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Why Discretionary Equity Investors Should Care about Credit Markets

We document two use cases to show that incorporating firm-level credit market information, such as bond momentum, can be used by discretionary equity investors as an effective overlay for sector screening and stock selection.

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Introduction

Equity investors have long been following credit markets' aggregate spread dynamics as a way to gauge the health of the economy and as an indicator of the market's risk appetite. Yet most investors overlook more granular credit data pertaining to sectors and individual issuers. This reflects the challenge in accessing comprehensive, high-quality CUSIP-level corporate bond price and analytics data, unlike in equity markets, as well as the common belief that the relative illiquidity of corporate bonds implies that information is more slowly incorporated in the credit market than their equity counterparts. However, incorporating firm-level credit market information in equity investing can be beneficial for at least two reasons. First, the two markets have distinct client bases, which means information missed by one market can potentially be caught by the other. Second, unlike equities, corporate bonds are more expensive to transact; hence, their prices are less affected by "noisy" trades and contain a higher information content, as investors may trade bonds in the secondary market only if the value of their information exceeds the transaction costs. To address this gap, we have published a series of reports over the past several years that examine the possible benefits of incorporating credit signals such as momentum and value in *systematic* equity strategies at the firm and sector level across different geographies and time frequencies.[1]

In this note, we demonstrate how sector- and firm-level credit market information can also benefit *discretionary* investors with two simple applications that rely on corporate bonds price dynamics that we find to be predictive of equity returns.

Specifically, we use the past cumulative returns of a company's corporate bonds as a signal for predictions of stock returns of the same company. This signal is denoted as BEAM, **B**onds in **E**quity **A**sset **M**omentum[2].

[1] See, for example, *Ben Dor and Xu (2014)*, *Ben Dor, Guan, and Rosa (2019)*, *Ben Dor and Guan (2015)*, *Ben Dor, Guan and Rosa (2018)*, and *Ben Dor, Guan, and Zeng (2018)*.

[2] In particular, BEAM signals are constructed as the cumulative excess returns of a company's corporate bonds over the most recent three months, including the most recent one. A bond's excess return is its total return minus the return of duration-matched Treasuries. We use excess returns in the signal construction to take out the yield components in bonds and focus only on the credit portion of bond returns, which is more likely to contain useful information on firm fundamentals. See *Ben Dor and Xu (2014)* and *Ben Dor, Guan, and Rosa (2019)* for more details.

In the first use case, we show that large idiosyncratic price movements of different equity sectors were preceded by similar movements in the credit spreads of bonds in the same sector, showing that BEAM signals can be used as a tool for sector screening.

In the second use case, we find that among a client-defined basket of energy stocks, those with higher BEAM signals had higher subsequent returns, showing that BEAM signals can be used for stock selection by sector investors.

Case I: Sector Screening

Credit market information can help screen large idiosyncratic sector movements. It is worth emphasizing that the goal of sector screening here is not to rank sector performance or to predict whether one sector will outperform another. Instead, we would like to see if credit market information, in particular BEAM signals, can help caution investors about extreme sector movements that are massively dislocated from the rest of the market. These movements are usually idiosyncratic and tend to catch investors by surprise.

For example, in April 2019, the health care sector, represented by all Russell 1000 constituents with a Global Industry Classification Standard (GICS) code of 35, experienced a loss of 2.65%. To put the number in context, for the very same month, eight other sectors had positive returns. Figure 1 reports returns of all 11 GICS sectors in April 2019. The loss of health care is very unusual, given that 80% of the sectors had gains. In fact, the Russell 1000 index rose 3.94% during the month. Historically, the market beta of the health care sector is close to 1. Its monthly returns between January 2012 and May 2019 are plotted against their contemporaneous Russell 1000 returns in Figure 2. Health care's return in April 2019, plotted in red, is the furthest from the fitted line between returns of the sector and those of the index. Perhaps what makes the behavior during April 2019 even more unusual is that in this month, returns of the sector and of the index have opposite signs. Figure 3 confirms that the loss in health care is a sector-wide phenomenon, instead of being driven by a few large names, as more than 60% of stocks in this sector experienced losses during April 2019. This is in stark contrast to other sectors, nine of which had the majority of their stocks going up during the month.

Given health care's drastically different behavior from the rest of the market, one might think that previous stock performance should have offered some warning signs of this idiosyncratic price movement. Yet the equity momentum[3] of this sector was very strong at the beginning of April 2019. Among all 11 sectors, health care had the strongest past stock performance, making its drop in April even more surprising. Figure 4 plots each sector's return (Y-axis) in April 2019 against its equity momentum signal at the beginning of the month (X-axis). Health care is plotted at the lower-right corner, as it had the strongest equity momentum signal but the lowest return.

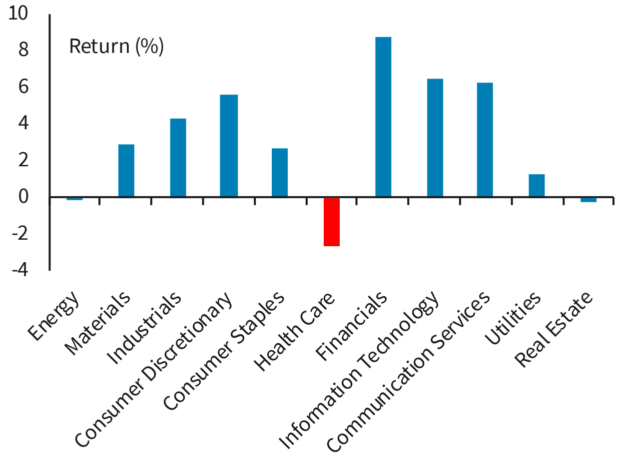
Turning to credit market signals, corporate bonds issued by health care companies had the weakest past bond returns among all sectors at the beginning of April 2019, exhibiting a very different price trajectory from the equity market. Figure 5 shows that health care moves to the leftmost corner when sector-level past bond performances (BEAM signals[4]) are plotted on the horizontal axis, indicating that BEAM signals were more in line with subsequent-month stock returns. The past underperformance of health care in the corporate bond market could, therefore, have had helped alert equity investors to spot the forthcoming loss.

[3] Equity momentum signals are calculated as the cumulative stock returns over a 12-month ranking window, skipping the most recent month. Individual company-level equity momentum is then aggregated to the sector level by market capitalizations.

[4] Individual company level BEAM is aggregated to sector level by equity market capitalizations.

FIGURE 1

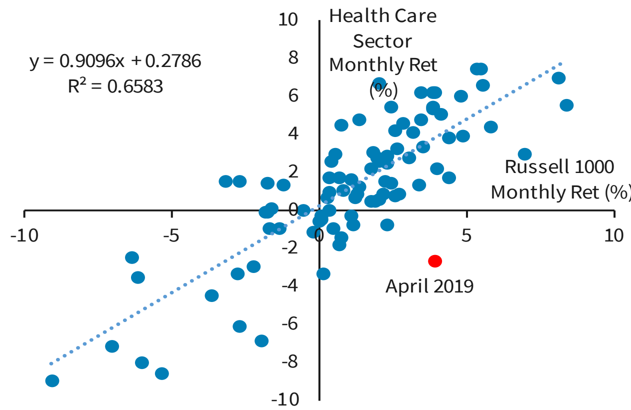
Russell 1000 Sector Returns (GICS) in April 2019



Note: Sectors comprise constituents in the Russell 1000 index grouped by their first two-digit GICS code. Returns are weighted by the stock market capitalization of the previous month-end. Source: Bloomberg, Compustat

FIGURE 2

Health Care Sector Monthly Returns against Russell 1000 Index Monthly Returns (January 2012-May 2019)

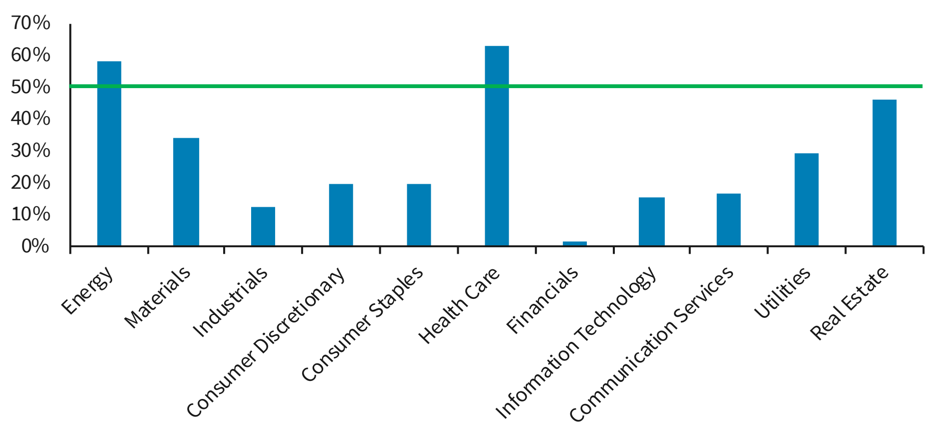


Source: Bloomberg, Compustat

Figure 6 lists other examples from the past five years where the BEAM signals served as a good predictor of large idiosyncratic sector moves in the subsequent month. We select a diverse set of examples from different sectors, years, and both directions of the idiosyncratic sector movements. In sum, all of them demonstrate cases where investors would have been caught by surprise if just monitoring equity momentum signals for big idiosyncratic sector movements. Such surprises could, however, be avoided or alleviated if BEAM signals were also included as part of the sector-screening process.

FIGURE 3

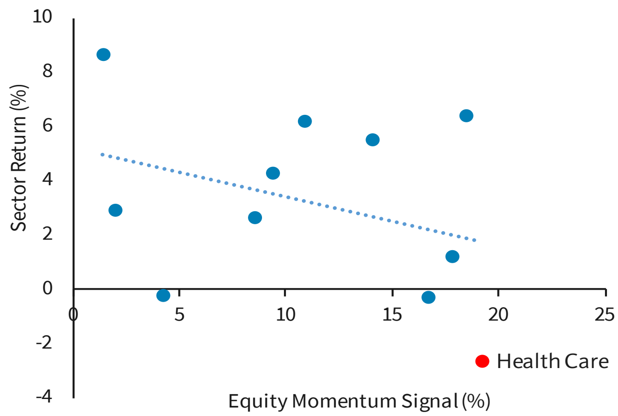
Percentages of Stocks with Negative Returns during April, 2019, by Sector



Note: Sectors comprise constituents in the Russell 1000 index grouped by their first two-digit GICS code.
Source: Bloomberg, Compustat

FIGURE 4

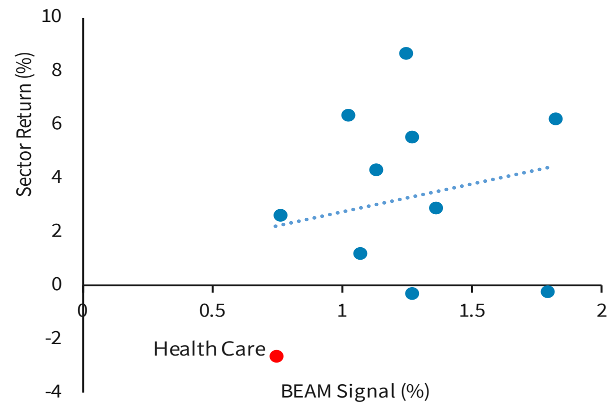
Sector Returns in April 2019 against Equity Momentum Signals at the Beginning of the Month



Note: Equity momentum is based on stock returns over a 12-month ranking window, skipping the most recent month. Company-level equity momentum is then aggregated to the sector level by market capitalizations. Source: Bloomberg, Compustat

FIGURE 5

Sector Returns in April 2019 against BEAM Signals (Bond Momentum) at the Beginning of the Month



Note: BEAM is based on the excess returns of a firm's bonds in the Bloomberg Barclays Corporate or High Yield indices over a three-month ranking window. Company-level BEAM is then aggregated to the sector level by market capitalizations. Source: Bloomberg, Compustat, Barclays Research

FIGURE 6

Selective Sector Examples Where Prices Moved Very Differently from the Rest of the Market

Year	Month	Sector name	Sector return	Number of sectors moving in the opposite direction	Russell 1000 return	BEAM rank (1-Bottom)	Equity Momentum rank (1-Bottom)	Total # of GICS sectors
2019	4	Health Care	-2.65%	8	3.94%	1	11	11
2018	8	Materials	-1.32%	9	3.45%	3	7	11
2016	10	Financial	1.97%	9	-1.95%	6	1	11
2014	7	Telecommunication Services	2.06%	7	-1.62%	10	1	10

Note: Sectors comprise constituents in the Russell 1000 index grouped by their first two-digit GICS code. BEAM is based on the excess returns of a firm's bonds in the Bloomberg Barclays Corporate or High Yield indices over a three-month ranking window. Momentum is based on stock returns over a 12-month ranking window, skipping the most recent month. For both signals, company-level signals are aggregated to the sector level by market capitalizations, and the sector-level signals are then ranked. The sector ranks are reported in the second and third columns from the right. MSCI initiated a new GICS sector code and moved Real Estate companies under the new sector starting from September 2016, increasing the total number of GICS sectors from 10 to 11. Telecommunication Services was the previous name of the sector with GICS code = 50. The sector is now named Communication Services after the sector restructuring by MSCI. Source: Bloomberg, Compustat, Barclays Research

Case II: Stock Screening

In the second use case, we examine a basket of global energy stocks and show how credit market information can help discretionary investors narrow down candidates from a larger stock universe.

Basket Description

The universe of stocks was defined in October 2017 by a portfolio manager with a global mandate specializing in the energy sector. We examined whether credit market information can help screen the universe, which consists of 139 energy stocks globally. Figure 7 plots the number of stocks by exchange country/region. The stocks are traded in 15 countries/ regions, with a large presence in the US. Stocks in the basket are then mapped to bonds in Bloomberg Barclays US and Pan Euro Corporate and High Yield indices issued by the same firms to construct BEAM signals. Between January 2010 and October 2017, on average, 43% of the names in the basket had BEAM signals available.

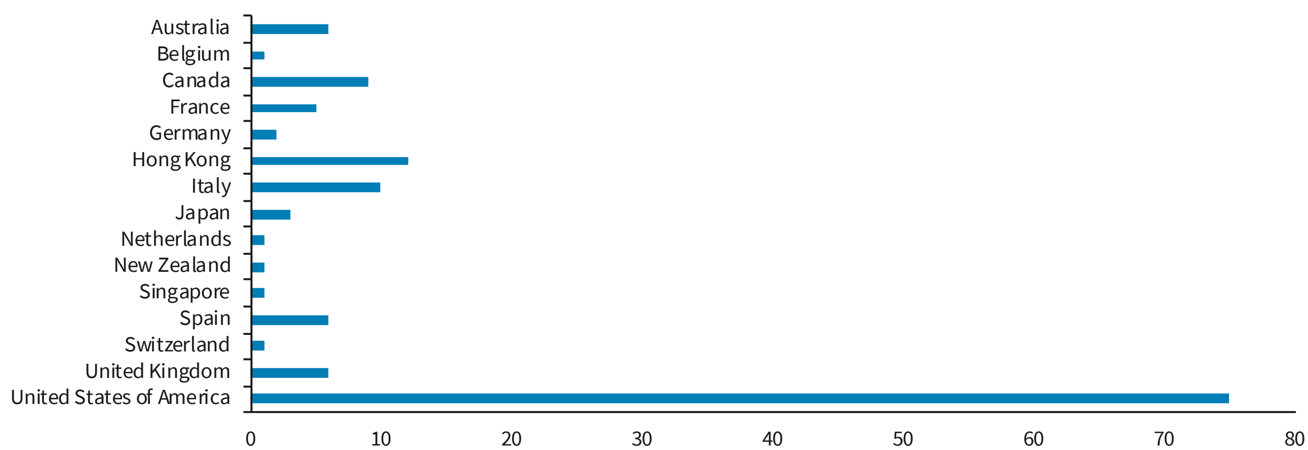
Using BEAM Signals to Narrow Down the Universe

Next, we use BEAM signals to filter the basket and narrow it down to a smaller universe for January 2010 to October 2017. The screening is simple and straightforward: at the beginning of each month, we keep names that have BEAM signals higher than their cross-sectional median value, ie, stocks experiencing strong bond momentum (the filtered universe). To examine the effectiveness of the screening, we compare the filtered universe against two other groups of stocks. The first is the group of stocks that do not have BEAM signals available (the no bond data group). These stocks tend to be smaller, as they usually do not have public debt. The other group has BEAM signals available but with lower values than the monthly median (the low BEAM group). The filtered universe always has the same number of stocks as the low BEAM group by construction.

Figure 8 reports the performances of the three groups. The filtered universe had higher average returns between January 2010 and October 2017. Its returns were also less volatile and, hence, had a higher Sharpe ratio. In addition, the filtered universe had the least risky tail behaviors. The fact that it was less volatile and less risky than the no bond data group is quite impressive, given that the latter on average had twice the number of names, thus offering more diversification across names. Figure 8 also shows that the filtered universe's outperformance across all these metrics is robust to alternative weighting schemes. Figure 9 plots the cumulative stock returns of the three groups and confirms that the filtered universe generated higher returns steadily over the sample period.[5] Figures 8 and 9 also show the low BEAM group's consistent underperformance, indicating that BEAM signals could also help avoid names that are likely to underperform.

FIGURE 7

Number of Stocks in a Basket of Global Energy Stocks, by Exchange Country/Region



Source: Compustat, Barclays Research

[5] Results are similar when stocks in each group are weighted by market capitalization.

FIGURE 8

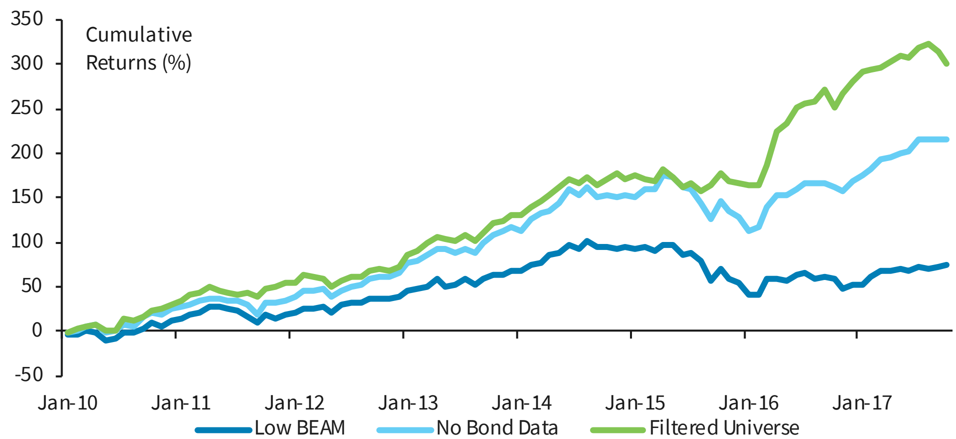
Stock Performance of the Filtered Universe, No Bond Data Group and Low BEAM Group

	Equally weighted			Value weighted		
	Low BEAM	No Bond Data	Filtered Universe (High BEAM)	Low BEAM	No Bond Data	Filtered Universe (High BEAM)
Average Return (%/Yr)	8.20	15.56	18.58	6.10	12.34	15.08
Volatility (%/Yr)	14.30	13.04	12.07	14.33	13.25	11.29
Sharpe Ratio (Ann.)	0.55	1.17	1.51	0.40	0.91	1.30
Worst Month Return (%/mo)	-12.17	-8.57	-7.72	-11.30	-7.92	-6.09
Max Drawdown (%)	-29.50	-22.13	-8.21	-36.47	-22.03	-6.19

Note: The sample period is January 2010 to October 2017. Stock returns and market values are converted to US dollars, using exchange rate data from Compustat. Source: Bloomberg, Compustat, Barclays Research

FIGURE 9

Cumulative Returns of Different Stock Groups



Note: The sample period is January 2010 to October 2017. Stock returns are converted to US dollars, using exchange rate data from Compustat. Stocks in each group are equally weighted. Source: Bloomberg, Compustat, Barclays Research

More importantly, we find that BEAM signals were more effective than equity momentum signals in narrowing down the stock universe. We constructed an equity momentum filtered universe by keeping names that have equity momentum signals above the 80^{th} percentile in the cross section at the beginning of each month. We use the 80^{th} percentile instead of the median used in the BEAM filtered universe in order to have similar numbers of names in the two filtered universes, as equity momentum has a larger coverage. Figure 10 reports the performance of the universe filtered by equity momentum. For comparison, we also include performances from BEAM filtered universe and a group of stocks that have equity momentum lower than the signal's 20^{th} percentile (the low momentum group). As shown in the figure, equity momentum was able to help narrow down the basket, as the filtered universe by equity momentum outperformed the low momentum group. However, BEAM signals were more effective in selecting stocks, as the BEAM filtered universe generated higher Sharpe ratios, lower volatilities and better tail behaviors than the equity momentum filtered universe, regardless of the weighting scheme.

FIGURE 10

Stock Performance of Filtered Universes by Equity Momentum and BEAM Signals

	Equally-weighted			Value-weighted		
	Low Momentum	Filtered Universe by Momentum	Filtered Universe by BEAM	Low Momentum	Filtered Universe by Momentum	Filtered Universe by BEAM
Average Return (%/Yr)	11.61	18.38	18.58	8.49	12.49	15.08
Volatility (%/Yr)	20.11	14.21	12.07	18.79	13.44	11.29
Sharpe Ratio (Ann.)	0.56	1.27	1.51	0.43	0.90	1.30
Worst Month Return (%/mo)	-15.21	-10.81	-7.72	-14.18	-9.82	-6.09
Max Drawdown (%)	-52.37	-15.77	-8.21	-51.05	-15.83	-6.19

Note: The sample period is January 2010 to October 2017. Stock returns are converted to US dollars, using exchange rate data from Compustat. Equity momentum signals are based on stock returns over a 12-month ranking window, skipping the most recent month. BEAM signals are based on the excess returns of a firm's bonds in the Bloomberg Barclays Corporate or High Yield indices over a three-month ranking window. Source: Bloomberg, Compustat, Barclays Research

Conclusion

This note documents two use cases of how incorporating credit market information at the sector and firm levels can help discretionary equity investors. Credit market information such as bond momentum can be used as an overlay for sector screening and stock selection. Incorporating credit market information in equity investing can be useful because credit market prices offer information from a different client base than the equity market and are also likely to have higher information content because of their higher transaction costs. We hope this note can bring investors' attention to this interesting but under-exploited source of information.

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