Smarter beta: Multi-factor investing for corporate credit

Olivier Laplénie finds that smart beta fixed income for corporate debt is best informed by a subtle combination of bond and equity indicators

Smart beta has generated greater demand from clients around the world for alternatives to traditional indices and there has been considerable response from asset managers of equities portfolios. In fixed income, however, progress in smart beta has been later and slower because of the relative lack of transparency in bond markets and consequent paucity of data.

The latest smart beta offering from THEAM overcomes these obstacles by virtue of our deep experience in both fundamental and quantitative fixed income investing as well as a rich proprietary database of historical transactions. Smart beta strategies can flop in practice because of the naivety of the portfolio construction and transaction costs. We have used our parent, BNP Paribas Investment Partner's extensive research capabilities to thoroughly model a realistic and robust proposition. The corporate bond strategy we demonstrate here is available in pooled or segregated form with reasonable turnover, reasonable transaction costs, fair exposure to the credit benchmark beta and still sizeable net alpha: 110bps annualised for European Investment Grade[1]; 155bps annualised for US Investment Grade[1].

We have achieved these figures thanks to a four-factor model that combines fundamentals and market information for both debt and equity in a company. Our universe is limited to companies with public issuance (we also exclude subordinated debt). But this still leaves us with upwards of 80% of the total market in the US and Europe. We then control for size by limiting weighting to a fixed number of issues. This brings down the weighting of banks, for example, from 22% in the BoAML US IG index to 11% on average from 2000 to 2014.

Our four factors are: value, quality, low risk and momentum. As readers will find out, these are not necessarily used as positive criteria. Fixed income investing philosophically is more about avoiding losers (defaults) than picking winners. And so, in using factors or smart beta, THEAM often finds they help to exclude bad issues and issuers.

A perfect example is momentum. We don't find convincing academic evidence that momentum works as a positive selection criterion in fixed income. We do believe, however, that negative equity momentum is a reliable indicator to avoid debt issued by the same company. Strong asset growth is another indicator we use to demote issues: we are wary of companies that have been ploughing cash into new enterprises.

For Value, too, we use an equity indicator in an unconventional way. Companies with low Price-to-Book are traditionally viewed positively by Value equity investors. But for our smart beta fixed income strategy, we find more often a low P/B indicates a value trap and we sort credit issues accordingly, in direct contrast to many equity smart beta strategies.

The other indicator we use to sort for Value is credit spread compared to distance-to-default. We measure this by cross-sectional regressions between comparable bonds. For the effectiveness of this indicator, see figure 1, which illustrates credit spreads versus distance-to-default for US Investment Grade since 2000. Like all our indicators, the component issues are sorted into quintiles on this measure monthly. It is clear from the chart that through bull and bear markets the first quintile outperforms consistently. This pattern emerges for European Investment Grade and US High Yield too – another dimension of factor consistency.

Quality also has two indicators aimed at staying clear of companies at high downgrade or default risk. We avoid firms which generate poor cashflow and those that have recently gone to the capital markets to raise finance, for example from an IPO or a jumbo debt issue.

The final factor, Low Risk, is informed by two indicators: low leverage, which we define as the debt-to-asset ratio, and distance-to-default. We prefer using company data from financial reports combined with equity volatility (which enters into distance-to-default calculation) rather than credit ratings, which tend to be lagging.

The combination with credit beta has been well delineated: all four factors are tested for their validity above the credit beta as well as excess returns over Treasuries to remove rate effects. And the factors have also been established as fairly independent of each other.

The strategy is implemented systematically. It can be tempting to discover a great idiosyncratic pick but we prefer to stay disciplined with our four-factor model because we are comfortable with the consistency shown thus far and won't sacrifice proven consistency for a sudden flash in the pan.

The process, however, is not finished here. THEAM does not want to see these sources of alpha wrecked by heavy transaction costs. Instead we have sought to bring turnover down to 6-7% per month, which we believe is reasonable, by optimising the portfolio. This has meant losing some gross alpha but has significantly improved net alpha compared to simple replication of the portfolio resulting from the four factor's combination. The result is a strategy that can outperform conventional credit indices without taking a wildly divergent performance path. We believe that consistent outperformance of the traditional benchmark indices is what European institutional investors desire.

THEAM's new offering aims for such consistent outperformance, built on realistic expectations of how bond markets actually work.

Figure 1: Cumulated Alpha by Quintile (Gross)
Credit Spread vs Distance-to-Default Indicator, for US Investment Grade universe

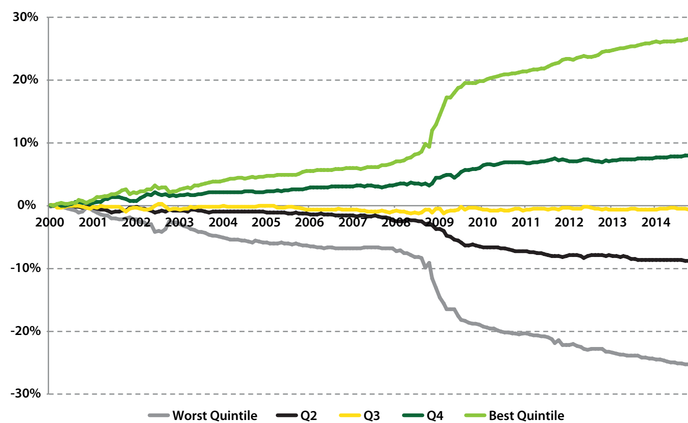

Table 1: Factors, excess returns versus treasuries

		Beta	Annualised Alpha (Gross)	Jensen Information Ratio (Gross)
Quality	US IG	0.92	0.70%	0.43
	EU IG	0.65	0.81%	0.85
	US HY	0.80	2.54%	0.94
Value	US IG	0.96	1.67%	0.98
	EU IG	0.79	0.88%	0.93
	US HY	0.83	3.49%	1.23
Momentum	US IG	0.93	0.77%	0.53
	EU IG	0.74	0.79%	0.95
	US HY	0.81	2.64%	0.98
Low Risk	US IG	0.92	1.04%	0.71
	EU IG	0.70	0.70%	0.87
	US HY	0.83	2.06%	0.77

Source: THEAM and BNP Paribas IP calculation, using BofA Merrill Lynch index data from 2000 to 2014:
US IG BofA ML US Corpate Investment grade
US HY BofA ML US High Yield BB-B, ex Financials
EU IG BofA ML EUR Corporate Investment Grade
Past performance is not a reliable indicator of future performance

FOOTNOTE
1 Source: THEAM and BNP Paribas Investment Partners calculation, from 31 Dec 1999 to 31 Dec 2014

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