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The Best Worst Sectors

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Sector selection is a popular strategy for many investment grade bond investors. For the US Corporate Index, just picking the widest sectors has historically been a way to improve returns. We look into why the strategy works and how it might be implemented by investors with difference goals.

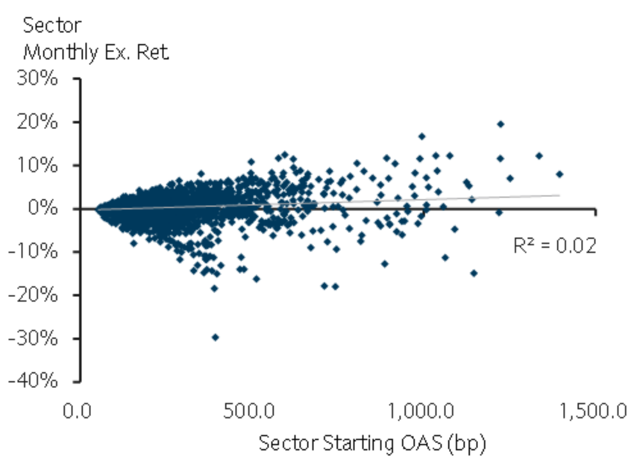
When we write about investment grade sectors, we frequently note that the widest sectors tend to outperform (see, for example, *US Credit Focus: Sector Update*). Spreads are now close to cycle tights, which leaves less room for further spread compression. As a result, the extra return from sector selection has increased in relative importance, making this a good time to review why we think buying the widest sectors can help generate extra risk-adjusted return.

The starting point is Figure 1, which shows that, on average, sectors that start with wider spreads outperform. The chart is noisy, but framed simply, the median one-month return for sectors that start between 0 and 100bp of OAS is 4bp, but for sectors with OAS starting between 100 and 250bp, that rises to 19bp, and then climbs to 226bp for sectors that start wider than 500bp.

Some of the effect seen in Figure 1 likely comes from sectors trading at wider spreads at the same time the index is trading wider, which generally leads to higher returns across the whole universe. But as Figure 2 demonstrates, even after adjusting for US Corporate Index starting OAS and returns, sectors that begin a month trading wider than the index tend to beat the index (and those that start tighter tend to lag).

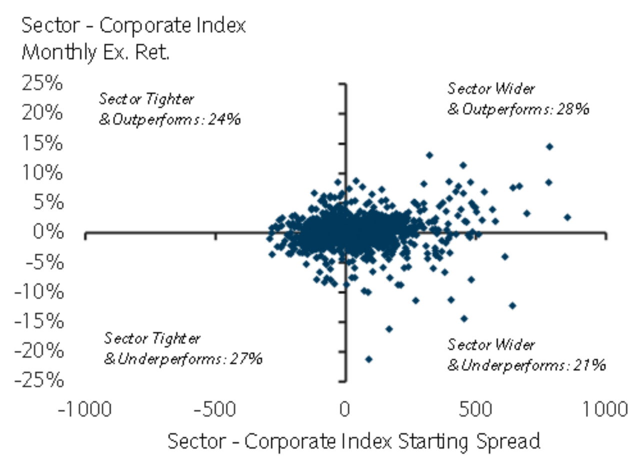
One aspect of the outperformance is just beta. We consider spread to be an estimator of forward beta, and it makes sense that higher-beta parts of the market would have higher average returns. They usually return more than the index during periods of positive market returns, and with the US Corporate Index posting excess return gains in about 56% of months since 2007, have performed better than the market on average. Thus, we would expect the relationship between sector performance and spread to look like Figure 3 during

FIGURE 1
Wider Sectors Have Higher Returns Than Tighter Sectors, but the Relationship Is Noisy



Source: Bloomberg Barclays Indices, Barclays Research

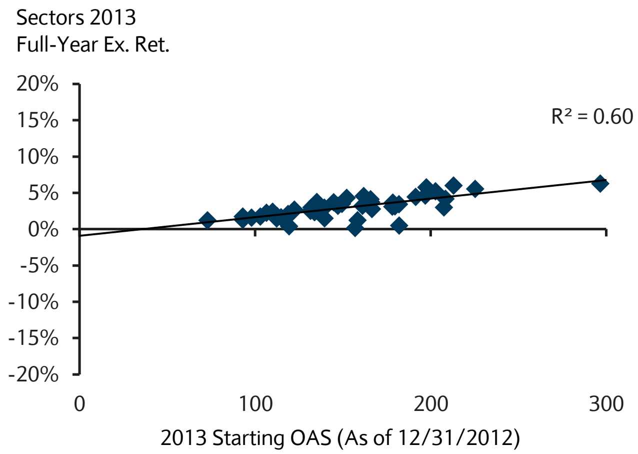
FIGURE 2
Wider Sectors Beat and Tighter Sectors Lag the Index



Note: The number of sectors starting wider and tighter than the index is not symmetric because sectors have unequal weights.
Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 3

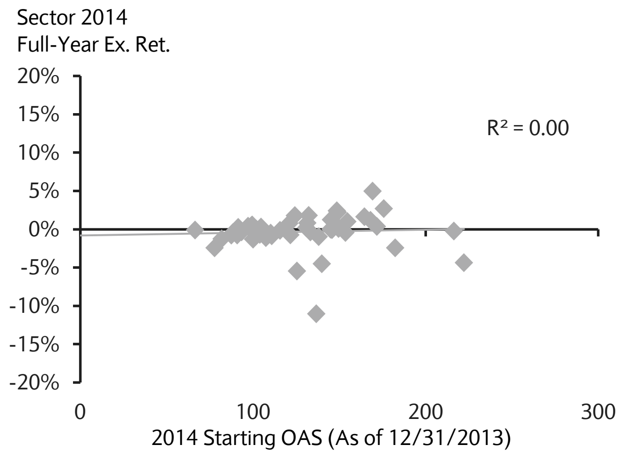
In Typical Year When the Index Performs Well (Such as 2013), Sector Spreads and Betas Are Closely Related…



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 4

…But in a Typical Sell-off (as in 2014), Betas are Much Less Tightly Linked to Starting Spreads



Source: Bloomberg Barclays Indices, Barclays Research

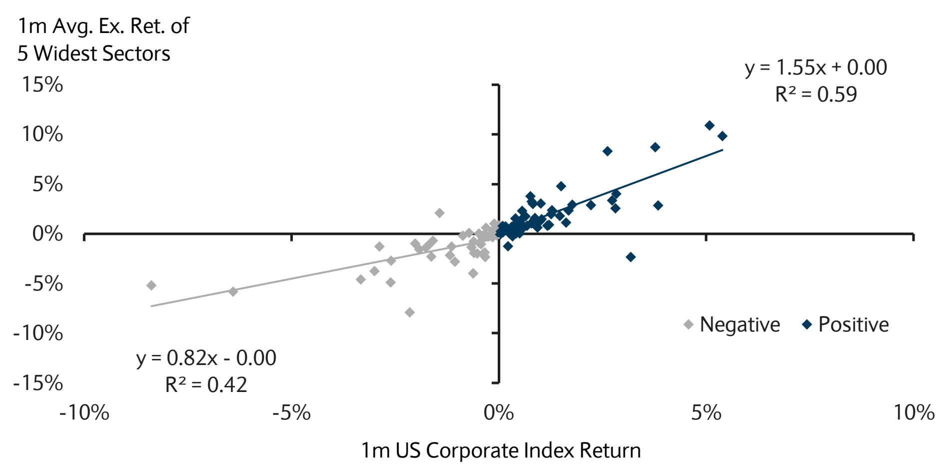
up years, with returns increasing linearly with starting spread. But Figure 4 suggests that the effect might be due to more than just beta. It shows a year when the market sold off, but rather than producing negative excess returns that became more negative with wider spreads, returns were essentially unrelated to starting spread.

The asymmetric relationship between upside and downside beta suggests that wider-spread sectors might actually produce incremental risk-adjusted outperformance. Instead of merely trading with higher beta, the widest sectors have positive convexity with the index. When the market is up, they are up more. But when the market falls, they fall by only an average amount.

Figure 5 demonstrates that convexity in a grouping of the five widest sectors. The downside beta is only about half of the upside beta, and beta explains less of the returns in the downside cases. The degree of convexity suggests that it should be possible to generate real alpha by tilting toward the wider-trading sectors.

FIGURE 5

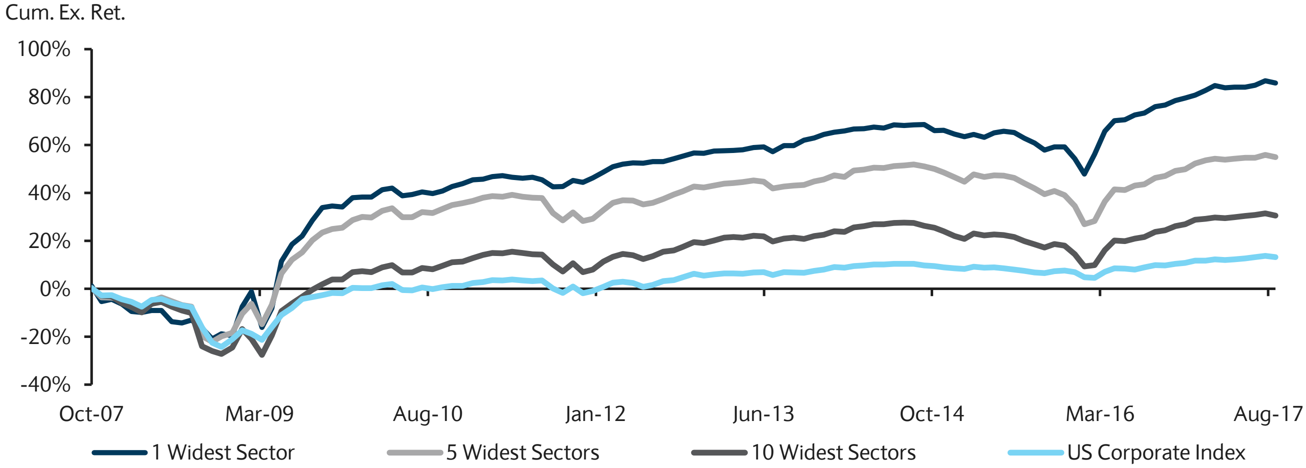
Grouping the Five Widest Sectors Shows That They Have a More Attractive Convexity Profile Than the Corporate Index



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 6

Just Owning the Widest Sectors Can Generate Significant Outperformance versus the US Corporate Index



Note: Cumulative non-compounded return. Source: Bloomberg Barclays Indices, Barclays Research

There are a couple of different ways to approach this:

For unconstrained investors, owning some collection of the widest sectors might be the most effective approach. As Figure 6 demonstrates, the widest single sector tends to outperform, as do other combinations of the widest. Each combination produces Sharpe rations higher than that of the US Corporate Index (more than 3.0x higher for the single widest sector, about 2.5x for the five widest, and about 1.5x for the 10 widest).

There are some advantages to owning more sectors. It reduces the total volatility of the strategy and increases the tracking relative to the US Corporate Index. It also improves the investability as a strategy, given that some sectors could have small index weights and, therefore, limited investment opportunities and poor liquidity. Expanding to several sectors (weighted by market value) improves the chances of being able to implement the strategy effectively.

For benchmarked investors a more compatible approach might be to tilt index weights slightly toward the wider sectors. In practice, the portfolio can be re-weighted depending on how far its spread is from the index. For example, if the index is trading at 100bp, a sector trading at 125bp might be increased to 1.25x its natural weight, and one trading at 200bp might be raised to 2.0x its natural weight.

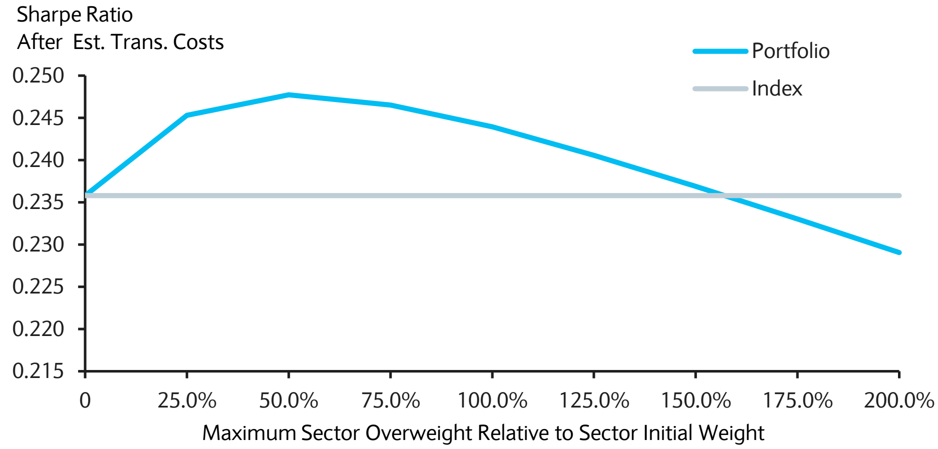
It also makes sense to pick a maximum degree that a sector might be overweighted, because:

- Some sectors are small, so an excessive overweight would be undesirable; and
- The larger the maximum overweight, the more trading is required, which can create a drag on performance

If we make some simple assumptions about transaction expenses (a 70bp round-trip average trade cost), it looks like an overweight of around 50% leads to the best Sharpe ratio, and a 150% cap captures the most extra return while still producing risk-adjusted performance similar to the overall index (Figure 7).

FIGURE 7

For Investors Who Want to Own the Whole Index, Capping Sectors at 50% over Their Index Weighting Seems to Offer the Best Risk-Adjusted Performance

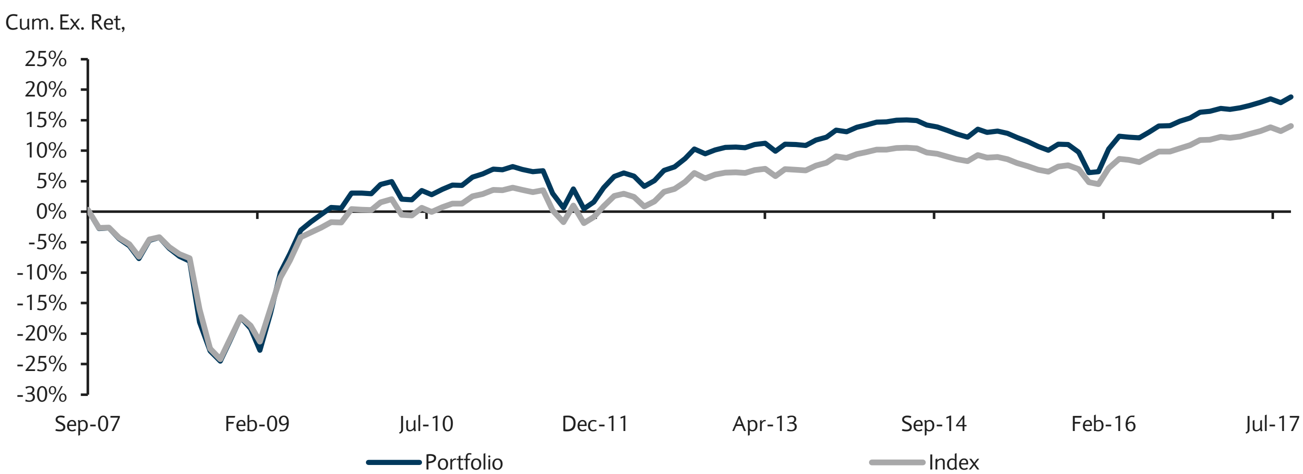


Source: Bloomberg Barclays Indices, Barclays Research

Applying the same cap, a portfolio using that weighting scheme could have generated about 40bp a year more than the index (Figure 8).

FIGURE 8

Tilting Weights toward the Wider-Trading Sectors Can Generate about 40bp/Year of Extra Return

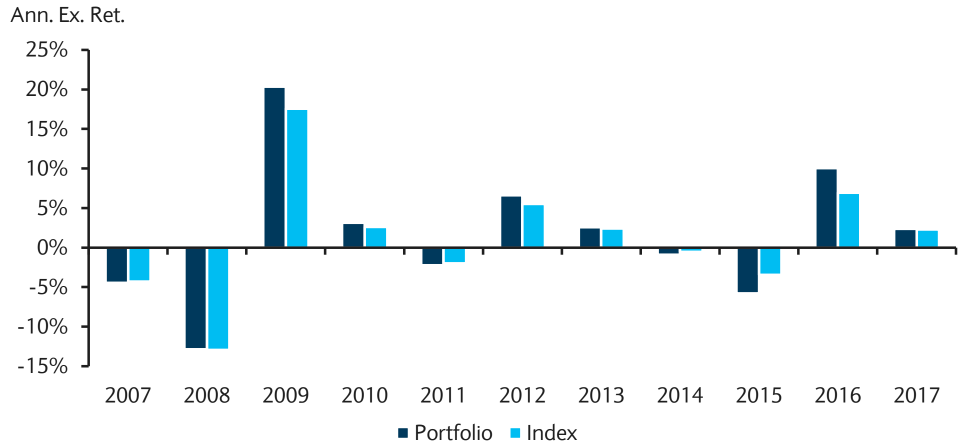


Source: Bloomberg Barclays Indices, Barclays Research

The alternative portfolio did better than the index in 64% of years (Figure 9), but also added some extra beta. In keeping with our view on this strategy, the beta was higher in up years than in down years, leading to the total outperformance.

FIGURE 9

Portfolios That Overweight the Widest Sectors Have More Upside in Up Years and Do Not Always Have More Downside in Down Years



Source: Bloomberg Barclays Indices, Barclays Research

Appendix – Current Weights for Sector Portfolios

Sector	OAS	US Corporate Index Weight	5-Widest Portfolio	10-Widest Portfolio	50% OW Capped Portfolio	150% OW Capped Portfolio
Midstream	154.6	3.9%	32.2%	21.8%	4.6%	5.2%
Metals & Mining	151.8	1.0%	8.7%	5.9%	1.2%	1.4%
Wirelines	151.8	4.6%	38.3%	25.9%	5.4%	6.1%
Independent Energy	149.5	2.0%	17.0%	11.5%	2.4%	2.7%
Refining	135.5	0.5%	3.8%	2.6%	0.5%	0.6%
Cable Satellite	131.3	1.9%		10.5%	2.1%	2.3%
Media Entertainment	128.5	2.4%		13.6%	2.7%	2.9%
Supermarkets	127.7	0.3%		1.6%	0.3%	0.3%
Oil Field Services	127.1	0.4%		2.2%	0.4%	0.5%
Retail REITS	124.7	0.8%		4.4%	0.8%	0.9%
Packaging	122.7	0.0%			0.0%	0.0%
Paper	120.9	0.5%			0.6%	0.6%
Healthcare REITS	119.5	0.6%			0.6%	0.7%
Life Insurance	119.3	1.5%			1.6%	1.7%
Other REITS	118.0	0.5%			0.5%	0.6%
Building Materials	115.5	0.3%			0.3%	0.3%
Wireless	112.3	1.0%			1.0%	1.0%
Lodging	111.1	0.1%			0.1%	0.2%
Other Utility	106.8	0.1%			0.1%	0.1%
Natural Gas	102.9	0.5%			0.5%	0.5%
Other Financial	102.2	0.0%			0.0%	0.0%
Office REITS	101.3	0.3%			0.3%	0.3%
Chemicals	100.7	1.7%			1.7%	1.7%
P&C	100.2	1.7%			1.7%	1.7%
Index	**97.1**	**100.0%**				

Sector	OAS	US Corporate Index Weight	5-Widest Portfolio	10-Widest Portfolio	50% OW Capped Portfolio	150% OW Capped Portfolio
Electric	96.5	6.3%			6.3%	6.3%
Automotive	96.1	2.3%			2.3%	2.2%
Brokerage /Asset Managers/Exchanges	96.0	0.9%			0.8%	0.8%
Airlines	95.9	0.4%			0.4%	0.4%
Railroads	94.8	1.3%			1.3%	1.3%
Tobacco	93.5	1.2%			1.2%	1.2%
Finance Companies	93.1	0.9%			0.9%	0.9%
Healthcare	93.0	3.3%			3.2%	3.2%
Apartment REITS	90.2	0.3%			0.3%	0.3%
Retailers	88.8	3.1%			3.0%	2.9%
Leisure	87.7	0.0%			0.0%	0.0%
Health Insurance	86.7	1.1%			1.1%	1.0%
Other Industrial	85.8	0.4%			0.4%	0.3%
Home Construction	85.1	0.1%			0.1%	0.1%
Pharmaceuticals	84.3	5.8%			5.5%	5.3%
Restaurants	84.0	0.4%			0.4%	0.4%
Food & Beverage	83.8	4.3%			4.1%	4.0%
Transportation Services	83.5	0.5%			0.4%	0.4%
Banking	82.8	22.8%			21.6%	20.7%
Aerospace/Defense	81.7	1.3%			1.3%	1.2%
Consumer Cyclical Services	80.4	1.5%			1.4%	1.3%
Diversified Manufacturing	80.2	2.3%			2.2%	2.0%
Environmental	78.5	0.2%			0.2%	0.2%
Technology	78.2	8.6%			8.0%	7.6%
Consumer Products	70.3	1.0%			0.9%	0.8%
Integrated Energy	67.1	2.7%			2.4%	2.2%
Construction Machinery	50.9	0.8%			0.6%	0.5%

Source: Bloomberg Barclays Indices, Barclays Research

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