Credit Portfolio Strategy | Global
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The Rating-Duration Tussle

Bank of America Merrill Lynch

Michael Contopoulos +1 646 855 6372
Credit Portfolio Strategist
MLPF&S
michael.contopoulos@baml.com

David Lavelle, CFA +1 646 855 6826
Credit Portfolio Strategist
MLPF&S
david.lavelle@baml.com

Marlane Pereiro +1 646 855 6362
Credit Portfolio Strategist
MLPF&S
marlane.pereiro@baml.com

Rachna Ramachandran +44 20 7995 8542
Credit Portfolio Strategist
MLI (UK)
rachna.ramachandran@baml.com

Longer duration beats lower rating

In this environment of low yields and flat curves, it is tempting to conclude that moving down the rating spectrum offers better value than extending duration. Our analysis of spread pick-up to risk, however, reveals that the longer-end of the curve generally offers better compensation relative to risk. In Europe, a switch from BBB to BB offers a good pick-up in spread, without compromising on efficiency. Within HG, AAs and As offer better spread-to-risk efficiency than corresponding BBBs, for short and medium term duration bonds . In the US, a switch from single-A to BBB looks interesting, as it doesn't compromise on risk/reward efficiency and the spread premium between the two is still high. In HY, a switch from BB to B is attractive on the basis of a significant increase in spread-to-risk efficiency.

Credit risk migration in Q1

As we enter Q2 we take the time to look at how risk concentration in our US and European High Grade and High Yield Indices has migrated over the course of the winter according to our Lighthouse Portfolio model as well as discuss where the indices currently stand with regard to sector and issuer risk concentration. As of March 30th, the US High Grade and High Yield indices look cheap relative to January 3rd while the European High Grade and High Yield indices look slightly richer since the start of the year.

Sector Performance Across Asset Classes

Total returns across asset classes show that equities outperformed in 8 of 10 sectors, while beta and risk adjusted returns were varied. Sector specific breakdowns highlight a general shift in returns from February to March where we see an indiscriminant decrease in returns across asset classes.

US and European COAS Relative Value

US HY looks cheap to equities with a z-score of 1.2 at the end of March while Europe is ever so slightly cheap to the US. Both US and EU HG Credit z-scores through the end of March emphasize that debt is cheap to equity, but not significantly so as the z-scores remain under the significance threshold.

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Refer to important disclosures on page 19 to 20. Link to Definitions on page 18. COAS Certification on page 18.

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Longer duration beats lower rating

Rachna Ramachandran +44 20 7995 8542

In this environment of low yields and flat curves, it is tempting to conclude that moving down the rating spectrum offers better value than extending duration. The nature of the rally as well – policy and liquidity driven more than fundamentals – lends itself to the outperformance of higher beta sections in the market i.e. HY. We prefer to be more nuanced in our approach though; putting into context the risk associated with the spread premium gained.

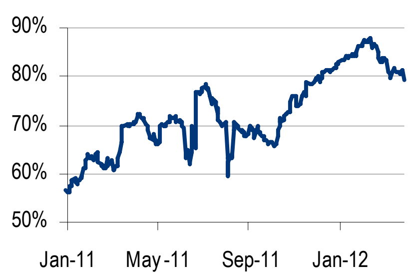
For Europe, our analysis shows that the longer-end of the curve generally offers better compensation relative to risk, although the actual spread pick-up is not that high compared to moving lower in rating. While rating premiums continue to remain high, we find that switching into lower quality paper is rarely compelling given the additional risk. A switch from BBB to BB offers an interesting value proposition to pick up more spread, without compromising on efficiency. In the short-end and the belly of the curve, AAs and As offer better spread-to-risk efficiency than corresponding BBBs.

In the US, for most ratings, it is more efficient to extend into the next duration bucket rather than move lower in quality. Within high grade, a switch from single-A to BBB looks interesting, as it doesn't compromise on risk/reward efficiency and the spread premium between the two is still high. Spread premiums for moving further into high yield ratings have declined since early August. However, a switch from BB to B is attractive on the basis of a significant increase in spread-to-risk efficiency.

In a rally, all are equal

Credit has had a record quarter. Excess returns for both HG and HY far surpassed historic first quarter returns. The return from the abyss has been fast and furious, but we believe that it is justified and continue to remain constructive on credit, across both US & European HG and HY, going into the second quarter. Chart 1 shows the average spread correlation between EUR HG sectors. While it has been on the decline more recently, correlation continues to remain elevated as 'micro' risks have yet to come to the fore. Indeed, the rally has been largely beta driven. In terms of excess returns this quarter, each rating group has returned more than its preceding (higher) one and longer duration buckets have outperformed the short-end.

Chart 1: EUR HG sector spread correlation

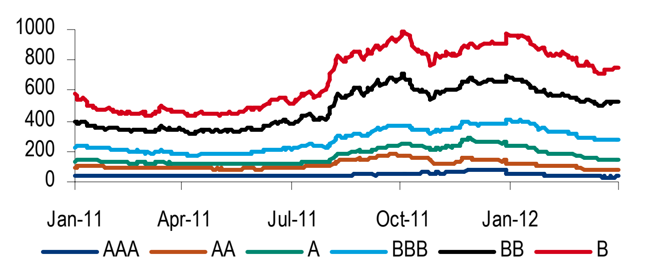


Source: BofA Merrill Lynch Global Research, Chart shows average 3m pairwise spread correlation between daily changes in sector spreads for the ER00 index.

But some are more equal than others

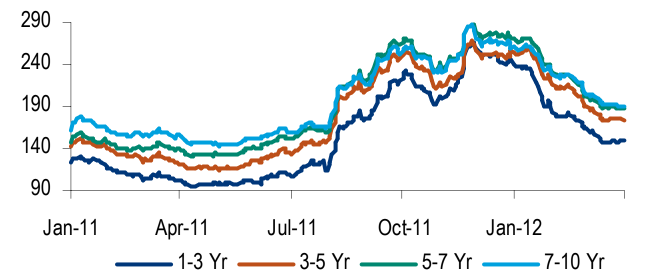
The outperformance of HY over HG though can be attributed more to high coupon income than spread performance. While spreads have largely moved in the same direction, the magnitude of spread retracement has been more discerning, particularly in Europe. EUR HY spreads have on average retraced 20% from their late November wides, compared to 30% for BBB and over 50% for single-A and above (Chart 2). In the US as well, BBB and below have retraced less than their higher rated counterparts (Chart 4). Curves however have remained largely the same, except for the very front-end, in Europe (Chart 3). The 1-3y sector has retraced 44% in the last four months, compared to 35% for the rest of the curve. In the US, it's the 7-10y sector that lagged the rest of the curve (Chart 5).

Chart 2: Rating spread premiums still high in EUR credit...



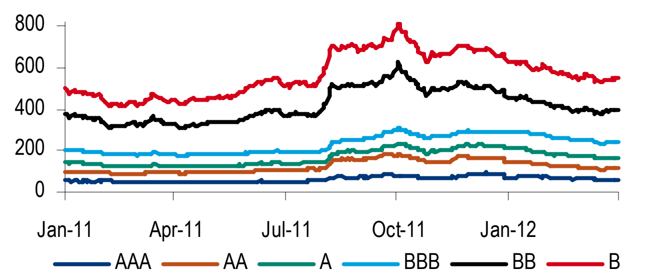
Source: BofA Merrill Lynch Global Research, Chart shows asset swap spreads. Based on ER00 and HE00.

Chart 3: ...while curves remain flat beyond 3y



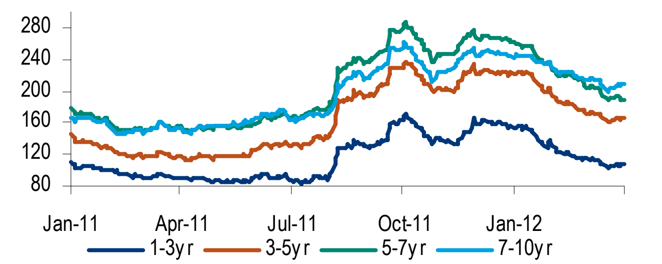
Source: BofA Merrill Lynch Global Research, Chart shows asset swap spreads. Based on ER00.

Chart 4: Rating spread premiums in US HY have been declining



Source: BofA Merrill Lynch Global Research, Chart shows asset swap spreads. Based on C0A0 and H0A0.

Chart 5: US HG curves steeper in the wings, flatter in the belly



Source: BofA Merrill Lynch Global Research, Chart shows asset swap spreads. Based on C0A0.

Rating & Maturity Premiums

Rating premiums are still relatively high in Europe compared to pre-crisis levels as peripheral issuers have borne the brunt of downgrades (Chart 6). This is most notable among investment grade ratings. A switch from AA to A now earns 70bp in spread premium, compared to less than 30bp in early August. Similarly, BBB spreads are now 127bp wider than single-A, up 36bp over the same period. In the US, premiums for moving into HY (BBB to BB, BB to B) have actually compressed even further than early August level, but there is still some value in moving down within high grade (Chart 7).

Excess spread received for moving along the curve is much less impressive than for moving into lower quality paper (Table 1). Despite the outperformance of the 1-3y sector in Europe, the premium earned for moving into the next maturity bucket of 3-5y is only 25bp compared to 33bp pre-crisis. In the US, moving into the belly of the curve now looks unattractive relative to the wings, based on spread premiums.

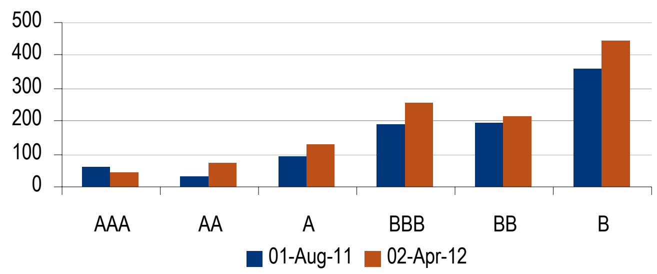
Simply based on premiums, it seems more attractive to venture into lower rated paper as opposed to extending duration in order to pick up additional spread. However, this might well lead to a disproportionate increase in portfolio risk. Instead, we analyse the trade-off between the two options by comparing spread compensation relative to risk contribution.

Table 1: Duration extension doesn't pay much

		EUR		USD	
From	To	01-Aug-11	02-Apr-12	01-Aug-11	02-Apr-12
1-3 Y	3-5 Y	33	25	50	59
3-5 Y	5-7 Y	12	13	35	23
5-7 Y	7-10 Y	5	3	-6	20

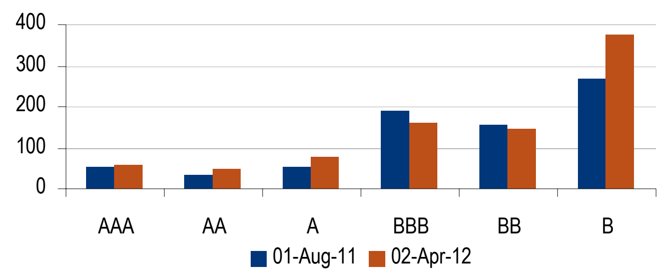
Source: BofA Merrill Lynch Global Research, Table shows asset swap spreads, based on ER00 and C0A0.

Chart 6: EUR spread pick-up for moving one grade lower in rating



Source: BofA Merrill Lynch Global Research, For a given rating, chart shows spread pick-up gained by moving into next lower rating. For single-Bs, this is for moving into CCC & below.

Chart 7: USD spread pick-up for moving one grade lower in rating



Source: BofA Merrill Lynch Global Research, For a given rating, chart shows spread pick-up gained by moving into next lower rating. For single-Bs, this is for moving into CCC & below.

What price Risk?

To measure risk, we turn to our Lighthouse Portfolio Analytics tools. (Please follow the link in the sidebar for more details.) We created two portfolios, EUR and USD, comprising the BofA Merrill Lynch HG and HY indices for each market, weighted by their market size (par amount). Lighthouse calculates the tail risk (VaR) of a portfolio based on issuer-level risk, concentration, curve position, subordination and spread correlation between issuers and sectors. The resultant 5% 3M tail risk for the EUR and USD portfolios stood at 1.76% and 2.67%, respectively (as of 30th March), i.e. there is a 5% chance of the EUR (USD) portfolio losing more than 1.76% (2.67%) over the next three months. This portfolio level risk can then be disaggregated to determine the contributions stemming from each rating/duration group (Table 2 and Table 3).

Cross Reference

Introduction to Lighthouse, 30 July 2010

Table 2: EUR Portfolio: Contribution from each rating-duration bucket to the total portfolio tail risk

Rating/Duration	0 -1	1 -2	2 -3	3 -4	4 -5	5 -6	6 -7	7 -8	8 -9	9 -10	>=10
AAA	0.00%	0.09%	0.06%	0.19%	0.15%	0.13%	0.11%	0.04%	0.06%	0.03%	-
AA	0.09%	0.71%	0.79%	1.45%	1.70%	0.81%	1.27%	1.43%	0.40%	0.40%	0.62%
A	0.55%	5.29%	4.43%	5.52%	7.49%	4.92%	4.78%	3.58%	1.32%	0.60%	0.93%
BBB	0.87%	2.22%	3.42%	3.55%	6.34%	3.20%	2.57%	1.89%	0.72%	0.40%	0.61%
BB	0.52%	1.36%	1.51%	2.64%	2.61%	0.98%	0.63%	0.07%	0.10%	-	0.11%
B	0.05%	0.88%	1.60%	3.61%	4.25%	0.09%	0.29%	-	-	-	-
CCC & Below	0.02%	0.22%	0.31%	0.97%	1.09%	0.35%	-	-	-	-	-

Source: BofA Merrill Lynch Global Research

Table 3: USD Portfolio: Contribution from each rating-duration bucket to the total portfolio tail risk

Rating/Duration	0 -1	1 -2	2 -3	3 -4	4 -5	5 -6	6 -7	7 -8	8 -9	9 -10	>=10
AAA	-	0.01%	0.03%	0.02%	0.01%	0.02%	0.01%	0.03%	0.00%	0.01%	0.16%
AA	0.01%	0.21%	0.34%	0.38%	0.46%	0.26%	0.52%	0.56%	0.15%	0.02%	2.52%
A	0.09%	0.85%	1.53%	2.22%	2.78%	2.28%	2.70%	2.21%	0.39%	0.49%	8.61%
BBB	0.04%	0.52%	1.06%	2.13%	3.04%	3.20%	4.75%	3.54%	0.48%	0.69%	11.56%
BB	0.17%	0.60%	1.12%	1.65%	2.47%	1.66%	1.63%	0.59%	0.30%	0.28%	0.95%
B	0.35%	0.97%	1.70%	4.65%	5.12%	2.36%	0.83%	0.39%	0.34%	0.64%	0.04%
CCC & Below	0.14%	0.66%	1.80%	2.38%	3.15%	1.31%	0.64%	0.17%	0.05%	0.03%	-

Source: BofA Merrill Lynch Global Research

In the EUR portfolio, most of the risk is concentrated in BBB and single-A, particularly within six years duration. This is due to concentration risk – a large part of the EUR market (66%) belongs to this group. Note that issuance beyond seven years is generally quite sparse in Europe, unlike the US which has a good representation across ratings and the curve. That said, risk contributions from the HY sectors (BB and B) in both portfolios, particularly in the 3-5y buckets is comparable to that from the HG buckets, despite being a much smaller portion of the market. (The 3-5y sector is large within HY, but much smaller when compared to the entire EUR/USD HG + HY market.)

Measuring spread-to-risk efficiency

In order to minimize the effect of concentration risk and more importantly focus on risk-reward, we calculate an efficiency ratio for each group. This is calculated as the spread contribution of a group to the portfolio divided by the risk contribution of the group. The higher the efficiency ratio, the better is the spread compensation per unit of risk taken.

In Europe, spread to risk efficiency is generally higher in investment grade than in high yield (Table 4). More surprisingly, there are few cases where the ratio could be improved by moving lower in ratings. AAs and As offer better efficiency than corresponding BBBs in the short-end and the belly of the curve. Lower down, a switch from BBB to BB offers an interesting value proposition, given the similar efficiency ratios and the potential for spread pick-up. Within HY, 3-5y single-Bs offer the highest spread-to-risk efficiency, significantly higher than for BBs in the same duration bucket. (Note that while the ratio is higher further down the curve within HY, there are in fact very few bonds in that area.)

The longer-end of the curve generally offers better compensation relative to risk, although the actual spread pick-up is not that high. Our Credit Strategists are bullish on the 3-5y non-financial sector as they expect more companies to tender bonds in this part of the curve to re-profile debt maturities. AAs and single-As offer the best value here, according to our analysis.

Table 4: EUR Portfolio: Spread to Risk Efficiency Ratios

Rating/Duration	0 -1	1 -2	2 -3	3 -4	4 -5	5 -6	6 -7	7 -8	8 -9	9 -10	>=10
AAA	-	-	2.6	1.3	1.1	2.0	1.2	1.1	1.4	1.3	-
AA	-	1.1	1.4	1.3	1.2	1.3	1.5	1.8	3.1	2.2	2.5
A	0.5	0.7	0.8	1.0	1.1	1.1	1.3	1.7	1.7	1.5	1.5
BBB	0.2	0.4	0.4	0.5	0.8	0.9	1.1	1.3	1.9	1.6	1.4
BB	0.2	0.4	0.4	0.6	0.9	0.9	1.2	2.8	2.6	-	1.5
B	0.1	0.4	0.8	1.1	1.6	2.3	2.8	-	-	-	-
CCC & Below	0.1	0.5	0.5	0.9	1.6	2.0	-	-	-	-	-

Source: BofA Merrill Lynch Global Research

The picture in the US is a bit more mixed. Spread-to-risk efficiency is generally higher further down the curve. In fact, for most ratings, it seems more efficient to extend into the next duration bucket rather than move lower in quality (Table 5).

Table 5: EUR Portfolio: Spread to Risk Efficiency Ratios

Rating/Duration	0 -1	1 -2	2 -3	3 -4	4 -5	5 -6	6 -7	7 -8	8 -9	9 -10	>=10
AAA	-	0.7	1.6	0.7	0.8	1.5	1.1	1.1	1.7	1.7	1.6
AA	3.9	0.7	0.9	0.9	1.2	1.1	1.1	1.3	1.5	0.8	1.7
A	0.6	0.6	0.7	0.9	0.9	0.9	1.2	1.4	1.4	1.1	1.4
BBB	0.3	0.4	0.6	0.7	0.8	0.9	1.3	1.5	1.3	1.1	1.4
BB	0.3	0.4	0.6	0.8	1.0	1.1	1.2	1.5	1.2	1.2	1.4
B	0.3	0.5	0.7	1.1	1.4	1.5	1.8	2.2	1.4	3.0	2.6
CCC & Below	0.2	0.4	0.7	1.1	1.3	2.1	2.4	3.6	2.3	1.3	-

Source: BofA Merrill Lynch Global Research

The switch from AA to A, which seemed attractive purely on the excess spread received, is less so given the loss in efficiency. A switch from single-A to BBB looks interesting here as it doesn't compromise on risk/reward efficiency and the spread premium between the two is still high. A similar move from BBB to BB is somewhat less compelling. Although ratios are comparable between the two, the spread pick-up now is already lower than that in early August. On the other hand, a switch from BB to B looks more attractive given the significant pick-up in spread-to-risk efficiency, across the curve.

Risk Migration

Michael Contopoulos +1 646 855 6372

Cross Reference

Introduction to Lighthouse, 30 July 2010

As we enter Q2 we take the time to look back at how risk concentration in our US and European High Grade and High Yield Indices has migrated over the course of the winter according to our Lighthouse Portfolio model. As mentioned above, Lighthouse uses our COAS model to define issuer risk, while also taking into account the issuer's concentration in a portfolio, correlation, capital structure and maturity, to ultimately calculate tail-risk. Unlike traditional VaR which relies on historical data, Lighthouse uses the forward looking measures inherent in the COAS model (equity option implied volatility) to calculate tail risk. For more details on Lighthouse, please see the introduction piece in the sidebar.

We also compare today's risk concentration with October 3rd 2011, exactly 6 months ago. Table 6 highlights the current risk profile across sector for each of our four indices. The highlighted cells denote the top 3 sectors with the most concentration of risk for that respective index. Not surprisingly, North American Banks, at 13.44% of the total Index weight, is the largest contributor to risk. In US High Yield, Basic Industries is not far behind financials, as Basics are the highest weight in the H0A0. The European index can't fight off the massive weight in Financials. At 35% market value weight, a risk contribution of 40.83% is not surprising, nor alarming, but does show the significant amount of concentration risk inherent in the European universe. Basic Industries at 20.50% market value contributes 15.28% of the risk while Finance, at 9.28% market value contributes 14.63% of the risk.

Table 6: US and European Lighthouse Risk Concentrations by Sector, 30-Mar-2012

Sector	C0A0	H0A0	ER00	HE00
Banks - North American	17.43%	1.08%	7.00%	0.00%
Energy	12.80%	9.58%	3.63%	1.43%
Finance	12.56%	11.93%	10.29%	14.63%
Basic Industries	7.44%	10.65%	4.03%	15.28%
Banks - European+	6.49%	0.46%	40.83%	9.03%
Utilities - Electric	6.20%	4.63%	8.67%	0.66%
Insurance - Life	4.35%	0.11%	3.18%	2.15%
Media	3.97%	9.17%	0.73%	9.89%
Utilities - Natural Gas	2.75%	1.32%	1.21%	0.00%
Telecom - North American	2.60%	9.16%	0.18%	4.66%
Food&Beverage	2.19%	3.42%	0.93%	5.04%
Technology	2.11%	4.76%	0.24%	1.18%
Transportation	1.97%	3.62%	2.02%	5.64%
Telecom - European+	1.88%	0.73%	5.39%	7.23%
Pharmaceuticals	1.85%	1.24%	0.84%	0.58%
Insurance - P&C	1.80%	0.92%	1.93%	0.24%
Capital Goods - Manufacturing	1.76%	3.48%	1.65%	10.28%
REITs	1.73%	1.44%	0.55%	0.00%
Healthcare	1.65%	6.56%	0.03%	3.66%
Retail	1.60%	3.64%	0.21%	0.67%
NonCorp - Lower Rated	1.28%	0.00%	0.36%	0.00%
Aerospace&Defense	1.09%	2.05%	2.01%	0.58%
Consumer Products	0.87%	2.94%	0.28%	1.08%
Autos&Autoparts	0.70%	3.02%	1.64%	4.26%
Supermarkets	0.35%	0.45%	0.98%	0.00%
NonCorp - Higher Rated	0.29%	0.59%	0.95%	0.21%
Tobacco	0.16%	0.03%	0.11%	0.00%
Gaming&Lodging	0.08%	3.04%	0.12%	1.62%
Brokerages	0.08%	0.00%	0.00%	0.00%

Source: BofA Merrill Lynch Global Research

Table 7: US High Grade Portfolio Stats

C0A0	30-Mar	29-Feb	3-Jan	3-Oct
Ispread (bps)	181	188	224	238
Duration (yrs)	6.27	6.38	6.36	6.36
YTW	3.50%	3.40%	3.90%	3.90%
Risk	-2.03%	-2.08%	-2.91%	-4.97%
Ratio	89%	90%	77%	48%

Source: BofA Merrill Lynch Global Research

Table 9: C0A0 Issuer Risk Concentration

Issuer	30-Mar	29-Feb	3-Jan	3-Oct
Bank of America Corp	4.45%	4.10%	4.36%	7.55%
General Electric Capital Corp	3.26%	3.24%	3.93%	2.97%
Citigroup Inc	2.82%	3.08%	3.45%	5.20%
Goldman Sachs Grp Inc	2.81%	2.82%	2.86%	3.55%
Morgan Stanley	2.62%	2.62%	3.30%	5.82%
JP Morgan Chase & Co	2.00%	2.50%	3.17%	3.35%
OAO Gazprom	1.15%	0.60%	0.45%	0.54%
Pemex Project Funding Master	0.97%	0.96%	0.83%	0.37%
Petrobras Intl Finance	0.94%	0.73%	0.55%	0.53%

Source: BofA Merrill Lynch Global Research

US High Grade Corporate Index (C0A0)

Table 7 in the sidebar breaks down the US High Grade Corporate Master Index over 4 specific dates: March month-end, 1-month ago, first business day of the year, and 1st business day of the 4th quarter, 2011. The Ratio of a portfolio is a measure of richness/cheapness… with a high ratio indicating that spreads are wide relative to the Lighthouse risk. With a spread of 238 bps and a risk of -4.97% on October 3rd, 2011, Lighthouse was telling us that the cash universe was trading rich to its risk. By January 3rd however, we see that the model was indicating that at 224 bps and -2.91% risk, the market was trading cheap (relative to 3 months prior). In other words, for just 14 bps of tightening, risk went down 41.5%. Since the January 3rd, 2012, cash spreads have remained cheap, with not much movement over the last month.

What stands out between October 3rd and last Friday, March 30th, is the significant decrease in risk concentration in financials (Table 8). Only three other sectors in the index have had a risk reduction between October 3rd and March 30th: Technology, Capital Goods- Manufacturing and Aerospace and Defense. Every other sector in the C0A0 has increased its risk concentration, absorbing the more than 12% reduction in Banks.

Table 8: US High Grade Sector Risk Contributions

Lighthouse Sectors	30-Mar	29-Feb	3-Jan	3-Oct
Banks - North American	17.43%	17.89%	20.32%	29.55%
Energy	12.80%	11.99%	11.18%	10.81%
Finance	12.56%	12.67%	12.54%	9.62%
Basic Industries	7.44%	7.04%	6.86%	5.97%
Banks - European+	6.49%	6.54%	6.26%	6.10%
Utilities - Electric	6.20%	6.50%	5.83%	4.91%
Insurance - Life	4.35%	4.10%	4.10%	3.78%
Media	3.97%	3.98%	4.34%	3.93%
Utilities - Natural Gas	2.75%	2.57%	2.26%	2.06%
Telecom - North American	2.60%	2.62%	2.43%	2.07%
Food&Beverage	2.19%	2.42%	2.32%	1.95%
Technology	2.11%	2.08%	2.30%	2.23%
Transportation	1.97%	1.90%	1.81%	1.72%
Telecom - European+	1.88%	1.90%	1.56%	1.59%
Pharmaceuticals	1.85%	2.04%	2.01%	1.70%
Insurance - P&C	1.80%	1.80%	1.78%	1.80%
Capital Goods - Manufacturing	1.76%	1.71%	1.95%	2.05%
REITs	1.73%	1.76%	1.68%	1.55%
Healthcare	1.65%	1.69%	1.62%	1.41%
Retail	1.60%	1.58%	1.88%	1.54%
NonCorp - Lower Rated	1.28%	1.26%	1.05%	0.50%
Aerospace&Defense	1.09%	1.15%	1.26%	1.26%
Consumer Products	0.87%	0.85%	0.92%	0.87%
Autos&Autoparts	0.70%	0.64%	0.62%	0.44%
Supermarkets	0.35%	0.36%	0.25%	0.24%
NonCorp - Higher Rated	0.29%	0.69%	0.61%	0.15%
Tobacco	0.16%	0.13%	0.16%	0.13%
Gaming&Lodging	0.08%	0.07%	0.08%	0.04%
Brokerages	0.08%	0.08%	0.04%	--

Source: BofA Merrill Lynch Global Research

From an issuer perspective, Bank of America contributes the most risk to the index, though it has fallen substantially since October 3rd (7.55% to 4.45%). GE Capital, Citigroup, Goldman Sachs and Morgan Stanley round out the top 5 biggest contributors to risk while OAO Gazprom, Pemex, and Petrobas have jumped substantially since October 3rd to become the 7th, 8th, and 9th most risky names in the index (Table 9).

US High Yield Corporate Index (H0A0)

Table 10: US High Yield Portfolio Stats

H0A0	30-Mar	29-Feb	3-Jan	3-Oct
Ispread (bps)	587	587	659	793
Duration (yrs)	3.81	3.72	4.03	4.34
YTW	7.15%	7.00%	7.96%	9.31%
Risk	-5.35%	-5.03%	-6.80%	-9.65%
Ratio	110%	117%	97%	82%

Source: BofA Merrill Lynch Global Research

Despite over 200 bps of spread tightening over the last 6 months (793 bps to 587 bps), US High Yield looks significantly cheaper then it has since October 3rd, 2011 (Table 10). However, while spreads have remained unchanged month-over-month, VaR has ticked up since Feb 29th, currently standing at -5.35% versus -5.03% a month ago. This increase in risk despite the lack of movement in spread has caused the index to trade at a 110% ratio versus a 117% ratio a month ago.

From a sector perspective, while the US High Grade Index has seen a large risk migration over the last 6 months out of North American Banks, into Energy, Financials, and Basic Industries, the US High Yield Index has remained remarkably consistent with its sector concentration not changing significantly between October 3rd, 2011 and March 30th 2012. This lack of change in sector risk concentration is largely due to the idiosyncratic nature of High Yield, as well as the relative lack of concentration in financials (11.14% Market Value between Finance, North American and European Banks, contrasted with 29% concentration in those three sectors for High Grade).

Table 11: US High Yield Sector Risk Contributions

Lighthouse Sectors	30-Mar	29-Feb	3-Jan	3-Oct
Finance	11.93%	12.18%	12.23%	12.33%
Basic Industries	10.65%	10.24%	10.61%	12.98%
Energy	9.58%	8.57%	8.64%	10.76%
Media	9.17%	9.09%	8.67%	7.03%
Telecom - North American	9.16%	10.05%	9.99%	8.25%
Healthcare	6.56%	6.84%	6.82%	5.20%
Technology	4.76%	5.23%	5.76%	4.82%
Utilities - Electric	4.63%	4.75%	4.21%	3.92%
Retail	3.64%	3.70%	3.61%	3.15%
Transportation	3.62%	3.04%	2.42%	2.89%
Capital Goods - Manufacturing	3.48%	3.58%	3.77%	3.57%
Food&Beverage	3.42%	2.59%	2.99%	3.72%
Gaming&Lodging	3.04%	3.34%	2.95%	2.55%
Autos&Autoparts	3.02%	3.69%	4.57%	4.24%
Consumer Products	2.94%	3.19%	3.05%	3.01%
Aerospace&Defense	2.05%	2.35%	2.23%	1.82%
REITs	1.44%	1.36%	1.51%	1.75%
Utilities - Natural Gas	1.32%	1.34%	0.88%	1.93%
Pharmaceuticals	1.24%	1.25%	1.07%	1.31%
Banks - North American	1.08%	1.16%	1.43%	1.21%
Insurance - P&C	0.92%	0.88%	0.82%	0.80%
Telecom - European+	0.73%	0.38%	0.47%	0.94%
NonCorp - Higher Rated	0.59%			0.02%
Banks - European+	0.46%	0.49%	0.51%	1.03%
Supermarkets	0.45%	0.43%	0.41%	0.36%
Insurance - Life	0.11%	0.24%	0.29%	0.37%
Tobacco	0.03%	0.04%	0.04%	0.03%
Brokerages			0.03%	

Source: BofA Merrill Lynch Global Research

Table 12: H0A0 Issuer Risk Concentration

Issuer	30-Mar	29-Feb	3-Jan	3-Oct
Ally Financial Inc	2.64%	2.46%	1.44%	1.36%
HCA Inc	2.17%	2.06%	2.05%	1.70%
Sprint Nextel Corp	2.11%	2.06%	2.37%	1.33%
Energy Future	1.97%	2.12%	1.85%	1.13%
Reynolds Group	1.97%	1.13%	1.49%	1.42%

Source: BofA Merrill Lynch Global Research

Ally Financial is the largest contributor to risk, as it has increased from 1.44% on January 3rd to 2.64% on March 30th. HCA has remained relatively static since January 3rd while Sprint's has decreased. Energy Future Holdings and Reynolds Group round out the top 5 issuers with the most risk contribution (Table 12). Big movers this year include American General Finance (9th riskiest) and CIT (15th riskiest), both contributing less risk on March 30th then on January 3rd (0.39% and 0.59% less, respectively) and Clearwire (13th riskiest) and Charter (18th riskiest), which both are contributing more VaR (0.25% and 0.28% more, respectively).

European High Grade Corporate Index (ER00)

Although the European High Grade Corporate Index looks cheap relative to October 3rd, 2011, it has richened since the beginning of the year as well as since last month (Table 13). The decrease in risk from 4.33% to 3.86% since January 3rd has not kept pace with spreads having come in 96 bps during that time, resulting in a decrease in Ratio from 125% to 116%.

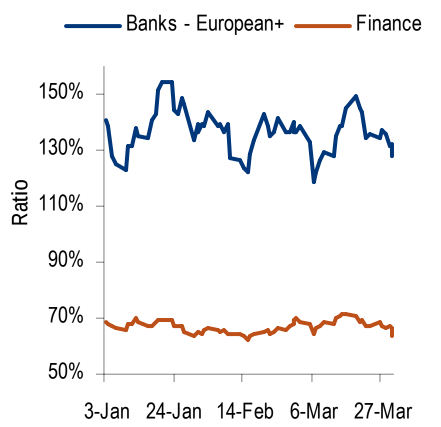
As we look at the sector distribution of VaR, we see that European Banks have remained relatively flat in terms of its contribution to risk, while Financials have actually steadily risen in risk concentration (Table 14). North American Banks, meanwhile, have fallen in risk substantially since October 3rd, but haven't moved much since January 3rd. Because risk in Lighthouse is a combination of exposure and issuer/issue risk (as well as correlation), the high weight in banks dominates the total portfolio VaR. Without a meaningful favorable move in the financial sectors (spread widening for the same level of risk or a big decrease in risk relative to spread), the overall index ratio will be hard pressed to move substantially. Chart 8 shows how the ratio for European Banks and Financials has changed since the beginning of the year. Notice that the ratio has gone down in both sectors over the last month, while being range-bound on the year.

Table 13: European High Grade Portfolio Stats

ER00	30-Mar	29-Feb	3-Jan	3-Oct
Ispread (bps)	171	188	267	256
Duration (yrs)	3.86	3.82	3.8	3.88
YTW	3.19%	3.37%	4.33%	4.40%
Risk	-1.47%	-1.54%	-2.13%	-3.06%
Ratio	116%	122%	125%	84%

Source: BofA Merrill Lynch Global Research

Chart 8: Ratio for Banks and Financials



Source: BofA Merrill Lynch Global Research

Table 14: European High Grade Sector Risk Contributions

Lighthouse Sectors	30-Mar	29-Feb	3-Jan	3-Oct
Banks - European+	40.83%	41.14%	42.14%	39.91%
Finance	10.29%	9.58%	9.46%	7.53%
Utilities - Electric	8.67%	9.34%	9.46%	8.73%
Banks - North American	7.00%	7.24%	7.90%	14.43%
Telecom - European+	5.39%	5.70%	4.74%	4.67%
Basic Industries	4.03%	3.69%	3.78%	4.19%
Energy	3.63%	2.85%	2.70%	2.90%
Insurance - Life	3.18%	3.08%	3.01%	2.31%
Transportation	2.02%	2.56%	2.41%	1.56%
Aerospace&Defense	2.01%	1.42%	1.07%	0.82%
Insurance - P&C	1.93%	1.85%	1.93%	2.17%
Capital Goods - Manufacturing	1.65%	1.61%	1.69%	1.89%
Autos&Autoparts	1.64%	1.56%	1.54%	1.97%
Utilities - Natural Gas	1.21%	1.13%	1.20%	1.15%
Supermarkets	0.98%	1.00%	0.98%	0.81%
NonCorp - Higher Rated	0.95%	1.21%	1.21%	0.62%
Food&Beverage	0.93%	0.96%	1.01%	0.67%
Pharmaceuticals	0.84%	0.88%	0.89%	1.23%
Media	0.73%	0.85%	0.71%	0.61%
REITs	0.55%	0.63%	0.60%	0.47%
NonCorp - Lower Rated	0.36%	0.39%	0.31%	0.21%
Consumer Products	0.28%	0.30%	0.32%	0.36%
Technology	0.24%	0.25%	0.22%	0.16%
Retail	0.21%	0.24%	0.27%	0.30%
Telecom - North American	0.18%	0.20%	0.19%	0.12%
Gaming&Lodging	0.12%	0.15%	0.12%	0.09%
Tobacco	0.11%	0.14%	0.12%	0.10%
Healthcare	0.03%	0.02%	0.02%	0.02%

Source: BofA Merrill Lynch Global Research

Within the ER00, Credit Agricole, Intesa Sanpaolo, Rabobank, GE Capital and Societe Generale make up the top 5 biggest risk contributors in the ER00 (Table 15). All the US banks in the top 20 are contributing less risk then they were on January 3rd, while Credit Agricole (1st riskiest), Intesa Sanpaolo (2nd), Societe Generale (5th), ING Bank (6th), Barclays (13th), Areva (14th) and Raiffeisen (17th) all are contributing more. Areva, in particular, has gone from a 0.37% risk contribution on October 3rd, to 0.54 on January 3rd, to 1.34% on March 30th.

Table 15: ER00 Issuer Risk Concentration

Issuer	30-Mar	29-Feb	3-Jan	3-Oct
Credit Agricole SA	4.69%	4.17%	4.34%	5.28%
Intesa Sanpaolo	3.75%	3.03%	3.45%	2.89%
Rabobank Nederland	2.84%	3.83%	3.73%	1.81%
General Electric Capital Corp	2.72%	2.81%	3.36%	3.40%
Societe Generale	2.04%	1.64%	1.78%	2.75%

Source: BofA Merrill Lynch Global Research

European High Yield Corporate Index (HE00)

Table 16: European High Yield Portfolio Stats

HE00	30-Mar	29-Feb	3-Jan	3-Oct
Ispread (bps)	670	704	926	889
Duration (yrs)	3.3	3.24	3.32	3.69
YTW	8.21%	8.60%	11.24%	11.03%
Risk	-4.79%	-4.64%	-6.23%	-7.89%
Ratio	140%	152%	149%	113%

Source: BofA Merrill Lynch Global Research

As Table 16 highlights, the European High Yield Index has rallied 229 bps in the last 6 months, going from 889 bps on October 3rd, 2011 to 670 bps on March 30th, 2012. Consequently, yield to worst has declined substantially from 11.03% to 8.21%. Meanwhile, its VaR has fallen from -7.89% on October 3rd to -6.23% on January 3rd to currently rest at -4.79%. Like European High Grade, the ratio of spread to risk for High Yield has declined over the course of the year as spread tightening has outpaced the reduction in risk.

From a sector perspective, risk concentration has become more dispersed, as Basic Industries and Finance are both down over the course of the year while Capital Goods – Manufacturing is up (Table 17). European Banks are contributing more risk to the total Portfolio VaR then they have all year, with concentration more then doubling since October 3rd, 2011.

Table 17: European High Yield Sector Risk Contributions

Lighthouse Sectors	30-Mar	29-Feb	3-Jan	3-Oct
Basic Industries	15.28%	16.26%	17.88%	19.81%
Finance	14.63%	15.47%	16.14%	14.32%
Capital Goods - Manufacturing	10.28%	8.00%	7.72%	7.84%
Media	9.89%	9.53%	10.54%	8.71%
Banks - European+	9.03%	8.42%	6.46%	3.90%
Telecom - European+	7.23%	7.60%	5.82%	4.50%
Transportation	5.64%	4.98%	4.57%	4.09%
Food&Beverage	5.04%	5.10%	6.08%	6.37%
Telecom - North American	4.66%	4.81%	4.84%	5.40%
Autos&Autoparts	4.26%	5.07%	5.19%	7.28%
Healthcare	3.66%	4.02%	3.92%	3.65%
Insurance - Life	2.15%	2.21%	1.67%	3.15%
Gaming&Lodging	1.62%	1.85%	1.65%	1.75%
Energy	1.43%	1.51%	1.72%	1.88%
Technology	1.18%	1.32%	1.73%	2.02%
Consumer Products	1.08%	1.14%	1.31%	2.51%
Retail	0.67%	0.65%	0.65%	0.47%
Utilities - Electric	0.66%	0.82%	0.90%	0.25%
Aerospace&Defense	0.58%	0.63%	0.62%	1.14%
Pharmaceuticals	0.58%	0.61%	0.60%	0.98%
Insurance - P&C	0.24%			
NonCorp - Higher Rated	0.21%			

Source: BofA Merrill Lynch Global Research

Table 18: HE00 Issuer Risk Concentration

Issuer	30-Mar	29-Feb	3-Jan	3-Oct
Wind Acquisition Finance SA	4.65%	4.79%	4.81%	5.30%
Lafarge SA	2.68%	2.56%	2.72%	3.36%
Caixa Geral de Depositos SA	2.53%	2.66%	1.91%	
Hellenic Telecom Org SA	2.18%	2.01%	1.56%	
Groupama SA	1.96%	1.98%	1.52%	0.58%

Source: BofA Merrill Lynch Global Research

Wind Acquisition, Lafarge, Caixa Geral de Depositos, Hellenic Telecom and Groupama SA are the top 5 biggest risk contributors to the HE00. Caixa and Hellenic Telecom weren't in the index in October, 2011, so these are new entrants in 2012. Generally, there hasn't been a massive migration in risk concentration in the HE00, though Groupama has increased from 1.52% of the total VaR on January 3rd to 1.96% on March 30th while Heidelberg Cement has gone from 2.63% to 1.87% during that time. Table 13 highlights the top 5 biggest risk contributors to the HE00 Index.

Michael Contopoulos +1 646 855 6372
Rachna Ramachandran +44 20 7995 8542
Marlane Pereiro +1 646 855 6362

Cross Reference

Quantitative Portfolio Strategist, 08 March 2012

Relative Value Sector Analysis

Last month we proposed several methods for comparing sector returns between Equities, Convertibles, High Grade and High Yield Corporates (see sidebar for last month's piece). We continue with that analysis this month, screening our universe for out/under performance.

US Sector Performance in March

When comparing total return on the S&P500, Merrill Lynch's US Convertible Index (VXA0), US High Grade Corporate Master Index (C0A0) and US High Yield Master II Index (H0A0), equities outperformed all other asset classes in 8 of 10 sectors. Equity outperformers included Financials, Tech, Consumer Discretionary, Healthcare, Materials, Industrials, Utilities, and Consumer Staples. Convertibles outperformed in the Telecom sector while High Yield had the least negative return in Energy. All High Grade credit sectors underperformed, with 8 of 10 sectors being the worst performers among the four asset classes. Only the S&P500 Energy and Convertible Materials sectors performed worse then High Grade in March (Table 19).

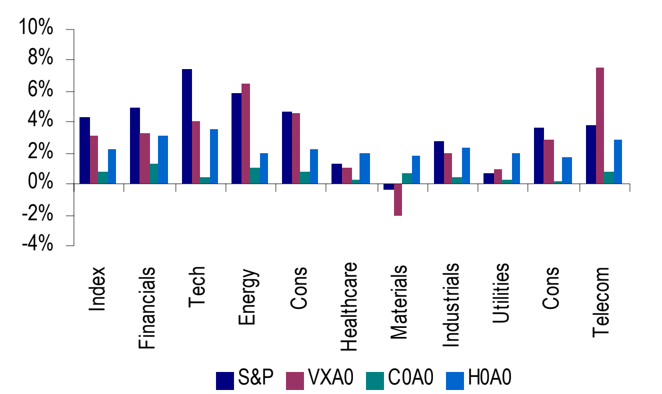
Table 19: March Sector Total Return by Asset Class

Sector	S&P	VXA0	H0A0	C0A0
Financials	7.52%	1.76%	0.67%	0.29%
Tech	5.07%	2.03%	-0.20%	-1.10%
Energy	-3.34%	-2.08%	-0.34%	-1.05%
Cons Discret	4.60%	1.14%	0.21%	-1.11%
Healthcare	4.44%	1.13%	-0.40%	-1.09%
Materials	0.37%	-2.73%	-0.55%	-1.02%
Industrials	1.24%	0.92%	-0.12%	-0.70%
Utilities	1.36%	0.74%	-1.16%	-1.17%
Cons Staples	3.43%	-0.05%	0.59%	-0.98%
Telecom	1.21%	3.92%	-0.37%	-1.15%

Source: BofA Merrill Lynch Global Research

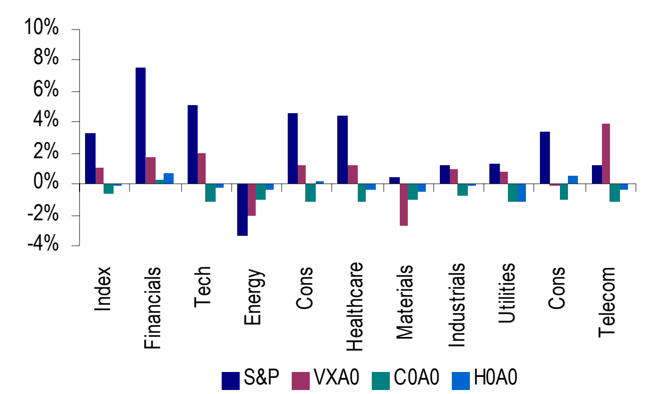
Sector specific breakdowns, as shown in Chart 9 and Chart 10 below highlight a general shift in returns from February to March. Whereas in February we see positive returns across the board with the exception of Convertible Materials, in March we see an indiscriminant decrease in returns across asset classes, the most notable of which are the Energy and Material sectors which have dropped amid rising oil supplies and concern about slower demand.

Chart 9: February 2012 Returns



Source: BofA Merrill Lynch Global Research

Chart 10: March 2012 Returns



Source: BofA Merrill Lynch Global Research

Three Points on R^2

Performing a regression analysis on S&P500 versus High Grade credit, High Yield credit, and Convertibles emphasizes three points: namely that the relationship between Equity and Converts is strong, Equity and High Yield is spotty, and Equity and High Grade is virtually non-existent. Table 20 below highlights equity versus convertible regressions with an R^2 of greater then .65.

Table 20: Equity vs. Convertibles with R^2 > .65

	Financials	Tech	Energy	Cons Discret	Healthcare	Materials	Industrials	Utilities
Equity Rtn	7.52%	5.07%	-3.34%	4.60%	4.44%	0.37%	1.24%	1.36%
Convert Rtn	1.76%	2.03%	-2.08%	1.14%	1.13%	-2.73%	0.92%	0.74%
Beta	0.50	0.58	0.51	0.95	0.60	0.53	0.69	0.82
Rtn Implied by Beta	3.74%	2.95%	-1.71%	4.38%	2.64%	0.20%	0.86%	1.11%
Diff in Rtn and Rtn Implied by Beta	-1.98%	-0.92%	-0.37%	-3.24%	-1.51%	-2.93%	0.06%	-0.37%

Source: BofA Merrill Lynch Global Research

Note: To get a sense of out/under performance we show the realized total return for these sectors and asset classes in the month of March, the beta when regressing historical equity returns versus convertible returns for that sector, as well as what the beta would imply as the return had the historical relationship held true in March.

We gather from Table 20 that all sectors underperformed the corresponding Equity sectors in March with the exception of Industrials which only slightly outperformed.

In Table 21 and Table 22 we also make note of the 2 sectors where equity versus HY credit yielded a R^2 of greater than .65 (Financials and Technology), as well as the 1 sector where HG versus HY had an R^2 of greater then .65 (Financials). In the case of HG vs HY the monthly return was very much inline with what the historical relationship would suggest as there was virtually no out/underperformance between HG and HY Financials using this methodology. The same can not be said for Equity versus HY, where we see that both HY Financials and Tech underperformed their Equity counterparts.

Table 21: Equity vs. High Yield with R^2 > .65

	Financials	Tech
Equity Rtn	7.52%	5.07%
High Yield Rtn	0.67%	-0.20%
Beta	0.56	0.51
Rtn Implied by Beta	4.20%	2.56%
Diff in Rtn and Rtn Implied by Beta	-3.53%	-2.77%

Source: BofA Merrill Lynch Global Research

Table 22: High Grade vs. High Yield with R^2 > .65

	Financials
High Grade Rtn	0.29%
High Yield rtn	0.67%
Beta	2.44
Rtn Implied by Beta	0.71%
Diff in Rtn and Rtn Implied by Beta	-0.04%

Source: BofA Merrill Lynch Global Research

A different point of view: Beta Adjusted Returns

The realized total return of Equity in March underperformed the return implied by the beta with its index more then any other asset class in 4 of the 10 sectors. This suggests that from a relative perspective (to each asset class's respective benchmark) Equity Industrials, Tech, Telecom, and Utilities may have the most room to move positive in coming months. Additionally Convertible Energy, Healthcare, and Materials, and High Yield Consumer Discretionary and Consumer Staples jump out as underperformers in March.

Table 23: Rank of Percentage difference in Total Rtn vs. Beta Adjusted Expected Rtn

	Equity	Convert	High Yield	High Grade
Cons Discret	2	3	4	1
Cons Staples	1	3	4	2
Energy	3	4	1	2

Table 23: Rank of Percentage difference in Total Rtn vs. Beta Adjusted Expected Rtn

	Equity	Convert	High Yield	High Grade
Financials	1	2	4	3
Healthcare	2	4	1	3
Industrials	4	3	2	1
Materials	3	4	1	2
Tech	4	2	3	1
Telecom	4	1	2	3
Utilities	4	2	1	3

Source: BofA Merrill Lynch Global Research

Note: We regress each asset class within each sector with its corresponding index, and then calculate the expected return of that sector as implied by the beta. We then look at the percentage differences between the actual sector return and the return implied by the beta and rank the percentage differences across asset classes within sectors.

A final point: Risk Adjusted Returns (relative to Index)

Table 24 shows the ratio of the difference between the YTD Total return of the sector and the benchmark index to the standard deviation of the sector returns over the benchmark.

Table 24:

	Equity	Convert	High Yield	High Grade
Cons Discret	0.3 (2)	6.93 (1)	0.07 (3)	-0.19 (4)
Cons Staples	5.79 (1)	-0.66 (4)	0.14 (2)	-0.15 (3)
Energy	-0.18 (3)	-0.29 (4)	0.59 (1)	-0.12 (2)
Financials	0.22 (3)	0.49 (2)	0.13 (4)	0.61 (1)
Healthcare	0.37 (3)	5.24 (1)	0.72 (2)	-0.2 (4)
Industrials	-0.3 (3)	-4.74 (4)	0.28 (1)	-0.19 (2)
Materials	-0.29 (4)	-0.18 (3)	3.8 (1)	-0.07 (2)
Tech	0.28 (3)	0.34 (2)	0.53 (1)	-0.08 (4)
Telecom	-0.44 (4)	0.21 (2)	0.74 (1)	-0.13 (3)
Utilities	-0.63 (3)	-3.06 (4)	-0.35 (2)	-0.3 (1)

Source: BofA Merrill Lynch Global Research

Note: Normalizing the returns by standard deviation allows for a more just comparison in terms of dollars earned per unit of risk, while by measuring performance relative to the benchmark, we hope to reduce the effect of understating credit risk. Once again, we rank each sector's ratio across asset classes to get a sense of relative performance.

COAS Relative Value

Marlane Pereiro +1 646 855 6362

Cross Reference

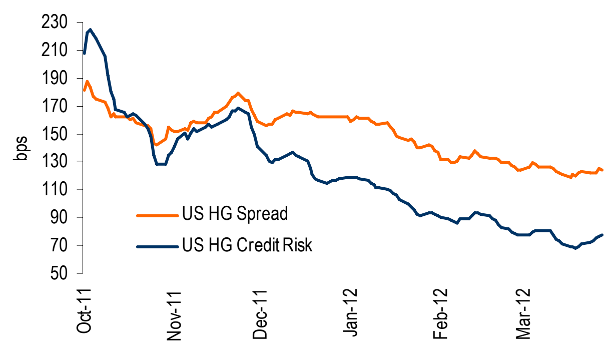
Introduction to Lighthouse, 30 July 2010

US High Grade

HG Universe spreads and COAS Credit Risk were tighter at the end of March, though only slightly from February levels. Credit spreads tightened 1bp from 126bps to 125bps, and credit risk tightened 2bps from 79bps to 77bps. Equity prices increased by a 0.5% through the end of March, whereas implied volatility decreased 0.4 vol points over the same time period.

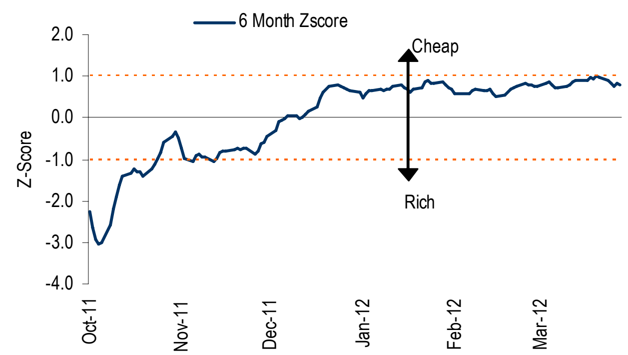
We define our COAS measure as the difference between credit spread and credit risk – in other words the excess compensation for credit risk (Chart 11). Results presented here are based on averages across High Grade issuers. Because models may suffer from misspecification we prefer to look at the z-score of the COAS- the number of standard deviations the current value is relative to the 6-month average. We consider a value greater than one or less than negative one to be a significant signal. With a z-score of 0.8, the US universe is below the significance threshold, but still highlights the cheap bias of the valuation imbalance between the debt and equity markets relative to the 6-month trading range. Chart 12 shows the six-month COAS z-score for the predominately bond-based universe corresponding to Chart 11.

Chart 11: US HG Spread vs. Risk



Source: BofA Merrill Lynch Global Research
Note: Based on averages across 375 high grade issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

Chart 12: US HG Credit cheap to equities



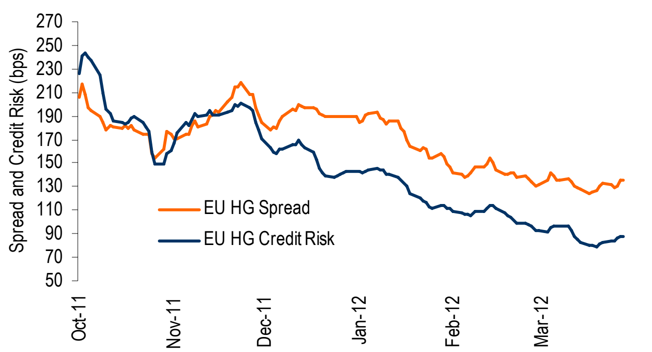
Source: BofA Merrill Lynch Global Research
Note: Based on averages across 375 high grade issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

European High Grade

European HG debt continues to trade cheap relative to equity as the difference between spread and risk (COAS) remains in positive territory. The 6-month z-score of 0.95 as of the end of March emphasizes that debt is cheap to equity, but not significantly cheap as the z-score remains just under the significance threshold of 1 (Chart 14).

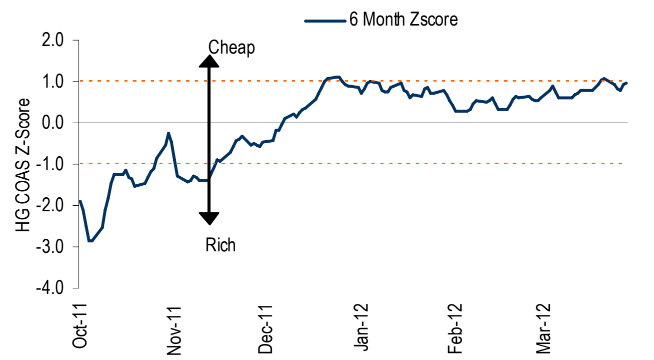
European Credit spreads widened by 1bp to 136bps whereas risk tightened by 9bps (97bps vs. 88bps). Equity prices increased 1% over the same period. Higher beta sectors, including energy (1.2 six-month z-score), finance (1.4 six-month z-score), gaming (1.2 six-month z-score), and insurance (1.1 six-month z-score) lead to relative cheap credit valuations during March.

Chart 13: EU HG Spread vs. Risk



Source: BofA Merrill Lynch Global Research
Note: Based on averages across 204 high grade issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

Chart 14: EU HG Credit is near cheap to equities

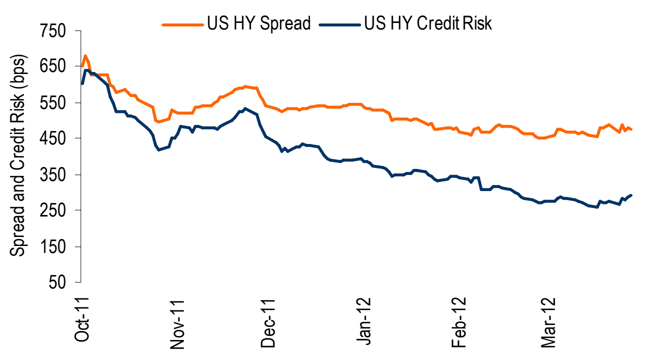


Source: BofA Merrill Lynch Global Research
Note: Based on averages across 204 high grade issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

US High Yield

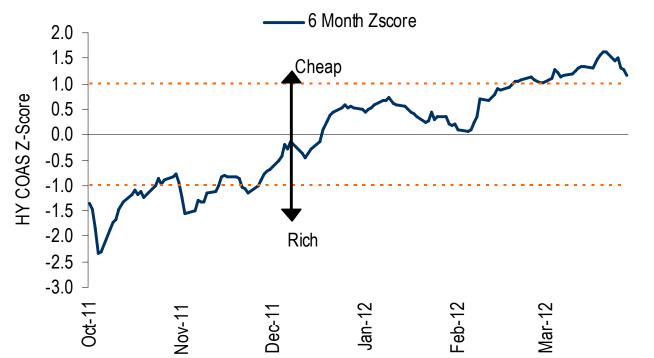
US high-yield issuer spreads increased 5% during March (453bps vs. 477bps), while credit risk increased 6% (273bps vs. 291bps) (Chart 15). Equity prices decreased 3%, and equity option implied volatility increased 3 vol points. US High Yield valuation is cheap with a 6-month z-score of 1.2 as of month end (Chart 16).

Chart 15: US HY Spread vs. Risk



Source: BofA Merrill Lynch Global Research
Note: Based on averages across 69 high yield issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

Chart 16: HY Credit looks cheap to equities



Source: BofA Merrill Lynch Global Research
Note: Based on averages across 69 high yield issuers. Credit spreads are from bonds or CDS depending on which is deemed liquid.

Europe versus US Relative Value

As of March 30th, the European universe is trading 0.3bps cheap to the US. Our US High Grade COAS value is 47.4bps, while the Europe High Grade COAS value is 47.7bps (Chart 17). Calculating the z-score on the difference in COAS, we see that the European universe of COAS names currently has a cheap bias to its US counterpart, as the six-month z-score stands at 0.7 as of month-end March (Chart 18).

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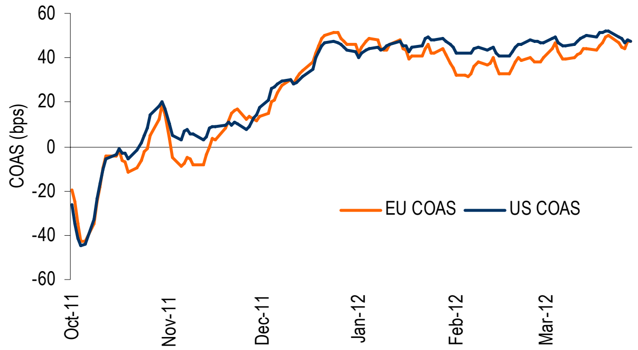
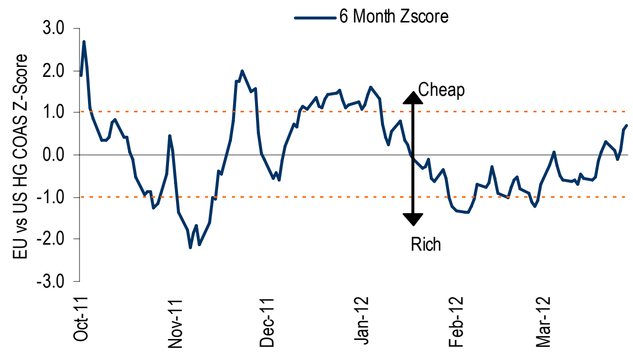
Chart 17: European COAS vs. US COAS



Source: BofA Merrill Lynch Global Research

Chart 18: Europe rich to US



Source: BofA Merrill Lynch Global Research

Link to Definitions

Credit

Click here for definitions of commonly used terms.

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