely to focus on the deterioration in asset quality driven by slowing economies. The impact is likely to vary from country to country, but the general uncertainty will be a key driver of sentiment in 2009. Core operating profitability is also a concern. Overall, however, we continue to believe that as we approach 2009, Asian banks are still relatively well positioned in terms of liquidity and capitalisation.

We also continue to believe that in view of the track record of regulatory intervention, the probability of timely government support for large banks in the region is very high. Hence, we believe that while a few banks may become distressed, ultimate default probabilities remain very low. In terms of relative value, we continue to recommend a largely defensive posture going into Q1, with our Overweights skewed toward senior paper of quasi-sovereign issuers, and selective LT2. Despite compelling yields, we would need to see more clarity on the fundamental outlook before we become more constructive on UT2 and Tier 1.

Figure 173: Key summary recommendations for Q1 09

Overweight	Underweight
China Development Bank	Aiful Corp
Commonwealth Bank of Australia	AmBank Bhd (AmBank)
DBS Bank	Australia and New Zealand Banking Group Ltd
Export-Import Bank of China	Bank of Baroda
Export-Import Bank of India	Bank of East Asia Ltd
Export-Import Bank of Korea	Canara Bank
Hana Bank	Dah Sing Bank Ltd
Industrial Bank of Korea	Dai-ichi Mutual Life Insurance Co Ltd
Industrial Development Bank of India Ltd	Development Bank of the Philippines
Korea Development Bank	EON Bank Bhd
Public Bank Bhd	Fubon Bank (Hong Kong) Ltd
Resona Holdings	Fukoku Mutual Life Insurance Co Ltd
Shinhan Bank	Korea Exchange Bank
Westpac Banking Corp	Krung Thai Bank PCL
	Land Bank of Philippines
	Metropolitan Bank & Trust Co
	Mizuho Financial Group
	National Australia Bank
	Nippon Life Insurance Co Ltd
	Orix Corp
	Promise Co Ltd
	Rizal Commercial Banking Corp
	Shinsei Bank
	Sumitomo Mitsui Financial Group
	Sumitomo Trust & Banking Co Ltd
	Takefuji Corp

Note: Recommendations are for Asian-benchmarked investors. Names under coverage that are not mentioned above have a Marketweight recommendation. Source: Barclays Capital

Diversified industrials: Demand uncertainties

Christina Chiow, Jit Ming Tan

2009 Outlook: Negative

Overall, we have a Negative outlook on diversified industrials. We believe the cyclical exporters/manufacturers and companies in the airline, auto/auto parts and technology industries are most at risk of underperforming operationally in the wake of falling global demand – the key driver we see for the sector. This is further exacerbated by these companies' inherently capital-intensive industries, requiring long-term investment decisions that look through the cycle. While commodity prices have declined substantially from their peak, these companies remain vulnerable to volatility in raw material prices. We do not expect the other diversified industrials in our coverage universe to escape unscathed. However, we believe the impact of slowing economies is likely to take longer to show up in the results of the Hong Kong property companies, given fixed-lease periods, which provide stable recurring cash flow in the near term. Like Genting Bhd, these companies are also helped by their strong liquidity and leading positions in their core markets.

In this sector, we are biased towards Hongkong Land (HKL) and Hutchison Whampoa (Hutch). We believe HKL's positive rental reversion and recurring cash flows will help insulate it against near-term volatility. Similarly, we believe Hutch's established businesses will help to underpin solid cash flow generation and improve credit metrics, in the absence of significant investments. We believe the names to avoid are those facing the greatest uncertainty in demand.

Figure 174: H1 09 picks and pans

Picks	
Hongkong Land	*Positive near-term earnings prospects, stable and recurring income stream, good pre-leasing progress.*
Hutchison Whampoa	*Solid cash flow generation from established businesses; diversity; 3G less of a financial drag.*
Pans	
Chartered Semiconductor	*Profitability/margin pressures, negative free cash flow and weak financial profile; USD375mn bonds due 2010.*
Gajah Tunggal	*Margin compression driven by input prices, vulnerable to IDR depreciation due to USD debt obligations.*
Hyundai Motor (HMC)/ Hyundai Capital (HCS)	*HMC – Deteriorating external outlook, aggressive expansion in a down cycle, limited financial flexibility. HCS – Narrowing funding alternatives, potential slow down in earnings growth and expected rise in delinquencies.*
Qantas	*Challenging operating outlook leading to reduced profitability, large capex (partly debt funded), M&A risks.*

Source: Barclays Capital

Shipping: Troubled outlook

Christina Chiow, Jit Ming Tan

2009 Outlook: Negative

Next year will be challenging for ship operators. The sector faces a confluence of events that have led freight rates to decline sharply from their mid-2008 peak, with a recovery not expected in the next six to nine months. As operators cope with weakening demand and tightening credit – conditions that also weigh on the broader economy – significant new shipping capacity is scheduled to be delivered in the near term, further compounding the pressure on rates. Clarkson Research estimates that the overall order book for new builds currently stands at 51% of existing fleet. Within the sector, initially we expect bulk freight and container vessel operators to be the worst hit, although the impact will inevitably spread to the tanker segment, as well.

We do not have any top picks for the sector, although we expect shippers that earn a large share of their revenues from medium- and long-term charter contracts – eg, Arpeni and MISC – to be less affected. We are less sanguine about the prospects for Wan Hai Lines, due to its focus on container shipping, as well as operators with sizable outstanding funding needs, such as BLT and Titan Petrochemicals.

Figure 175: H1 09 pans

Pans	
Berlian Laju Tanker	Funding concerns arising from large short-term debt maturities and aggressive longer-term capex plans.
Titan Petrochemicals	Severe funding deficit, with difficult financing prospects and challenged recovery values for unsecured creditors.
Wan Hai Lines	Bleak operating outlook for container shipping; ratings downgrade likely.

Source: Barclays Capital

Refining and petrochemicals: Earnings pressure; rating risk

Christina Chiow

2009 Outlook: Negative

We have a Negative outlook on the Asia ex-Japan refining and petrochemicals sector in 2009. We believe the sector is poised to underperform as a slowdown in global and regional economies will have a direct impact on demand for refined and petrochemical products. This also comes at a time of significant new capacity coming on-stream in the region. The financial performance of refining and petrochemical companies is largely determined by refining and petrochemical margins, ie, the price differentials between refined products and crude oil or between petrochemical products and feedstock (such as naphtha or gas). We expect 2009 margins to trend downwards on the back of softening demand, leading to declining capacity utilisation amid incremental new capacity. However, unlike previous troughs in 1998/99 and 2001/02, there is less overhang from surplus refining capacity in Asia ex-Japan, even with the large incremental capacity and relatively more benign crude oil prices.

In the wake of recent earnings volatility and the expectation of further earnings pressure, credit metrics are likely to weaken, particularly for those that still have high, ongoing capex plans. We believe capex plans at GS Caltex, IRPC, PTTAR, PTT Chemical and SK Energy are likely to require further debt-financing, with Thai Oil being a notable exception. However, PTT Chemical is relatively insulated from volatile petrochemical margins given its pricing agreement with PTT and its current strong financial profile, ie, net debt/EBITDA of 0.4x.

Figure 176: H1 09 picks and pans

Picks	
PTT Chemical	Pricing agreement with PTT supports margin, debt/EBITDA unlikely to exceed 2x even with capex.
Pans	
GS Caltex	A weakened financial profile leads to limited financial flexibility, large capex requires debt funding.
IRPC	Earnings volatility increases the potential for further negative free cash flow; still in the midst of expansion, which will require debt funding.
PTTAR	Increased leverage in 2008 as a result of high capex leads to limited financial flexibility to weather margin pressures in 2009.
SK Energy	Profitability/margin pressures exist although mitigated by its more integrated business model than GS Caltex; large capex requires debt funding.

Source: Barclays Capital

Primary energy/utilities: Supported by government ownership/regulatory oversight

Christina Chiow, Jit Ming Tan

2009 Outlook: Stable

We have a Stable credit view on the Asia ex-Japan primary energy/utilities sector. We remain comfortable with the credit fundamentals of primary energy producers (with the exception of Medco) despite the unprecedented sharp falls across the commodity complex. Lower commodity prices will certainly take the shine off primary energy producers. For now, we see this more of an issue for earnings than for underlying credit quality. For many, performance is coming off a high base and a number of these credits have, as a result of the recent commodity up-cycle, built up substantial liquidity. We are more positive on the Chinese gas distribution companies given the increasingly recurring nature of their earnings and relatively stable margins. In contrast, we are less sanguine on the utilities companies in Malaysia and Korea, despite the decline in commodity prices, which will hopefully be followed by a corresponding decline in coal costs. The lack of a longer-term transparent, predictable, automatic cost pass-through mechanism means that higher costs are often passed through to users with a significant time lag and lower magnitude (if at all). That said, most of the companies in this sector either benefit from government ownership or some form of industry regulations and a reasonable level of support can be expected given the strategic importance of most of these companies.

The most important earnings drivers for these companies will be commodity prices and FX volatility, while we believe their large capital expansion plans will drive their financial profiles.

Figure 177: H1 09 picks and pans

Picks	
Berau Coal	Forward sales agreements, higher production and selling prices to support improved profitability.
CNOOC	Higher production to offset decline in commodity prices; free cash flow generative in the absence of M&A.
Pans	
KEPCO	Profitability/margin pressures, negative free cash flow, large capex plan requires debt funding.
Medco	Asset sales to meet near-term funding needs look challenging.

Source: Barclays Capital

Commodities/natural resources (ex-energy): Elevated event risk

Christina Chiow, Jit Ming Tan

2009 Outlook: Negative

We expect the current environment of weaker commodity prices to have a varying impact on issuers in this sector. We favour companies involved in the production/harvest of basic food produce, eg, China Fishery Group (CFG), where we believe demand and prices will be more stable. Our outlook for base metal producers, eg, Vedanta Resources, is less constructive, considering the demand cyclicality and price volatility inherent in these commodities. We believe event risks will be elevated in 2009 as higher-rated issuers may seek to capitalise on the generally lower asset valuations, through M&A and strategic investments. Funding for expansionary capex and the potential for resultant ratings declines are also a concern, although we expect access to new financing to prove difficult in the near term. For further background on the impact of commodity price weakness, please also see ***Commodity related credits – Tumble and twirl***, 11 November 2008.

Overall, while we expect a more challenging environment in 2009, we believe the companies in this sector are approaching it from a position of strength. Notwithstanding this, we have Negative credit views on the majority of the companies under our coverage, reflecting predominantly company-specific issues.

Figure 178: H1 09 picks and pans

Picks	
China Fishery Group	Stable Alaskan pollock prices expected, strong cash flow generation should be sufficient to meet short-term debt maturities.
Pans	
Advance Agro Public Co Ltd	Aggressive cash management practices with heavy reliance on short-term debt.
Vedanta Resources plc	Profitability pressures on weak base metal outlook, capex plans remain aggressive despite cutbacks.

Source: Barclays Capital

Chinese real estate: Rising operating uncertainties exacerbate liquidity concerns

Jason Rogers

2009 Outlook: Negative

The outlook for Chinese high-yield (HY) real estate developers remains negative going into 2009. The aggressive moves by the Chinese government aimed at stabilising the economy and the property market specifically will eventually provide some respite, in our view, but this will take time to filter down to the physical market. Facing sluggish demand and falling prices, pressure on operating margins and liquidity dynamics remain severe. In particular, liquidity is being stretched by the failure of many Chinese HY real estate developers to achieve pre-sales targets, forcing companies to delay project launches and construction schedules. With lower-than-expected cash flows, increases in working capital requirements are leading to more onshore borrowings at the project level, heightening subordination risks for USD bondholders. While we are not expecting the default of names under our coverage in 2009, reflecting our view that these names have a higher-than-average level of financial flexibility, market dynamics (and spreads) are likely to be rattled by the potential bankruptcy of one or two of the less established players. Further negative rating action is also inevitable, in our opinion.

Figure 179: H1 09 pans

Pans	
Greentown	The company is one of the weaker names under our coverage and is more vulnerable to a protracted downturn in sales volumes. We expect its ratings to hit low B by end-2009 (currently Ba3 Neg/BB- Neg).
Hopson	One of the more aggressive players. Lack of transparency and unpredictable land acquisitions adds to general concerns over operating performance.

Source: Barclays Capital

Telecoms: Back to basics

Jit Ming Tan

2009 Outlook: Stable

We expect the telecommunications industry to report a generally stable operating performance in the next 6-12 months. This should be supported by the utility-like nature of voice telecommunication services, and still-low penetration rates in developing markets, which represent a source of future growth. Funding needs also appear light, reflecting an expected moderation in competition and capex spending, and manageable levels of short-term debt. We believe the discipline imposed by the tight credit environment will force telecommunication operators to focus on generating efficiencies instead of attempting to buy market shares through significant marketing spending. Any negative developments in the sector are likely to be issue-specific rather than a result of broader industry dynamics, in our view.

Among the telcos under our coverage, our top pick is Korean broadband operator SK Broadband. Notwithstanding our expectations that demand for IPTV may be weak in 2009, we believe the company will improve on its 2008 operating performance, which was negatively impacted by the fallout from its customer data leakage incidents. Our top pans reflect idiosyncratic risks relating to political and economic uncertainties in the case of Pakistan Mobile and uncertainties over ongoing privatisation plans for PCCW.

Figure 180: H1 09 picks and pans

Picks	
SK Broadband (previously Hanarotelecom)	Expected pick-up in demand following 2008 subscriber loss, support from parent SK Telecom.
Pans	
Pakistan Mobile Communications	Continuing political and economic uncertainties in Pakistan, large short-term debt maturities.
PCCW	Increased leverage, uncertainties over business/financial strategies and concerns over level of disclosure going forward as a result of ongoing privatisation plans.

Source: Barclays Capital

Structured credit

Matthew Leeming, Søren Willemann, Gaurav Tejwani, Fabien Azoulay, Madhur Duggar, Batur Bicer

Turning the page or closing the book?

What began with problems in sub-prime CDOs soon spilled over to the entire structured credit space and resulted in the worst year in history for structured credit products. Because of the notable disarray in the market and the state of many market participants, it is now legitimate to ask whether the asset class will survive. We believe parts of it will and that a natural supply and demand will eventually surface. However, the process will be slow and partial at best. Products and investment strategies are likely to be limited to their simplest forms in 2009.

Some prerequisites for normalcy are stabilization of credit spreads and defaults, clarity on possible changes to regulatory and accounting treatment, improvement and transparency of pricing models and a potential evolution of rating agencies' models. While risks abound for now, 2009 is also likely to present compelling opportunities for discerning investors.

In the investment grade world, we expect moderate deleveraging to continue. In index tranches, we recommend simple and directional strategies rather than multi-leg risk-isolating trades. The CLO market – which, in our opinion, will be the first to recover – will still be facing further deleveraging, in the short term, through the restructuring of market-value CLOs into cash flow CLOs. Finally, the credit volatility markets are, in our view, likely to gain interest as a risk-management tool for credit investors.

Key recommendations and outlook

- In rated synthetic CDOs, valuations may be close to bottoming, but no relief is in sight yet for fundamentals and ratings. Investors may decide to hold on, sell or restructure based on the specifics of the trade.
- For long-term investors searching for superior risk-adjusted returns, we prefer the 10-15% in CDX IG or the 9-22% in ITraxx Main (or equivalent if customized).
- We like the option-like payoff of equity steepeners in 5s10s at current levels.
- In CLOs, we find Aas to have a free option on OC trigger valuation.
- For CLO investors with a higher risk appetite, we like triggerless equity by selling protection on a portfolio of LCDS names and by protection on the 8-100% tranche.
- In HY tranches, equity steepeners 3s7s are attractive at current levels

Will structured credit survive? Expect a slow road to recovery

Corporate CDO issuance has plummeted, price performance has been dismal, ratings downgrades have gathered momentum, headlines continue to be negative and investor confidence is at a low. The primary question market participants are asking is whether structured credit will survive. We believe that parts of it will, parts will evolve and some may become extinct. It will be a slow road to recovery with elevated risk but ample opportunities for discerning investors.

The motivation for structured credit still exists – but Is muted

Natural supply from credit risk transfer: The structured credit market first developed via securitisation as a means to move assets off balance sheets, thereby freeing up capital and reducing the cost of funding. This motivation to reduce risk remains. Now more than ever, banks have a requirement to lay off risk, reduce funding costs and manage regulatory as well as economic capital. Balance sheet transactions should gradually return, provided supply meets demand.

Demand for diversified credit exposure: On the demand side, institutional investors in securitised assets were able receive an attractive premium on highly rated structured products, with protection against first losses, referencing apparently diversified portfolios. This was not limited to balance sheet transactions. The asset/liability arbitrage arising from diversification created incentives for arbitrage transactions in order to meet this demand. Furthermore, the development of the CDS market permitted the construction and hedging of purely synthetic securitisations and an ensuing explosion of investment in the credit derivatives market. Over time, the pursuit of yield led to aggressive structures purely to maximize return on capital. Tightening spreads and low interest rates drove the evolution of more aggressive structures, recourse and spread-dependent products such as CPDOs and leveraged super senior tranches.

While the need for leverage or yield is no longer as strong and the risk appetite for complexity is low, there is still a latent demand for high quality assets, and the supply of such products in a plain-vanilla format is often limited. Once market conditions improve, we expect some CDO demand to return – though for structures that are truly high quality.

Distressed funds: One bright spot from a demand perspective is the allocation of capital to funds that will focus on distressed securities. We believe that such funds will initially gravitate towards simply distressed corporate debt and then to cash securities such as CLOs. Over time, part of that capital is likely to be diverted to synthetic transactions as well.

Lessons from 2008

When spreads widen and defaults increase, leveraged products generally suffer. However, the pain turned out to be greater than anticipated given the nature of recent events.

Leveraged credit exposure: The recent widening of credit spreads and a sudden spike in defaults has quickly exposed the inherent flaws and risks of these products. For example, an original leverage of 6x-9x was typical in many AAA tranches. The leverage amplified the rally in credit, but the same feedback effect triggered additional deleveraging, enhanced spread volatility and caused a general deterioration of valuations. Investors will have to be more cognizant of the price volatility associated with even senior tranches.

Contagion: The systemic nature of the spread widening and defaults in the underlying portfolios (first in ABS and then in corporate credit) has caused large increases in correlation. Even though corporate CDOs are not subprime and may eventually recover, valuations are dismal for now across products. As a result, dislocations have appeared across capital structures, with senior tranches having underperformed dramatically. Investors can no longer ignore the correlation between various risky assets.

Ratings Instability: Confidence in the ratings of structured products has disappeared given the poor performance of even the highest-rated tranches. Though the rating methodology for corporate CDOs is better than that of subprime CDOs, it is evident in hindsight that leverage and correlation between reference entities was too high. Downgrades are affecting ratings-sensitive investors and triggering increases in

regulatory capital or breaching investment guidelines/criteria. As ratings are assigned primarily on expected loss or likelihood of impairment rather than volatility of performance, there is a need to either have rating agencies provide additional risk measures, or for investors to overlay these risks themselves.

Liquidity: Demand has plummeted and liquidity has been further hurt by the drop in the number of market makers. As fundamentals deteriorate, investors are wondering whether to hold on to their existing investments, restructure or hedge where possible, or simply unwind. From the dealers' perspective, escalating spreads and correlation have highlighted model and risk management problems, particularly with respect to gap risk, convexity, correlation hedging and model calibration. Consequently, liquidity in bespokes and even index tranches has diminished significantly, thus exacerbating some of the mark-to-market problems. While investors may have been under-compensated for liquidity and model risk, it is also evident that dealers have underestimated their hedging costs.

What is required to restore confidence? changes all around

Over the course of the coming years, we expect to see a careful reconstruction of the structured credit industry. However, there exist a number of prerequisites. From the investors' perspective:

- A realisation of losses and subsequent stabilisation of loss rates and spreads
- Any further necessary deleveraging to weed out weaker players or transactions, as current deals are unwound or broken up
- Clarity in the role and regulation of the rating agencies and their models and investor confidence therein

Issues which need to be resolved from the issuers' perspective include the following:

- Banks need to reduce their existing exposures, for example to large, concentrated portfolios of very thin, bespoke, mezzanine CDOs so that they can provide liquidity and focus on serving client needs
- Improvement and increased transparency of credit derivative pricing models
- Clarity around any future potential regulatory changes (for example consider the recent EC proposal that originators of securitisation instruments retain a 5% vertical slice)
- Gradual drop in counterparty risk so the focus returns to credit and a more rigorous incorporation of counterparty risk in pricing and risk models
- A return of focus to fundamentals and simple structures in line with investors' risk appetite and return requirements
- A need to better distribute risk rather than have it concentrated in one investor type or just a few hands. Hedging thin single tranche synthetics is increasingly tough for dealers. As a result, they will need to place all or large parts of the capital structure – which is not easy
- Find ways to place super senior risk after most investors focusing on that tranche have found their business models broken
- Develop a distressed investor base that provides support in a downturn

Which products will survive? A return to the basics

Even once these issues have been resolved, we would expect the structured market to be rebuilt, cautiously, upon the fundamental requirements of banks and investors. We

do not expect to see innovation for the sake of spread optimisation, as we saw via ever diminishing tranche thicknesses or highly leveraged CPDOs. Nor would we expect complex second-level tranching such as CDO^2 or CDOs of ABS.

In our view, the successful products will entail:

- Simple securitisations, motivated by risk reduction, such as balance sheet CLOs
- Securitisations driven by regulatory capital framework incentives that also reduce true or economic risk
- Cautious, non-recourse leverage; for example, simple CLO structures involving just two or three tranches
- Simplicity and transparency of structure and pricing; index tranches will continue to trade for this reason though improvements are needed in bespoke pricing
- Thicker tranches, having relatively low price volatility and benign risk attributes – the key drawback of thin tranches is their digital payoff and inherently high and unstable leverage when the portfolio expected loss is close to the tranche strike
- Formulaic structures or structures sensitive to market volatility (CPDOs, CPPI, LSS) are unlikely to stage a recovery in the short term or in a highly levered format

A new price equilibrium will be discovered. This will depend upon both the benefit to the issuer (for instance, the funding reduction or capital relief arising through securitisation) and the augmented price of risk as we emerge from the current crisis. From the investor's perspective, the focus will be on diversity and credit selection rather than maximizing spread or rating efficiency. The pursuit of yield shall initially give way to conservative strategies and gradually to the best risk-adjusted return strategy.

Dislocations and opportunities

The systemic nature of the crisis has led to capital structure dislocations, with even robust, senior tranches trading at distressed levels. The next few months will likely present structured credit players with numerous attractive opportunities. However, risks will remain elevated as well. Certainly mark-to-market volatility will persist into 2009. In addition, corporate default rates are expected to pick up and the outcome of many trading strategies is inherently linked to the eventual loss rates.

In addition, factors such as future regulatory or rating agency changes will create incentives for market participants to act. For example, banks may reclassify relatively safe senior assets onto the hold to maturity book via the new IAS39 rules in Europe; this should alleviate selling pressure at the senior part of the capital structure. There is also the incentive to retain senior tranches and shed capital intensive junior risk under Basel II. Consequently, as banks become willing to pay more for junior protection, this should ultimately result in appealing equity tranche opportunities for discerning investors with strong fundamental credit expertise.

Investment grade structured credit

Recommendations – Keeping it simple

Overall, we find that the current market is best suited for value seekers and patient investors. We prefer simple and fundamental-based strategies to multi-leg trades or delta-hedged strategies that attempt to anticipate demand-supply technicals.

For shorter-horizon trades, stay with index tranches

The liquidity in customized tranches is limited and for a trade horizon measured in weeks, it is best to stay with the relatively more liquid index tranches. If market participants are concerned with a few specific credits, it is cheaper to hedge them separately rather than choosing bespoke tranches.

Time for taking some directional views rather than executing correlation trades

We believe that investors are better off using smaller notionals of outright or lightly hedged tranche trades rather than taking pure correlation views. Most correlation trades have a small directional element, in any case. With tranche deltas dependent on models that are stretched to their limits, and realized deltas driven by demand-supply technicals, taking a delta-hedged view involves risks. In our view, it is best to take a more directional approach incorporating fundamental views on the underlying credits and the structural features of the tranche.

For the risk averse, value in shorter-dated senior tranches

Inverted credit curves have created some of the cheapest shorter-dated senior tranches. The inversion of curves may be justified given the near-term uncertainty. Yet, some short-dated senior tranches provide compelling returns. We can also utilize off-the-run tranches – for example, the originally 5yr IG5 has only two years left to maturity. The 7-10% tranche in IG5 is currently valued at approximately 1300 bp and the 10-15% is at 640 bp[17] Similarly, the 5 yr iTraxx Main S3 9-12% tranche with 1.5 years remaining to maturity is about 450bp.

Super seniors are too tight in terms of absolute spreads

The 22-100% iTraxx or 30-100% CDX tranches may be fundamentally robust but are too tight in absolute spread terms relative to where super seniors in other asset classes trade. A risk adjusted framework (Figure 184 to Figure 186) shows IG super-seniors are more robust from a normalized default rate perspective but involve high mark-to-market volatility. We believe investors need to be compensated more for the negative convexity and this high volatility. In addition, there is still a very small chance that typical holders of this risk may unwind their positions, further hurting valuations.

The 10-15% CDX IG and 9-12% ITraxx main tranches are sweet spots for long-term investors searching for superior risk adjusted returns

We believe the 7-10% and the 10-15% tranches in CDX IG and 9-22% tranches in iTraxx Main are good investment choices at current levels, although we prefer the more senior tranches. In CDX, fundamentally, the 5 year 7-10% tranche is quite likely to avoid principal losses in recessions slightly worse than the previous two (Figure 184). However, we like the additional cushion that the 10-15% tranche provides against a severe recession. Selling outright protection will ultimately turn out to be the best trade, in our opinion, although it clearly involves mark-to-market volatility tolerance. For now, investors should consider using a partial index delta hedge that they can discard later. We recommend gradually scaling into the position at opportune levels.

Trades with option-like payoff are also attractive

As implied volatility in index swaptions continues to be high, it may be cheaper to gain convexity and option-like payoffs in the tranche market. These trades also provide a longer time horizon. One such trade is equity steepeners. The CDX IG9 and iTraxx Main S9 0-3% 5s-10s tranche curves have compressed to about 4 and 5.5 points, respectively, with the continued index widening and ongoing defaults. We see relatively little downside at these levels. It is inherently a long duration trade (5yr equity has a higher delta), as well as a positive convexity trade. The construct is also likely to benefit from time decay if realized default rates are not excessive but more in line with long-term averages. Investors looking for an option-like payoff with a greater likelihood of profits can consider junior mezzanine steepeners, although at a higher upfront cost.

[17] *Approximate levels as of November 26 2008*

Rated mezzanine tranches – bottoming on valuations but no relief in sight yet

The mezzanine bespoke market – typically A to AAA rated at issuance – is battered by defaults and downgrades in the portfolio, resultant tranche downgrades and poor valuations.

- Fundamentals appear materially worse than they did a year ago.
- CDO portfolios will likely continue to experience defaults or severe deterioration on some credits. The weaker, aggressively or adversely selected portfolios will likely witness tranche subordinations being erased.
- Tranche ratings will continue to deteriorate. We estimate that an average transaction will lose 3 to 4 notches, while many will drop 6 or 7 notches. Any changes in rating agency methodology can further hurt performance.
- However, valuations are already depressed and are pricing in a severe recession. Prices of say $20 on original AAA tranches are quite common. The valuation downside for investors from this point is therefore limited.
- Demand continues to be tepid, while a slow-and-steady stream of unwinds has kept the tranche spreads under pressure. We expect the tone to be similar in H2 09, though accounting or regulatory changes can accelerate or dampen the flow. For example, in Europe, some investors may decide to hold rather than sell their tranches if IAS39 reclassification is applicable to them.
- On a positive note, many transactions will eventually accrete to par as the subordination exceeds realized default-related losses. Unlike subprime CDOs, the likelihood of recovery in corporate CDOs is reasonable. Therefore, investors need to study their portfolios carefully as they decide between selling, restructuring, or in some cases, adding more.

We believe that for transactions that involve a fundamentally weak portfolio and weak subordination, the decision to sell at a very low dollar price should be made by comparing the expected duration of the deal and the associated coupon income to the market price. Adding subordination is best for tranches with some weakness and in need of an extra cushion for the uncertainty.

Equity tranches – Quite likely to get wiped out, trading at option value as expected

As default rates rise, equity tranches will be partly, and in many cases completely, wiped out. The risk of defaults is indicated by several names in credit indices as well as bespoke portfolios trading at points up front. The level and dispersion of spreads is already reflected in equity tranche prices, with most of them trading at very high points upfront. These tranches resemble long dated out-of-the-money options – with little to lose and a faint possibility of reaping stellar returns.

Credit and structured credit – The tail that wagged the dog now finds its health tied to it

After several years of driving credit spreads tighter and eventually destabilizing them via unwinds (or fear of unwinds), the dependence has weakened and reversed. Credit fundamentals and performance are now driving the structured credit markets.

We expect moderate CDO unwind activity to continue but do not expect a mass exodus at such distressed levels. From a broader credit market perspective, the drop in delta (leverage) for most CDOs (as spreads have widened) means that more than half of the unwind has already occurred. For now, the CDO technical will remain a moderate negative for credit markets.

Recent defaults and their ratings impact

Financials were often referenced in synthetic CDO portfolios. Consequently, the recent defaults have chipped away the subordination, hurting valuations and ratings. Figure 181 illustrates the likely effect of defaults on a typical AAA-rated CDO tranche that was already at zero cushion because of previous ratings migrations.

Figure 181: Ratings sensitivity of a typical AAA CDO tranche

Number of Defaults	0	1	2	3	4	5
@10% Recovery	AAA	AA (-2)	A (-5)	BBB+ (-7)	BBB- (-9)	BB+ (-10)
@40% Recovery	AAA	AA (-2)	AA- (-3)	A+ (-4)	A- (-6)	BBB (-8)

Source: Barclays Capital

Figure 182: Prevalence of defaulted entities in rated S&P transactions – Percentage of 3,771 total

	US Banks		GSEs			Icelandics		
	LEH	WaMu	FNM only	FRE only	FNM+FRE	One Icelandic	Two Icelandics	Three Icelandics
US	26%	21%	4%	1%	22%	4%	5%	4%
Europe	36%	28%	5%	4%	20%	5%	3%	7%
Asia (Ex-Japan)	3%	4%	1%	0%	2%	0%	1%	2%
Japan	4%	4%	1%	1%	3%	1%	1%	1%
Total	70%	57%	10%	7%	46%	9%	9%	14%

Source: S&P, Barclays Capital

Figure 183: Estimated CDS Deleveraging by correlation desks hedging CDOs

Vintage	Estimated issuance volume ($bn)	Average delta equivalent notional at issuance ($bn)	Current average delta equivalent notional ($bn)	Effective deleveraging by correlation DESKS ($bn)
2005	33	265	83	182
2006	65	587	228	359
2007	39	273	117	156

Note: Issuance is estimated only for rated transactions. Actual overall volumes may be greater. We used an average delta of 8,9 and 7 for the 2005, 2006 and 2007 vintages respectively. Current average delta are 2.5, 3.5 and 3 in the same order. Source: Barclays Capital

Effect of CDO unwinds on credit markets

While the concerns about unwinds are justified, the market impact of CDO unwinds will likely be negative but not catastrophic.

- From the view of the broader credit markets, more than half the unwind has already occurred. The gradual drop in deltas of most thin mezzanine tranches from a typical 6x-9x to current levels of about 3x-4x means that correlation desks should have already bought back more than half the protection.
- Many investors are likely to hold on or restructure rather than liquidate.
- The drop in valuations has continued through the year. Thus, the incremental mark-downs and resultant effect on earnings should be only moderately negative.
- Many participants that did not require mark-to-market accounting of these positions may now be forced to losses.
- Credits often referenced in CDOs may widen further on the back of unwinds.

In balance, we expect the CDO unwind technical to continue to be a negative influence on the credit markets. However, we believe it should not result in a further catastrophic widening of credit spreads. Credit spreads can find a clearing level and thus support structured credit prices. For a detailed discussion of CDO unwind mechanics, see *CDO unwind headwinds*, 16 October 2008.

Analysis framework – Charting a path through unfamiliar territory

Input 1 – Learning from history and being aware that each crisis is different

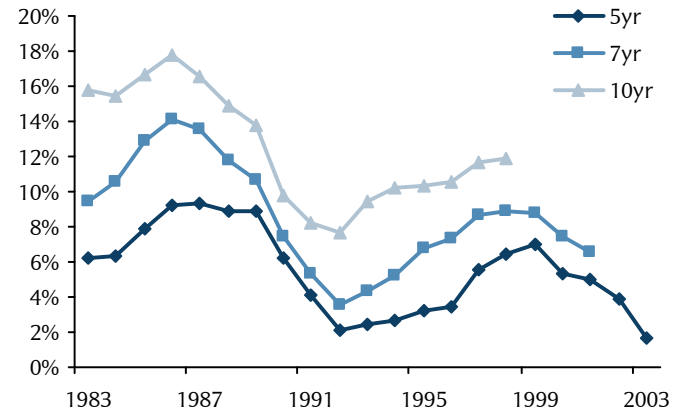
The first step in the search for value in any product is to compare current levels with their historical extremes, with some adjustment for the current situation. For synthetic CDOs, there is no direct comparison, as the structures prevalent during the last credit cycle (whether synthetic or cash IG CDOs) were somewhat different in nature. Nonetheless, we extrapolate default rates and find that in a default environment of that nature, the weaker transactions of today may have had their junior tranches wiped out. We also learn that for a hold-to-maturity strategy, a 7-10% tranche will likely withstand a recession but may experience losses in a very severe one.

Input 2 – Comparing products across asset classes

With no easy way to compare risk-adjusted returns, our first approach is to compare products that are similar in seniority. Tranches exposed to tail risk (seniors/super seniors) is where the comparison is most useful. One such method is to check how much subordination a tranche has in excess of the losses implied in the asset portfolio. Figure 185 plots super senior spreads against a crude recession multiplier – the ratio between the loss rate that a tranche can withstand and what the portfolio prices in. As expected, products with a lower subordination relative to risk pay higher spreads (example LCDX). IG super seniors are more robust, though we must also compute their other risks such as spread volatility, as explained in the next step.

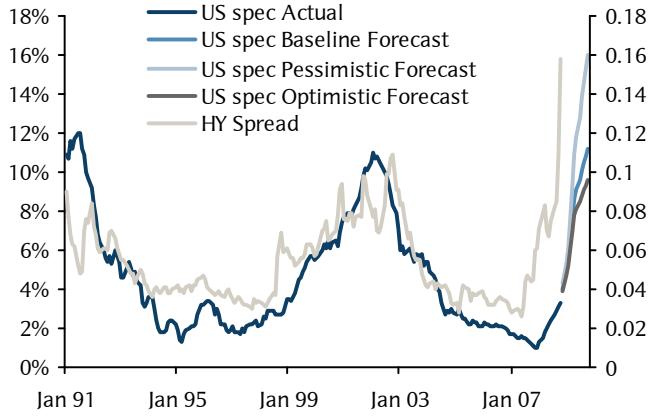
Figure 184: Investment grade and high yield historical default rates

Historical default rates for a portfolio similar to CDX IG11



Source: Moody's, Barclays Capital

US Speculative grade historical and forecast default rates



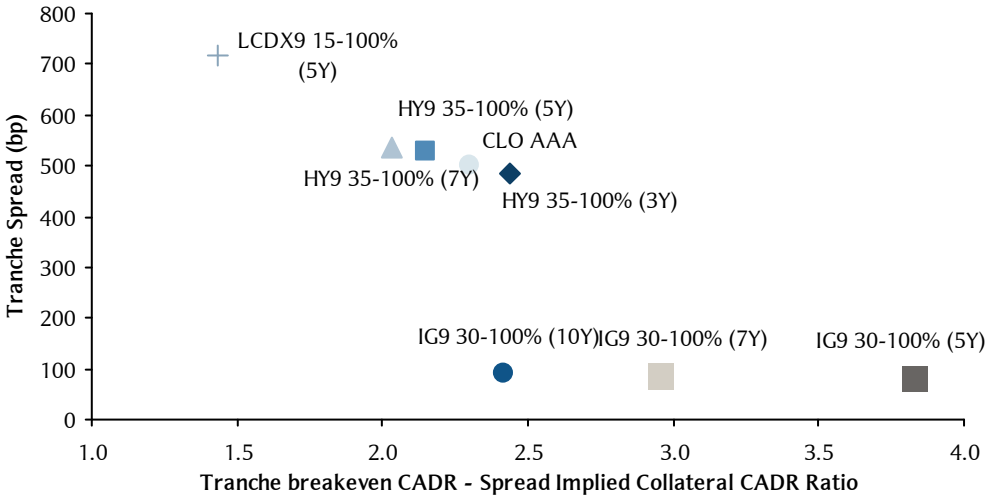
Source: Moody's, Barclays Capital

Input 3 – Adjusting for technicals, volatility, market positioning etc

The importance of demand-supply technicals has become even more apparent in the structured credit market this year. The sudden widening of all super senior tranches across asset classes initially in March illustrated this risk. The realized mark-to-market volatility on super-senior products way exceeds their fundamental risk and, therefore,

demands that investors be compensated for it. Similarly, the volatility in mezzanines during Q4 08 was amplified by bespoke unwind concerns.

Figure 185: Tranche spread versus tranche breakeven CADR-spread implied collateral CADR ratio



Note: Data as of November 24, 2008. Assumed recoveries are 70% LCDX, 40% for IG, and 30% for HY.
Source: Barclays Capital

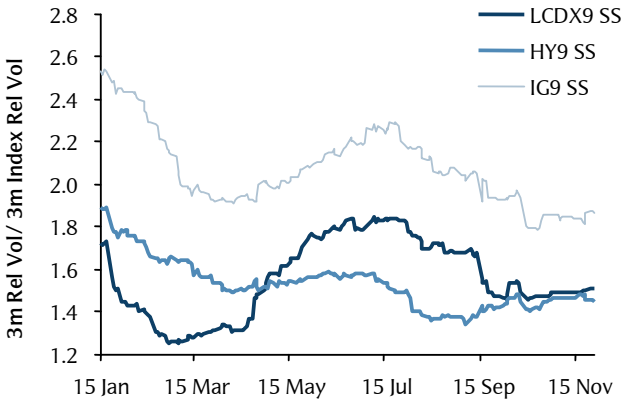
Figure 186: Realized volatility of super senior risk for LCDX9, HY9 and IG9 5Y

3-month realized volatility and spreads for super seniors in LCDX9, HY9 and IG9 5Y

	LCDX9 15-100%		HY9 35-100%		IG9 30-100%	
	Rel Vol	Spread	Rel Vol	Spread	Rel Vol	Spread
1/15/08	100%	146	96%	160	205%	27
3/20/08	86%	195	87%	215	168%	61
6/20/08	86%	113	72%	144	175%	47
11/20/08	169%	639	113%	480	162%	72

Source: Barclays Capital

Time series of 3-month realized volatility of super seniors normalized by 3-month realized vol of respective index



Source: Barclays Capital

An eye on the modelling issues

The failure of many models to perform during the 2008 systemic risk spike is well known, though, in hindsight, this was likely to occur given the basic premise of the models. Market participants use different models but all are a variation of the base correlation and default time copula approach in a risk neutral framework. With the widening of spreads several issues emerged:

- **Calibration problems in fitting super senior spreads**: The widening of super senior tranches reached a level that most models were unable to accommodate even at very high correlation assumptions. Eventually, recovery rate reduction or stochastic recovery (that is allowing the recovery upon default to be random) enabled models to calibrate. See *Base Correlation Limits*, 22 January 2008, for a more detailed discussion.

- **Unintuitive single-name deltas:** With high correlation levels, models gave negative deltas for mezzanine tranches with respect to certain low-spread names. This created apparently paradoxical situations – for example, a protection buyer on a tranche would need to buy rather than sell protection on a particular credit as a hedge. While mathematically correct as per the model assumptions, the outcome is un-intuitive.
- **Bespoke mapping problems**: The common approach to pricing tranches on a bespoke portfolio in the base correlation framework is to map this portfolio to the index portfolio. In a low correlation environment, this mapping is mostly dependent on absolute risk of the portfolio (spread level). With spread dispersion going up and diverging between index tranches and bespokes, the mapping process has become challenging. In reality, bespoke pricing is not just driven by the observable index tranches but by demand and supply which exists irrespective of model issues.

We recommend using a variety of techniques to stress model risk and pricing parameters. For example, comparing empirical deltas, computing greeks for different recovery assumptions or utilizing more than one model.

High Yield Structured Credit[18]

We expect the ongoing deleveraging of MTM-sensitive structured products to continue in H1 09. This will give way to the deleveraging of cash CLO structures in H2 as they come to the end of their reinvestment periods and managers trade out of impaired credits to preserve OC-tests. Secondary CLO trading is likely to continue to place downward pressure on lower-rated credits and the CLO bid for loan paper is likely to be concentrated in higher-rated credits that are still trading at high dollar prices. Market volatility has caused CLO tranches to trade at a discount to the underlying portfolio. If this continues, we expect some deals to collapse as investors try to exploit the mispricing.

Balance sheet CLOs will dominate new issuance as banks motivated to reduce risk, place loans back into the market through simple two-tiered structures. The future of HY synthetic tranche products will depend on the extent to which liquidity develops in LCDS and banks choose synthetic products to hedge loans on their balance sheets. We are cautiously optimistic about the product – demand for protection from banks, coupled with investors looking to take exposure to wide spread senior tranches, might finally create the liquidity that the LCDS product has thus far lacked.

Market volatility has dislocated capital structure pricing

Underperformance in the loan market has caused significant dislocations in the CLO capital structure with the actual market value of the portfolio trading substantially higher than the market value implied by tranche prices. This phenomenon existed even in H1 08, however, since then, the degree of dislocation has become more severe as Aaa tranches have continued to underperform and the market has begun to trade equity without giving much value to its option to redeem the deal. In *frictionless markets,* it would be possible to buy the Aaa and the equity at current market prices, call the deal, unwind the collateral, use the proceeds to pay down the rated notes at par and still be left with some upside. From a practical standpoint, such an arbitrage opportunity could be very difficult to execute, however, we believe that if senior tranches continue to underperform the underlying collateral, the opportunity might become sufficiently attractive for investors to implement on deals that are past their no-call period.

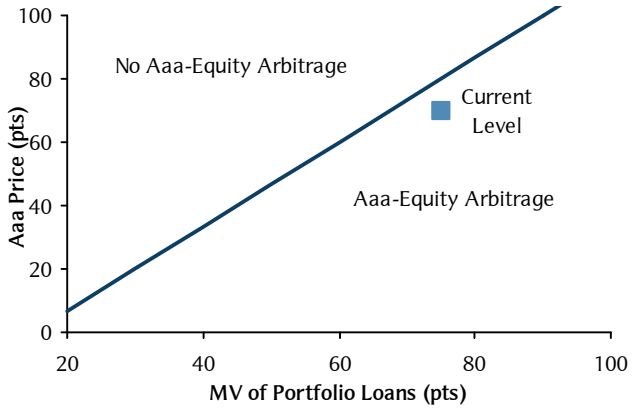
[18] *Please refer to Opportunities in the CLO and HY Structured Credit Market, November 19, 2008 for a presentation on the views discussed in this section.*

Figure 187: Loan market volatility has dislocated CLO tranche pricing

MV of loans implied from tranches is lower than market traded value

Tranche	Rating	Thickness	DM	Price (pts)
A1	Aaa	75%	650	70
B	Aa2	5%	1200	40
C	A2	5%	1600	22
D	Baa2	5%	2200	18
E	Ba2	2.50%	3000	15
Equity	N/R	7.50%		15
Impled Ptfl Val				58
MV of loans				75

Current market levels imply existence of AAA-equity arbitrage



Source: Barclays Capital

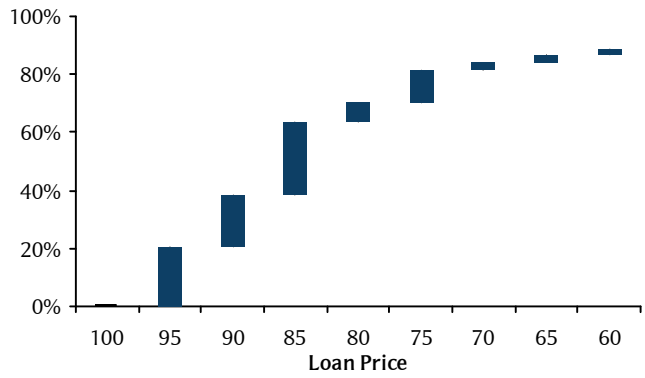
Technical unwinds to continue in loan structures

Recent volatility around loans has seen a rapid deleveraging of MTM-sensitive loan-based structured products. We estimate there is at least $65bn of MTM structures (TRS: $50bn+, TRS CLO: $6bn, MV CLO: $10bn) that are deleveraging and/or being restructured into cash flow CLO type structures, eg, balance sheet CLOs. A deleveraging of MTM structures is likely to add further pressure on the loan market[19].

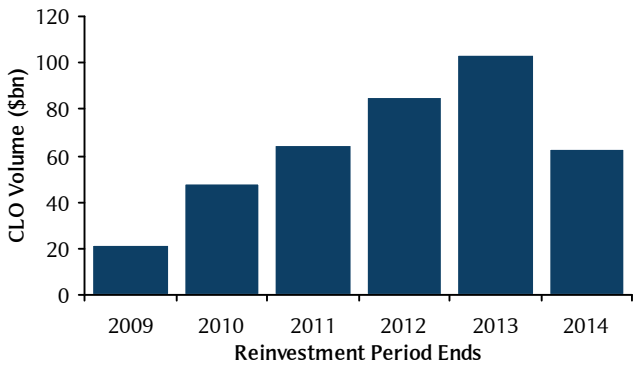
On the other hand, cash CLOs with an outstanding balance of around $400bn will begin to deleverage in 2009 as $70bn of CLOs issued between 2004 and 2005 enter their post-reinvestment period. These transactions will use principal proceeds from scheduled amortizations of loans to pay down the senior tranches. We estimate that up to $3bn of leveraged loans would get sold out of 2004 and 2005 vintage CLOs between 2009 and 2010. The actual level of deleveraging is likely to be higher if credit quality worsens and CLOs that are within their reinvestment periods also have to use principal proceeds to pay down senior liabilities to reconcile OC tests.

Figure 188: MTM-sensitive loan structure have been under pressure

Percentage of Notional sold to cure trigger



Cash CLOs will begin deleveraging in 2009



Note: Market value CLO is assumed to maintain its original subordinate OC cushion value of 116%. Advance rate of 92.8% for loan price bigger than $90, 85.9% for loan price between $80 and $90, and 76.3% for price below $80. Source: Moody's, Barclays Capital

[19] *Please refer to "Deleveraging in Structured Credit Markets: Addressing Recent Headlines", October 27, 2008, for a more detailed analysis around these structures.*

CCC haircuts in CLOs will put pressure on lower-rated credits[20]

As downgrade activity in loans has increased and the market value of lower-rated credits has deteriorated significantly, the CCC haircut for cash CLOs has gained increasing attention. In most CLOs, credits rated below CCC in excess of a pre-determined limit, typically 7.5%, must be included at market value for OC test purposes. With CCC loans trading at or below 60 pts, accelerated downgrades to CCC will cause rapid deterioration in junior OC test calculations.

Using a sample of 2006 and 2007 CLOs and Moody's global forecast 1-year rating transition matrix, we estimate that the percentage of CLOs with CCC bucket sizes in excess of their allowed limits (typically 7.5% of the portfolio notional) would rise to 55% by the end of 2009 from its current level of about 25%.

Managers have incentive to trade out of lower-rated credits…

In the absence of any manager trading, the CCC haircut adjustment would accelerate OC trigger failure by about a year – to 2010 from 2011. However, the compensation structure of CLO managers (junior management fees and ownership in CLO equity) creates a powerful incentive for them to trade out of lower-rated credits in order to prevent the CCC-haircut threshold from being hit.

We find that a manager who trades out of all excess CCC obligations and into BB rated credits (we assume that CCC and BB credits trade at $60 and $80, respectively) can postpone an OC event by about two years from 2010 to 2012 for a typical CLO transaction. In addition, trading out of CCC names would also help to maintain the portfolio credit quality and lower default levels.

Figure 189: Effect of CCC haircut and manager OC Test Performance

Year	2008	2009	2010	2011	2012	2013
CCC Bucket Size	2.0%	10.3%	15.0%	14.0%	13.0%	12.0%
	OC Test Performance (no CCC Haircut)					
Junior OC Test (103%)	108.7%	107.1%	104.8%	102.6%	100.6%	98.7%
	OC Test Performance (with CCC Haircut)					
No Manager Trading	108.7%	105.9%	101.6%	99.8%	98.2%	96.7%
Manager Trades out of CCC into BB	108.7%	107.1%	105.2%	103.7%	102.2%	100.8%

Note: We apply Moody's forecast transition matrix for the next two years, after which we assume that rating transitions revert to historical levels. We assume manager trades out of excess CCC names at $60 and into BB names at an average price of $80. Source: Barclays Capital

In addition, most CLOs are not likely to be buyers of lower-rated credits as this is likely to cause them to violate their WARF tests. The combined effect of increasing CCC buckets and steadily deteriorating WARF tests is likely to place pricing pressure on lower-rated credits as managers trade out of them.

…into Higher-rated credits

A common concern around the CCC-haircut issue has been the inability of managers to replace lower-rated credits with higher-quality ones. The reason is that many of the higher-rated credits are also trading at depressed prices below $80. Most CLO transactions have "discount asset purchase" language stating that any collateral purchased below a pre-defined limit (eg, $80-85) must be included at market value when calculating OC tests.

While this has proved to be a temporary encumbrance, we believe CLO deals have enough structural flexibility for managers to circumvent this language.[21] In particular,

[20] *Please refer to "CCC Haircuts in Cash CLOs", November 3, 2008 for more details on this topic.*
[21] *Please see the section entitled "The discount asset purchase problem in CLOs", in* US Credit Alpha, *7 November 2008.*

we think CLO transactions will be able to reference loans synthetically at higher dollar prices and will choose to buy synthetic notes that reference high-rated structured credit products such as Aa CLO tranches.

Finally, despite the underperformance in the loan market, a significant enough fraction of the market continues to trade above the $85 level. We believe solid loan credits that trade above the $85 level and provide attractive coupons are likely to be the types of loans that CLOs will buy next year. We have begun to see some of this activity already.

Low-leverage balance sheet CLOs to come back

As market value structures deleverage and loans come back onto bank balance sheets, banks are likely to want to replace this risk in the market in the form of balance sheet CLOs. Balance sheet CLOs were popular in 1997 and 1998, when about $90bn of these trades were placed. Those trades were primarily motivated by regulatory capital concerns and banks tried to place out of the senior parts of the capital structure which were capital intensive.

This time, we believe credit loss concerns rather than regulatory capital concerns are likely to motivate balance sheet CLOs and banks are likely to place the junior part of the capital structure while holding onto the Aaa slice, thereby achieving regulatory capital relief under Basel II. In addition, the Temporary Security Liquidity Facility (TSLF) of the Fed would also provide banks the option to gain funding by posting the Aaa tranche with the Fed.

Significant discounts in loan prices and heightened volatility around the asset class are likely to lead to lower leverage balance sheet CLOs compared with the earlier generation of deals. This time, we expect two-tier structures to dominate – a thick equity tranche (eg, 0-25%) and a senior Aaa tranche (25-100%). Loan funds with credit expertise are the most likely buyers of the equity tranche with the Aaa tranche being bought by the bank.

Relative value and trade recommendations

Aa CLO tranche – Free option on OC trigger valuation

Current pricing of Aa CLO tranches implies little or no value attributed to the OC triggers in a cash CLO. Assuming a discount margin of 1200bp, the current price for a Aa CLO tranche is around $40. If we break down the tranche into a risk-free annuity and a PO that pays par minus losses at maturity, we find that the current value of the tranche can be explained almost completely by the PV of Libor plus coupon and the value of the PO[22]. This implies that current pricing ascribes little value to OC triggers because senior risk is priced at very high correlation levels. Under a high and correlated default scenario, OC triggers would have no value. We estimate Aa OC trigger value would increase by 3-6 pts as correlation levels and spreads decrease. At current prices, Aa CLO investors could, therefore, own the OC trigger "option" for free with the expectation that OC triggers begin to appreciate once the market normalizes.

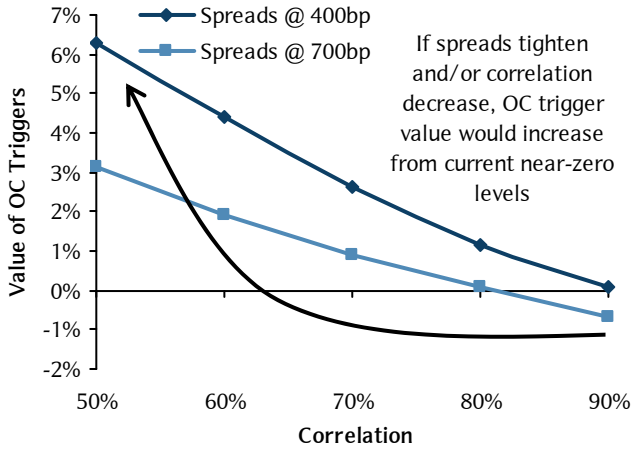
Triggerless CLO equity – Monetizing spread widening in loans without trigger risk

Cash CLO equity is susceptible to trigger risk. We expect 2006-2007 vintage OC tests to be hit in a year if default rates reach 8-12%, downgrades accelerate and managers fail to trade out of troubled credits. Synthetic markets offer the opportunity to invest in triggerless equity by selling protection on a portfolio of LCDS names and buying protection on the 8-100% tranche. Even under severe CDR scenarios (eg, 15-20%), the trade has a very attractive IRR profile. Investors should focus on higher quality efficient names that trade in LCDS form when constructing their portfolios.

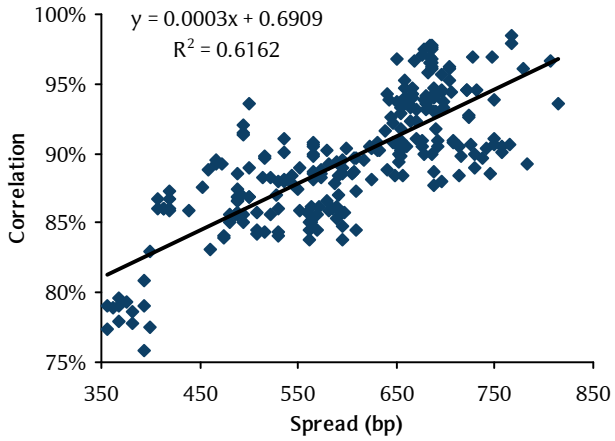
[22] *Please refer to Monetizing credit risk premium through Aa CLO tranches, September 9, 2008 for a detailed discussion of the methodology used.*

Figure 190: Aa CLO tranche OC trigger value would increase as spreads and correlation decrease

OC trigger value as a function of spreads and correlation



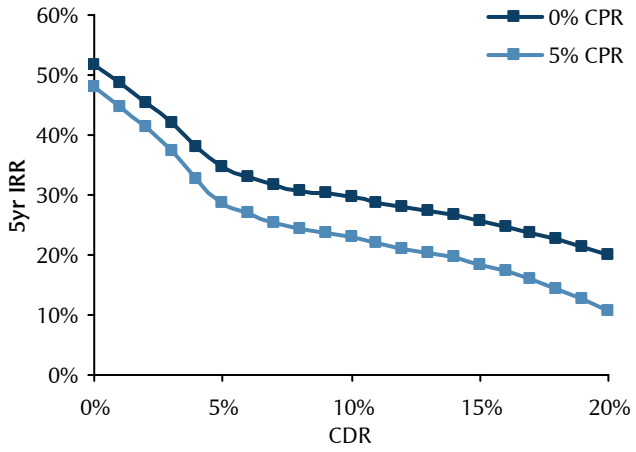
Spreads and correlation are highly correlated



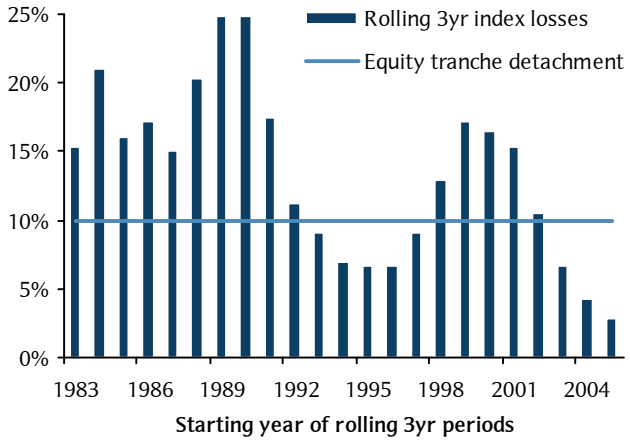
Source: Barclays Capital

Figure 191: Opportunities in junior synthetic tranches

Triggerless equity IRRs are resilient to realized default rates



HY equity steepeners are an OTM option on defaults



Source: Barclays Capital

HY Equity steepeners – Attractive OTM options on HY defaults

Spread widening in HY space has driven the basis between HY equity tranches to their all-time tights (3s7s are at 4 pts). Equity steepener trades are a cheap way of buying forward default protection in the HY index. Steepeners resemble an OTM option with the limited downside of losing the initial upfront payment, while having significant upside potential if defaults are back loaded: If equity gets wiped out in three years, the investor would lose 4 pts of initial investment. If 50% of equity survives, the MTM P&L is around 40%. Worsening credit environment and HY debt maturity profiles suggest that HY defaults are likely to be high and concentrated between years 3 and 7. The trade looks particularly attractive, given recent efforts by HY companies to extend debt maturities by restructuring near-term debt. This should have the effect of pushing near-term default risk into the outer years of the trade.

Credit volatility

Applications of CDS options in 2009

We see strong potential for growth in the market for CDS options due to several sources: a need to manage the mark-to-market volatility of corporate bond and loan portfolios; a desire to express more refined credit views; exploitation of the volatility in credit markets; and managing the credit spread convexity in other instruments. We discuss some of the areas of application below.

For managing the mark-to-market volatility and tail risk of loan and bond portfolios, CDS options are flexible and efficient tools that so far have not attracted much attention. As elevated levels of volatility in credit spreads are likely to persist throughout 2009, CDS options could get an increased focus as a risk management tool.

As we progress through the credit cycle, the ability to express views on (de)compression between credit indices becomes increasingly important. CDS options enable the investor to express such views in an efficient and cost-effective way as shown in ***Implying Crossover-Main beta from options***, 26 June 2008, and ***Trading the beta between two indices***, 23 July 2008.

Due to the excessive volatility in spreads, expressing simple directional spread views is difficult. In such an environment, the ability for CDS options to limit downside risk and in general allow for versatile payoff profiles should make them increasingly popular.

As the market for credit indices matures, the increased sophistication of investors is likely to bring more focus on two aspects of the market: Significant intraday volatility (***Systematic CDS Index Trading***, 3 November 2008) and the ability to trade spread convexity in options vs tranches via delta hedged strategies.

Market recap and outlook

2008 in review – Footprints of Systemic Events

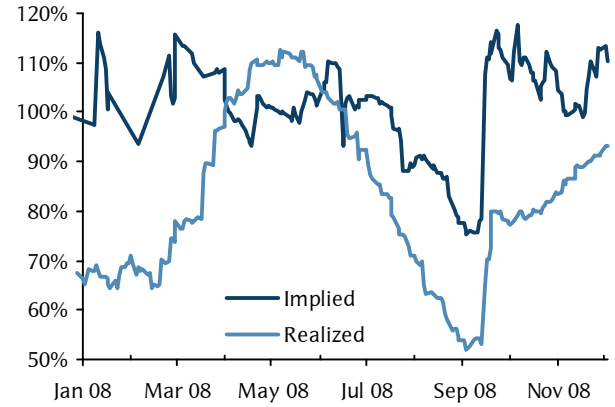
Credit volatility markets (Figure 192) clearly show the footprint of the two major events of 2008: The implosion of Bear Stearns in March and the default of Lehman Brothers in September. The run-up to the implosion of Bear Stearns was fraught with other negative news, leading to a gradual increase in realised spread volatility in iTraxx Main. In contrast, ahead of the default of Lehman, implied and realised volatility had been trending downwards, but jumped overnight as Lehman filed for bankruptcy.

It is important to note that the iTraxx Crossover volatility showed a distinctly different behaviour: it reacted more slowly to the events and was generally less erratic. This highlights the systemic nature of the events so far: the volatility – and intensity of changes in volatility – has been concentrated in the investment grade indices which include financials. Only to a lesser extent has high yield spread volatility been affected.

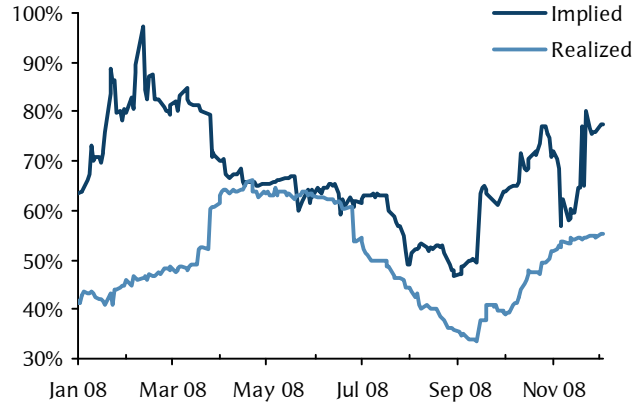
In response to the two events, the volatility term structures inverted, making short-dated options expensive relative to long-dated. This has reverted, the volatility term structures currently being flat to upward sloping.

Figure 192: Implied and realised volatility – iTraxx main and crossover

Panel A: iTraxx main, implied and realised 3mth volatility



Panel B: iTraxx crossover, implied and realised 3mth volatility



Source: Barclays Capital

The volatility skew (implied volatility at different levels of moneyness) flattened almost completely up to the implosion of Bear Stearns. For Main, the skew has remained virtually flat since. Prior to the global government interventions, we felt that a flat skew for Main was not natural, given the propensity for systemic shocks. After the wave of bailouts and the clear commitment of regulators to prop up banks, we see systemic risk as much less of an issue now, justifying a flat volatility skew in Main. In mid-October, the volatility skew for iTraxx Crossover started steepening again. As markets shift their focus away from systemic risk to fundamental credit deterioration, this development makes sense, given most investors expect Crossover to be the index most affected by widespread deterioration in credit quality.

Where do we go from here?

Volatility markets have begun to show a shift in attention away from systemic risk to focus on credit deterioration. If this deterioration comes to fruition, we are likely to see an increase in implied volatility in high-yield credit indices relative to investment grade.

We have earlier reported on high levels of intraday volatility in spreads (*Credit Volatility Strategist*, 19 November 2008). This is likely to continue to drive the (absolute and relative) levels of implied volatility in credit indices as sophisticated investors and option traders can use the intraday volatility to monetize gamma. Thus, the intraday behaviour is likely to be a significant determinant of the overall price of CDS options. Currently, intraday volatility, in particular for indices such as iTraxx Main, is very high, making CDS options expensive on a relative basis. This means that trades which leave the investor a net-seller of credit "Vega" are prefererable. Below, we present two such trades well-suited for the current environment. For the very bearish investor, we recommend the following trade, to be implemented after spreads have experienced a sustained rally:

Getting paid to be bearish: Sell out-of-the-money receiver options

- Sell €10mn March 2009 strike 120 receiver options (ref 168).

Upfront income: €41k. If spreads are wider than 120bp on 20 March 2009, investor keeps premium. Trade breaks even on 20 March 2009 if iTraxx Main is at 110bp.

For the moderately bearish investor, we recommend the following trade:

Costless short: Profit from spread widening below 287bp

1) Buy €10mn strike 170 payer option on Main expiry 20 March 2009 (Ref 168).
2) Sell €13.4mn strike 200 payer option on Main expiry 20 March 2009.

The trade is costless at inception. At expiry, the trade expires worthless if spreads are below 170bp. If spreads are 170-287bp, the trade profits but underperforms at wider spreads.

Convertibles: An attractive alternative

Luke Olsen, Heather Beattie CFA, Angus Allison

The convertible bond market is currently dislocated and illiquid, following the cheapening and deleveraging during 2008. We believe the market now offers opportunities to credit investors, including distressed high yielding convertibles, basis trades and switches out of comparable straight bonds. Although the market is off its late-October lows, we expect weak technicals to persist in the short term. However, the outlook for the medium term is less clear; we attribute a low but significant probability to some sharply positive returns for convertible investors in the early to middle part of 2009.

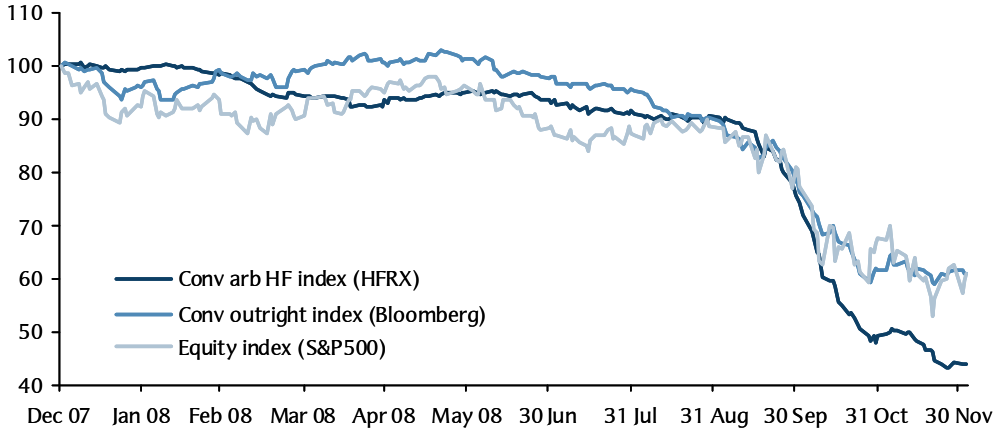
As the convertible bond asset class has had one of its worst years on record in terms of performance for both outright and hedged investors (Figure 193), we believe it now offers an appealing alternative investment to straight credit. Indeed we opine that the growing interest in convertibles from non-traditional investors is a relative positive for the market. We believe there is a 20-30% probability of some sharply positive monthly returns for the convertible arbitrage strategy, eg, in the 2-4% range, in the early to middle part of 2009. This scenario is much more likely to transpire if the factors that have driven the cheapening since the summer are reversed/resolved.

Cheapening exacerbated by deleveraging

Convertible market cheapening has been fuelled by a vicious circle of deleveraging with multiple contributory factors

The convertibles market has been under pressure for much of 2008, which became extreme during September and October. By way of illustration the Asian convertible market currently has a market value of $52bn versus a nominal value of $61bn, while the EMEA convertible universe has a nominal value of €82bn and a current market value of €62bn. We attribute the sell-off to a number of factors, namely: 1) the financing crisis, with funding levels for many investors becoming much more costly; 2) counterparty concerns leading to more stringent margining and collateral requirements for leveraged investors; 3) secondary market illiquidity; 4) risk reduction on virtually all sides; 5) forced selling by funds to raise cash for redemptions and liquidations; 6) equity short-selling restrictions that came into effect in September; 7) the paucity of credit appetite as asset swap bids have evaporated and the availability of CDS and cancellable CDS have been reduced; and 8) the sell-off in emerging markets.

Figure 193: Performance of convertible hedged and outright indices YTD



Note: Indices are rebased to 100 at 31 Dec 2007. Source: Bloomberg, Hedge Fund Research, Barclays Capital

But with cheapness comes opportunity

These factors have all resulted in the selling of convertible portfolios and negative performance amid the ongoing vicious circle of deleveraging. As such, convertible secondary markets are now cheap, dislocated and illiquid. However, we believe the current market presents opportunities in distressed high-yielding convertibles, basis trades and switches out of straight bonds, with interest from both traditional and non-traditional convertible investors. These themes are described in more detail below.

For further comment on the causes and effects of the convertible market cheapening, and on our outlook for convertible valuations, please refer to *Convertible market update: Cheap and cheaper*, 29 October 2008.

Future prospects: Winds of change?

Recent partial recovery may have run its course…

We believe that the patchy recovery of the market off its late-October lows has probably run its course, at least in the near term. This is especially evident for the more defensive and investment grade convertibles that have recovered the most in recent weeks. A variety of convertible buybacks by EMEA and particularly Asian issuers, totalling around $1.8bn since September has also lent support to the market. Overall technicals remain weak in our view (albeit to a lesser extent than in October) as illiquidity, deleveraging and fears of redemptions still hang over the market.

… but outlook for early-mid 2009 is less clear: we see a significant probability of a surprisingly sharp rebound

However, the outlook for early-mid next year is less clear. If the following conditions hold: 1) international money market support, liquidity supply, and financial institution strengthening measures to help stimulate bank lending; 2) the availability and cost of funding improves; 3) investor/fund redemptions get executed; 4) short-selling restrictions are eased; 5) equity and credit markets find some stability; and 6) there are no further major counterparty failures, then we believe that one possible scenario is a period of surprisingly positive returns for the convertible strategy. However, we do believe that the above six conditions are necessary, rather than sufficient conditions. Overall, we estimate a 20-30% probability of a few monthly returns in the 2-4% range in the early to middle part of next year.

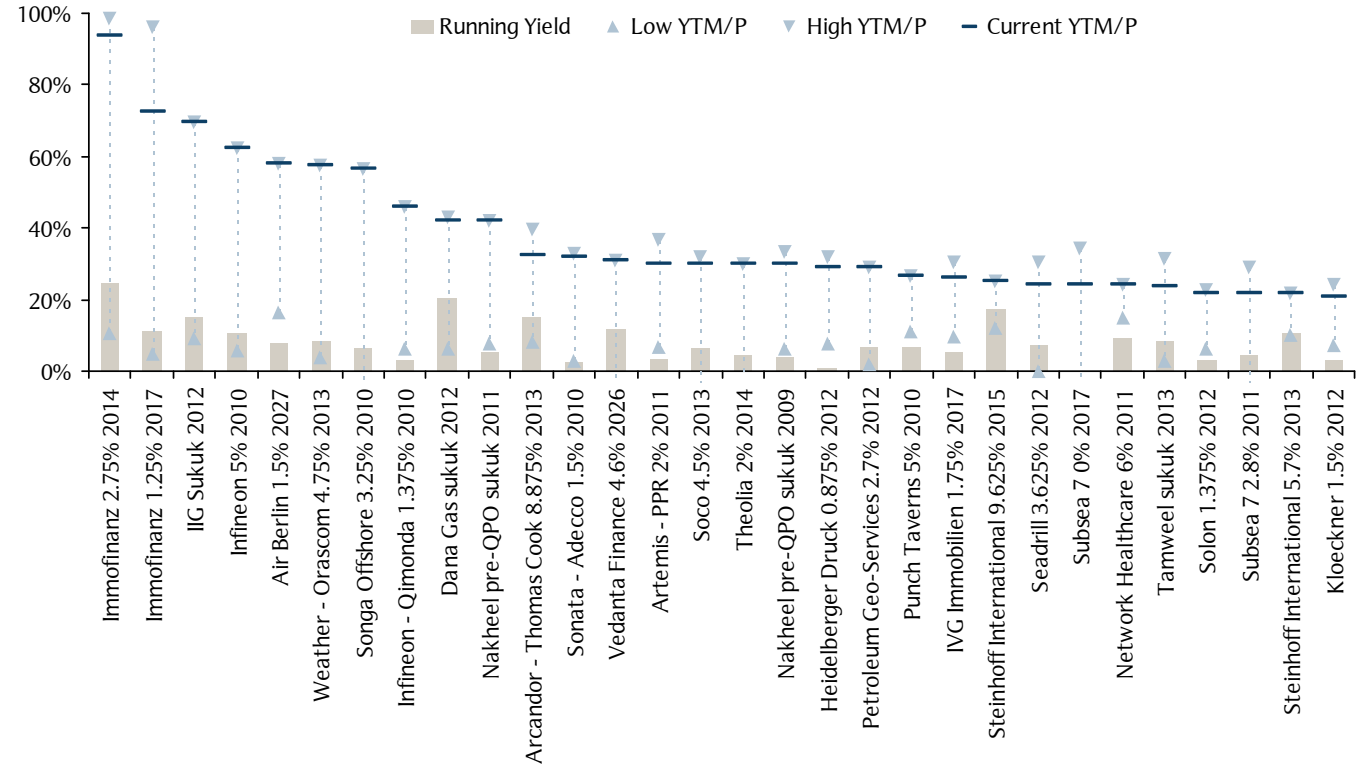
High-yielding convertibles: Introducing the YieldScape™

High-yielding convertibles offer a substantial enlargement of the opportunity set for high yield and distressed funds

The sell-off in convertibles has resulted in many of them now offering yields that are at, or close to, historical highs. In Figure 194 and Figure 195 we present the relatively active convertibles in our EMEA and Asian universes that are yielding more than 20% and 25%, respectively. These bonds have at least six months to maturity or to the next put date. In the case of special situations, many of these convertibles offer change of control protection in the form of a bondholder put. Given current depressed bond prices, a lot of the bonds screened also offer significant running yields, this feature being more prevalent in EMEA with the predominance of zero-coupon bonds in Asia. We believe this subset of the convertible market offers some potential opportunities to high yield and distressed funds, and at a minimum, represents a substantial expansion of their existing liquid universe. For more details of the methodology please see *Convertible YieldScape™: Screening for high yields*, 31 October 2008.

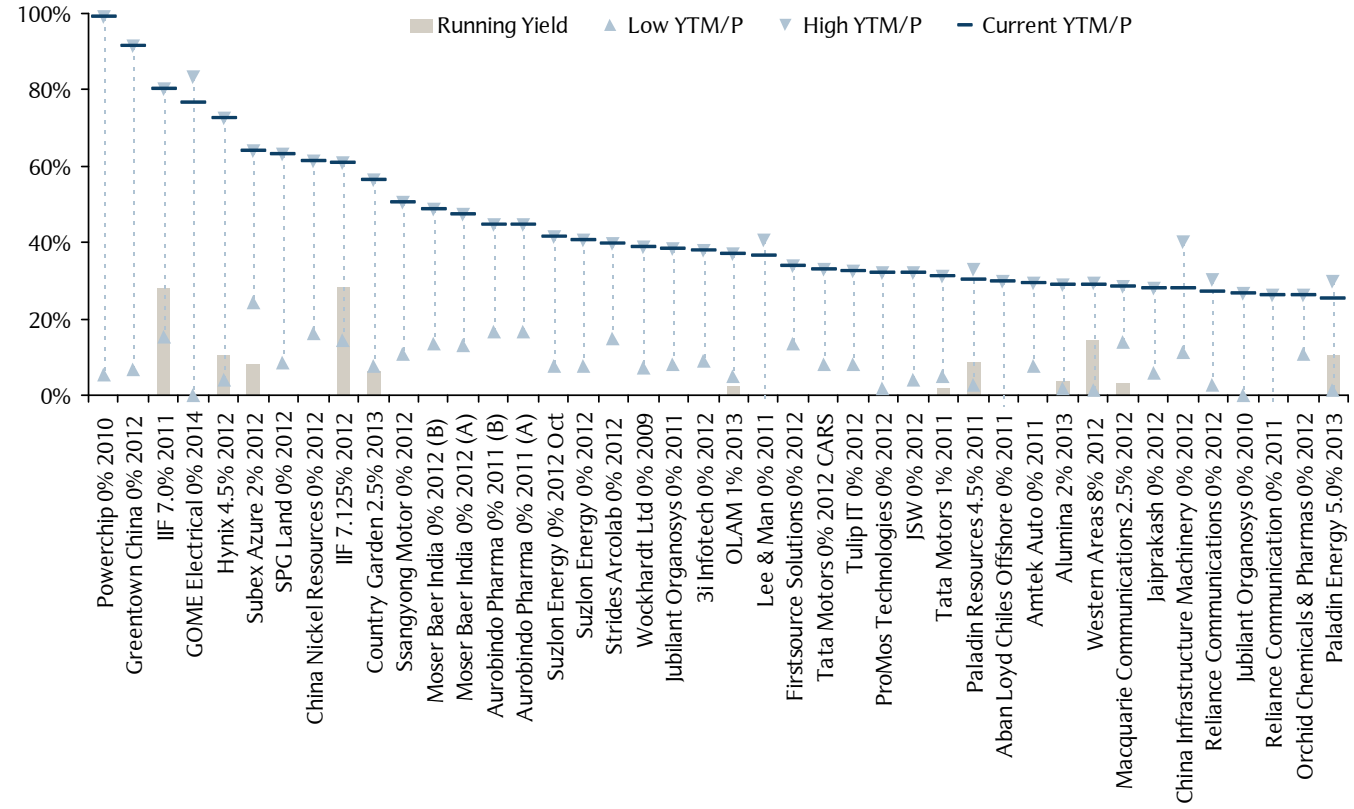
By looking at the yields offered by the convertibles in Figure 194 and Figure 195, we find that hypothetical portfolios of equal investments in each of the bonds would be projected to generate positive annual returns provided the annual default rate is less than 23% in EMEA and 26% in Asia. This is under the very conservative assumption of zero recovery rates for all of the bonds, and also that the highest-yielding bonds are the first to default.

Figure 194: EMEA Convertible YieldScape™ – Yield to maturity/put and running yield of EMEA convertible bonds and their yield ranges over the past six months



Notes: YTM/P is the greater of the semi-annual yield to maturity and yield to put (if any); Pricing as of 3 December 2008. Source: Barclays Capital

Figure 195: Asian Convertible YieldScape™ – Yield to maturity/put and running yield of Asian convertible bonds and their yield ranges over the past six months



Notes: YTM/P is the greater of the semi-annual yield to maturity and yield to put (if any); Pricing as of 3 December 2008. Source: Barclays Capital

Convertible bond versus CDS basis

Substantial basis opportunities have appeared for nimble investors: liquidity, mark-to-market and funding risks are key

For investors with funding and tolerance for mark-to-market risk, there are a number of basis opportunities available in the convertible market. In Figure 196 we present a screen of possible basis trades in both EMEA and Asia ranked by the highest mid-indicative differentials between the bond-implied asset swap margin (ASM) and the CDS level to the nearest tenor. We exclude names that mature or become puttable before 2010, or that we do not believe are sufficiently tradable.

We prefer ASM to z-spread as a more conservative metric for relative value in basis trades, while z-spread remains our preferred metric for relative value between bonds. Also, due to the discounted prices of many convertibles, the differential between ASM and z-spread may be greater than for equivalent straight bonds, owing to the higher coupons on the latter.

Lastly, we remark that basis opportunities may often be brief and practically difficult to achieve. Indeed, several of the most compelling opportunities that we identified in earlier screens – see, for example, *Convertible bond versus CDS basis: An update*, 7 November 2008 – have dwindled in recent weeks on convertible bond richening (eg, Alcatel), CDS widening (eg, 3i Group) or both (eg, STMicroelectronics).

Figure 196: Cash versus CDS basis for EMEA and Asian convertibles

Name	Workout date	Price	Parity	Red price	ASM spread	Z spread	CDS level	CDS Tenor	Basis (ASM - CDS)	Basis (Z - CDS)
Nakheel pre-QPO sukuk 2009	14 Dec 09	85.0	NA	109.5	2445	2742	624	1	1761	2118
Hynix 4.5% 2012	14 Jun 10	43.0	11.9	100.0	4016	7024	2938	2	1079	4087
Infineon 5.0% 2010	05 Jun 10	48.0	9.4	100.0	3762	6940	2746	2	1016	4194
APV - Richter Gedeon 1% 2009	28 Sep 09	99.4	78.8	110.6	1095	1141	424	1	626	717
News Corp - BSkyB 0.75% 2023	15 Mar 10	900.0	478.4	1000.0	547	763	130	1	417	633
Tata Motors 1% 2011	27 Apr 11	63.2	17.1	121.8	2332	2850	1594	2	390	1256
Vedanta Finance 4.6% 2026	21 Feb 13	40.2	31.3	100.0	1693	2864	1329	4	363	1535
Adecco 0% 2013	26 Aug 10	100.0	37.0	111.0	489	485	156	2	316	329
CapitaLand 3.125% 2018	05 Mar 15	58.5	29.3	106.6	901	1182	559	5	306	623
ABN AMRO - Fortis 1.875% 2010	27 Oct 10	92.5	2.9	100.0	299	322	46	2	252	276
Capitaland 2.1% 2016	15 Nov 13	63.0	34.7	100.0	790	1025	559	5	232	466
ST Microelectronics 0% 2016	23 Feb 11	93.0	27.8	107.8	468	492	229	2	221	263
Portugal Telecom 4.125% 2014	28 Aug 14	87.6	51.6	100.0	327	362	165	5	162	197
Axa 3.75% 2017	01 Jan 17	177.2	62.7	269.2	666	547	313	7	157	234
TUI 2.75% 2012	01 Sep 12	59.5	30.7	100.0	1108	1570	964	4	144	607
Capitaland 2.95% 2022	20 Jun 17	48.7	18.1	100.0	724	1082	604	10	120	478
Tata Motors 0% 2011	21 Mar 11	59.4	10.6	99.3	1663	2296	1594	2	81	702
Tata Motors 0% 2012 CARS	12 Jul 12	44.1	12.9	131.8	2196	3044	1617	4	66	1428
Infineon - Qimonda 1.375% 2010	31 Aug 10	50.0	0.9	100.0	2810	4883	2746	2	64	2137
Valeo 2.375% 2011	01 Jan 11	39.5	10.3	46.4	790	924	780	2	10	144
International Power 4.75% 2015	05 Jun 15	60.6	37.9	100.0	818	1105	808	7	9	297
Capgemini 2.5% 2010	01 Jan 10	50.2	24.5	51.0	251	268	255	1	-4	12
Finmeccanica - STM 0.375% 2010	08 Aug 10	90.0	19.9	100.0	357	395	378	2	-21	17
TUI - TUI Travel 4.5% 2013	15 Apr 13	67.0	66.0	100.0	938	1234	964	4	-26	270
Wendel - Capgemini 2% 2009	19 Jun 09	37.7	24.6	39.9	1019	1140	1047	1	-28	93
SCOR 4.125% 2010	01 Jan 10	2.1	1.5	2.0	162	168	190	1	-28	-22
KfW - Deutsche Post 0.5% 2010	03 Feb 10	96.5	55.8	100.0	4	4	33	1	-29	-29
EFG Eurobank 1% 2009	29 Nov 09	103.8	31.5	111.4	468	462	462	1	-46	0
International Power 3.25% 2013	20 Jul 13	68.3	50.4	100.0	743	935	838	5	-95	97
Alcatel 4.75% 2011	01 Jan 11	13.0	1.6	16.2	1376	1719	1472	2	-96	247
KfW - Deutsche Telekom 3.25% 2013	27 Jun 13	103.6	75.0	100.0	-75	-75	43	5	-118	-117
Capgemini 1% 2012	01 Jan 12	38.2	24.5	41.9	129	124	241	3	-143	-116
Air France 2.75% 2020	01 Apr 12	18.1	10.1	20.5	404	455	589	3	-184	-134
Telecom Italia 1.5% 2010	01 Jan 10	111.5	47.6	118.4	364	334	484	1	-209	-150
3i 3.625% 2011	29 May 11	79.2	33.8	100.0	951	1093	1232	2	-281	-139
Michelin 0% 2017	01 Jan 17	72.6	38.1	139.6	466	516	560	7	-287	-44
Adidas-Salomon 2.5% 2018	08 Oct 09	108.2	94.0	100.0	-182	-178	138	1	-320	-316
Rhodia 0.5% 2014	01 Jan 14	25.2	5.0	54.5	993	1414	1183	5	-347	231

Notes: Spreads in basis points; levels as of the close on 3 December 2008; 'ASM basis' is the ASM minus the CDS on the premium redemption amount for accreting principal bonds; holders of News Corp – BSkyB 0.75% 2023 also receive 75% of BSkyB ordinary dividends on coupon dates. Shaded names are not deliverable but may offer quasi-basis opportunities. Source: Bloomberg, MarkIt, Barclays Capital

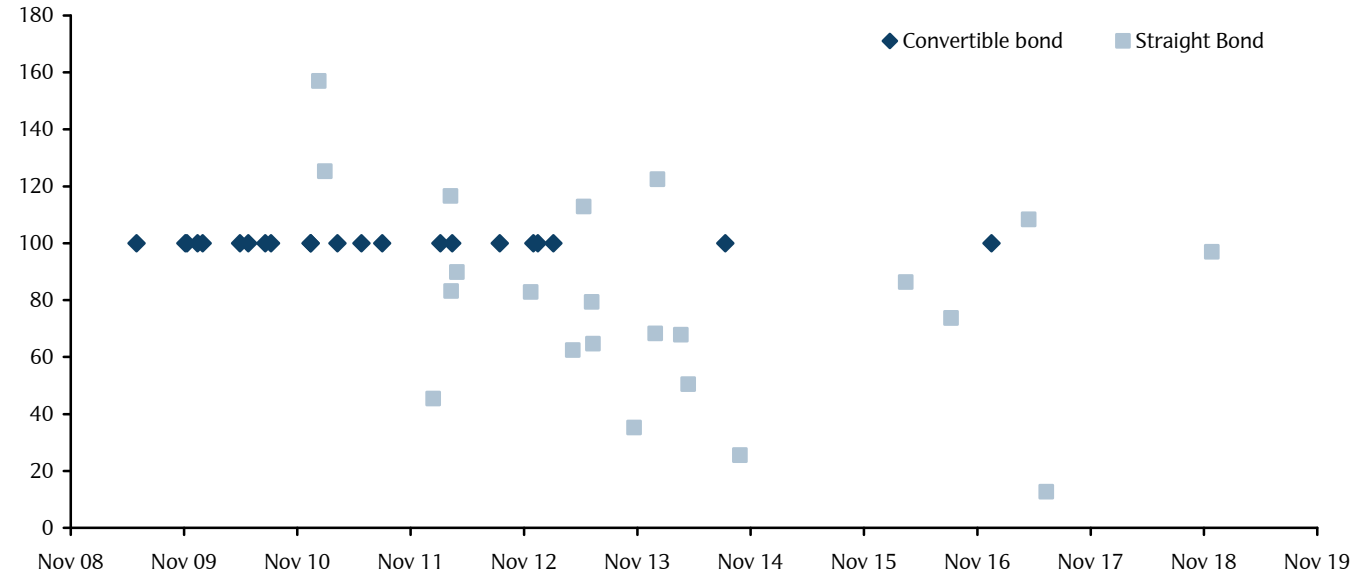
Convertibles: Cheap versus straight bonds

In order to determine whether convertible bonds are currently cheap relative to straight bonds we analysed a subset of names common to both the convertible and straight credit markets, pairing up those with equivalent rankings/ratings. We took the ratios of their z-spreads to their workout dates (defined as the maturity date or the next put date, if any) and based on the median of these ratios we devised an indicator of relative value. Several weeks ago we found the median of the z-spread ratios of convertible to straight bond spreads was 1.60. This is significantly above 1.00 and hence, where the comparison is feasible, we concluded that the convertible market was cheap versus straight bonds. See *Convertibles: Cheap versus straight bonds*, 21 November 2008.

By comparing relative z-spreads of pari-passu convertible and straight bonds, we find that convertibles are cheap

At the time of writing, it remains the case that convertibles are cheap relative to straight bonds, albeit to a lesser extent than before. The median ratio has narrowed to 1.35, evidencing the recent partial recovery in some convertible valuations. Figure 197 illustrates that of the 22 EMEA and Asian convertible/straight bond pairs in our sample, the majority of convertibles imply a significantly wider spread than their comparable straight bonds. In addition, the convertibles tend to have shorter workout dates than their straight bond counterparts, and hence less duration risk. Lastly, they may outperform in the 'tail' scenarios of a change of control or a sharp equity rally.

Figure 197: Convertible and straight bond implied z-spreads (rebased) versus workout dates



Notes: Convertible bond implied spreads are rebased to 100, straight bond spreads are rebased to the straight spread divided by the convertible bond spread. Source: MarkIt, Bloomberg, Barclays Capital

We consider the convertible and straight bond to be approximately fair value to each other if the ratio of their workout date z-spreads is between 0.80 and 1.20. We believe this band takes into account bid/offer spreads and liquidity issues. Figure 198 reveals that only four convertibles look expensive relative to their respective straight bonds (shaded in grey), 14 look cheaper than their respective straight bonds (shaded in light blue) and four look approximately fair relative to their respective straight bonds (not shaded).

Our relative value indicator can help identify switch trades and support asset allocation decisions

We opine that we can use this analysis/indicator to first identify potential switch ideas between the relevant convertible and straight bonds, and to assess the relative attractiveness of a trade in the context of other possible switch trades. Second, we can quantitatively monitor the relative value between the convertible and straight bond markets on an ongoing basis, which could affect asset allocation decisions.

Figure 198: Convertible and straight bond implied z-spreads and spread ratios for the sample set

Name	Convertible bond	Straight bond	CB z-spread	Straight bond z-spread	Ratio of z-spreads	CB workout date	Straight workout date	Scaled straight spread	Ratio of scaled spreads
Median					**1.23**	**Feb 11**	**Sep 13**		**1.35**
Hynix	HYUELE 4.5% 2012	HYUELE 7.875% 2017	7009	885	7.92	14 Jun 10	27 Jun 17	1136	6.17
Parpublica	PARPUB 3.25% 2014	PARPUB 4.191% 2014	210	53	3.92	18 Dec 12	15 Oct 14	51	4.14
Greentown China	GRNCH 0% 2012	GRNCH 9% 2013	11062	3897	2.84	18 May 10	08 Nov 13	4127	2.68
Publicis	PUBFP 1% 2018	PUBFP 4.125% 2012	546	248	2.20	18 Jan 10	31 Jan 12	227	2.40
Adecco	ADENVX 0% 2013	ADENVX 4.5% 2013	485	303	1.60	26 Aug 10	25 Apr 13	276	1.76
Petroplus	PPHNSW 3.375% 2013	PPHNSW 6.75% 2014	2977	1502	1.98	28 Mar 11	01 May 14	1707	1.74
Posco	POHANG 0% 2013	POHANG 2.05% 2013	588	380	1.55	19 Aug 11	28 Jun 13	344	1.71
KEPCO	KORELE 0% 2011	KORELE 7.4% 2016	626	540	1.16	23 Nov 09	01 Apr 16	417	1.50
Vedanta	VED 4.6% 2026	VED 8.75% 2014	2863	1954	1.47	21 Feb 13	15 Jan 14	1986	1.44
Kerry Properties	KERPRO 0% 2012	KERPRO 6.375% 2016	1199	884	1.36	22 Feb 12	25 Aug 16	839	1.43
EFG Eurobank	EUROB 1% 2009	EUROB 5.269% 2012	462	384	1.20	29 Nov 09	28 Mar 12	339	1.36
Alcatel	ALUFP 4.75% 2011	ALUFP 6.375% 2014	1720	1166	1.47	01 Jan 11	07 Apr 14	1283	1.34
Finmeccanica	FNCIM 0.375% 2010	FNCIM 5.75% 2018	395	383	1.03	08 Aug 10	12 Dec 18	300	1.32
Valeo	VLOF 2.375% 2011	VLOF 3.75% 2013	931	739	1.26	01 Jan 11	24 Jun 13	714	1.30
TUI	TUIGR 2.75% 2012	TUIGR 5.125% 2012	1575	1305	1.21	01 Sep 12	10 Dec 12	1323	1.19
Michelin	MICH 0% 2017	MICH 6.5% 2012	516	464	1.11	01 Jan 17	16 Apr 12	511	1.01
Noble Group	NOBGRP 0% 2014	NOBGRP 8.5% 2013	1615	1823	0.89	13 Jun 11	30 May 13	1893	0.85
Portugal Telecom	PORTEL 4.125% 2014	PORTEL 3.75% 2012	362	423	0.86	28 Aug 14	26 Mar 12	447	0.81
Wendel	MWDP 2% 2009	MWDP 5% 2011	1140	1428	0.80	19 Jun 09	16 Feb 11	1488	0.77
Nexans	NEXANS 1.5% 2013	NEXANS 5.75% 2017	693	751	0.92	01 Jan 13	02 May 17	906	0.77
Air France-KLM	AFFP 2.75% 2020	AFFP 4.75% 2014	458	561	0.82	01 Apr 12	22 Jan 14	625	0.73
Telecom Italia	TITIM 1.5% 2010	TITIM 4.5% 2011	334	524	0.64	01 Jan 10	28 Jan 11	513	0.65

Note: Z-spreads shown are derived from mid-prices on 3 December 2008; the scaled spread ratios reflect spread adjustments for the differential between the workout dates of the two bonds. Source: Bloomberg, Barclays Capital

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