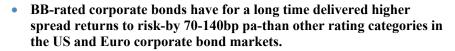
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The Long-Term Strategist

Do BBs still offer better returns?



- This market mispricing, and thus strategic opportunity, is likely due to the institutional segmentation between high-grade and high-yield investors and managers.
- When BBBs get downgraded to BB and become HY fallen angels, HG
 managers are induced to sell, depressing the price beyond what is
 warranted by worsened credit fundamentals and creating a Value
 effect similar to that in equities.
- Fallen angels, in turn, perform better over time than the overall BB category, and explain fully its superior returns. Without them, BBs are no better than other rating categories.
- The BB/fallen angel factor is not prevalent in EM external debt, as this market is much less segmented between HG and HY investors.
- The outperformance of BBs versus neighboring ratings has not weakened over time and is especially strong during a recession, even as it gives part back in the first year of a recovery. Fallen angels, in contrast, underperform in the run-up to a recession, as they are doing now, and early in a recession, rebounding near its end.
- We are comfortable to be strategically OW BB-rated US and Euro debt and fallen angels versus other ratings. The tactical investor is better off to wait and buy only when a recession has been confirmed, in our view, typically 6-12 months after onset. The tactical investor should stay OW BBs now and sell only when the economy rebounds.
- Previously published as part of Joyce Chang et al., <u>The rise of the corporates</u>: Is a triple-B cliff on the horizon?, Oct 2019.
- Video.

BB/Ba¹ rated corporate debt has long been considered a superior asset class, with a higher spread return to risk than other rating categories, akin to the Value style in equities. BBs reside right below the lowest investment- or high-grade debt (IG or HG)—BBBs/Baas—and are the best-rated, but lowest-yielding part of the high-yield bond world (HY). The cheapness of BBs is thought to come from the BBB rated debt downgraded into high yield—so-called fallen angels—which induces high-grade managers to sell, and thus



Long-term Strategy

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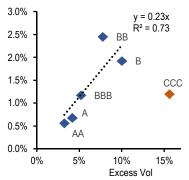
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Excess Return and Vol for US credit over USTs, by rating category

%, Dec'88 - Jul'19



Source: J.P. Morgan, ICE BofAML

See page 11 for analyst certification and important disclosures.

¹ BB and BBB are Standard & Poor's rating categories, while Ba and Baa are Moody's. For brevity, we will just use BB and BBB, without making any judgment against Moody's as virtually all companies use both ratings.

Global Markets Strategy The Long-Term Strategist 03 October 2019

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depresses the bonds' prices by more than warranted by weakened credit fundamentals.

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The current bumper crop of BBB rated debt, which counts now for over 50% of the high grade (HG) world (see Beinstein, US High Grade Corporates: How much BBB debt will fall to HY?(pp. 28-31) in The rise of corporates: Is a triple-B cliff on the horizon, Oct 2019), is raising fears that in the next down cycle an overabundance of fallen angels will create a traffic problem that overwhelms the BB sector, thus creating greater losses than normal on BBBs. Beinstein does not agree, as he thinks that many of such BBBs which would be under threat of falling into high yield (HY) would be able to use their ample cash reserves and unfilled buyback programs to de-lever and/or to take other measures to avoid a downgrade.

In our 2004 *Global Issues* paper² we investigated whether active managers like hedge funds had been able to arbitrage away market inefficiencies, and we noted that the excess returns on BB rated US corporate bonds had not gone away. We discussed two forms of market segmentation that could have been responsible for this mispricing. The first is that BB rated credit is the first rating below investment grade. When a corporate bond is downgraded from BBB—the lowest investment-grade rating—fund managers who are limited to buying investment-grade bonds are induced to sell this bond, depressing its price, and pushing up its yield³.

Insurance companies do not have this problem, but instead have higher capital requirements on lower-grade bonds, inducing them to sell if the spread is not high enough relative to the increased capital levy. In the Euro Area, insurers own just under half of the high-grade market, compared to only about one sixth of the HY market, and thus their selling of downgraded bonds can be an important driver of their eventual cheapness.

The excess returns on BBs depend on their prices being low relative to their credit and risk fundamentals. As such, they are similar to the Value factor/style in equity markets. Value stocks are shares that are low in price relative to the company's earnings, cash flow, dividend, and/or book. We discussed this factor last year in Will Value come back?, The Long-term Strategist, 10 Nov. 2018.

The empirical evidence

Table 1 presents the historic returns, volatilities and excess returns to risk (Sharpe ratios) of USD-denominated corporate bonds, ex EM, by rating category, from AA to CCC. We do not include AAA rated bonds as they now constitute under 1% of the HG index, and thus are too small to be considered an asset class. We show both J.P. Morgan's HG JULI index and HY index which start at the end of 1999, and the ICE BofAML US HG and HY indices, which start at end-1988.

Table 1: Credit indices performance Monthly, % and ratios, compound pa.

Index	Metric	AA	Α	BBB	ВВ	В	CCC
	Return	5.4%	6.2%	7.0%	7.8%	6.7%	6.8%
	Volatility	4.4%	5.3%	5.7%	6.3%	8.1%	14.8%
J.P. Morgan since	Return over Cash	3.4%	4.2%	5.0%	5.8%	4.7%	4.8%
Dec. 1999	Volatility over Cash	4.3%	5.3%	5.7%	6.4%	8.2%	14.9%
	Sharpe Ratio	0.78	0.80	0.87	0.90	0.57	0.32
	Return	6.6%	6.8%	7.4%	8.5%	7.9%	7.1%
	Volatility	4.5%	5.2%	5.3%	6.4%	8.5%	14.3%
BofAML since Dec. 1988	Return over Cash	3.2%	3.4%	4.0%	5.1%	4.5%	3.7%
	Volatility over Cash	4.5%	5.1%	5.4%	6.4%	8.5%	14.4%
	Sharpe Ratio	0.71	0.66	0.74	0.80	0.53	0.25

Source: J.P. Morgan, JULI ex EM and US Domestic HY by Rating, ICE BofAML.

Both sets of indices show a modestly higher excess return-to-risk for BB rated corporate bonds⁴. Each of these Sharpe ratios is much higher than the 0.3-0.4 range that is more typical over the very long run, largely because of the secular move down in bond yields, which fell from 7.8% on JULI HG in 2000 to 3.2% this summer. This clearly benefits higher-duration rating classes, which are the better rated ones. The lower credit risk on HG companies allows them to issue longer out than sub-HG companies. In addition, the higher coupon on HY bonds by itself also lowers the duration of their issues. Thus, HY indices have much lower maturities. Since 1999, BBBs averaged a duration of 6.9 years against only 4.5 years for BBs in our indices, and BBs

² <u>Have hedge funds eroded market opportunities?</u>, Jan Loeys, *Global Issues*, 1 October 2004.

³ HG managers are not immediately forced to sell a bond downgraded to below HG, as they typically are allowed to hold some HY bonds. In Europe, we estimate that HG managers are mandated to hold some 5-10% in HY bonds. See *Fund facts: EUR IG Monthly Positioning Update – June 2019*, Sriram et al.

⁴ In this paper, we discuss returns in compound annual terms, and not average terms, as it is the compound return the long-term investor will actually earn. However, the case for using compound returns is not 100% straightforward, as credit returns are asymmetrically biased to the downside. We did check average returns and they also gave us superior Sharpe ratios for BBs and fallen angels relative to other rating categories.

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were nevertheless able to edge out BBBs with a slightly higher Sharpe.

When judging future potential excess returns by rating categories, we therefore need to strip out the returns on the underlying UST bonds, as our mispricing hypothesis has all to do with the corporate credit part of corporate bonds, and thus their spread over USTs. That is, we need to investigate the **spread return** on corporate bonds, or the return after deducting, or hedging out, their duration return.

This can be done in two ways. The first is a cross-asset perspective, where we simply compare corporate bond indices of different ratings with UST index portfolios of the same duration. A second approach is to consider corporate bond investors who systematically hedge out the underlying duration risk with UST futures, swaps, or short positions in liquid UST benchmark bonds. This can be done at the individual bond level or at the index level. The spread return generated by the first approach is really the return pick-up earned by long-only investors who reallocate from USTs to corporate bonds with the same duration. The second is more akin to a funded position by hedge funds that want to focus on credit risk and have no view on where USTs are headed.

The two approaches produce different excess returns for credit, with the hedging approach showing higher spread returns partly as benchmark UST yields are lower than those on the full index. Given that duration hedging with benchmark USTs is more executable than with full UST maturity indices, and given that we are only interested in the relative spread return of BBs versus other rating categories, we will present only the results with benchmark UST hedging. It does not affect the conclusions.

Duration matching should in principle be done on a dynamic basis, say each month. Thus, for each series we can build a matching duration portfolio of UST benchmarks—2s, 5s, 10, or 30s for each month. Overall, we found very little cumulative difference between duration matching on a dynamic, monthly basis (floating weights), or simply once for the full period (fixed weights), and thus only report the simple calculation method of using fixed duration/maturity weights.

Table 2 presents the compound spread returns, volatilities and Sharpe ratios by rating category for both our and the ICE BofAML credit indices, each since inception. They confirm that in each case, BB-rated corporate bonds produced both the highest spread returns and the highest returns to risk over the past 20-

30 years. On the longer ICE sample since 1988, BBs earned a spread over UST returns to risk of 0.31, followed by 0.22 for BBBs and less for others.

Table 2: US corporate bonds, duration matched

Index	Metric	AA	Α	BBB	ВВ	В	CCC
	Return over USTs	0.5%	1.1%	1.7%	2.9%	2.3%	2.5%
J.P. Morgan	Volatility over USTs	3.8%	4.6%	5.9%	7.8%	9.5%	16.0%
since	Sharpe Ratio	0.14	0.24	0.29	0.38	0.24	0.16
Dec 1999	Yield spread (bp)*	116	144	207	383	584	1226
	Spread return**	0.8%	1.0%	1.7%	383 584		
BofAML ICE since Dec 1988	Return over USTs	0.6%	0.7%	1.2%	2.4%	1.9%	1.2%
	Volatility over UST	3.3%	4.2%	5.2%	7.8%	10.0%	15.6%
	Sharpe Ratio	0.17	0.16	0.22	0.31	0.19	0.08

Source: J.P. Morgan, BofAML. JULI ex EM and US Domestic HY by Rating. *Spread to Worst in case of HY.

Duration Matched with UST: Constant maturity 5- and 10-year for AAA, AA, A, BBB; 3- and 5-year for BB, B and CCC for J.P. Morgan, Constant maturity 5- and 10-year for AAA, AA, A, BBB, BB, B; 3- and 5-year for CCC for BofAML ICE.

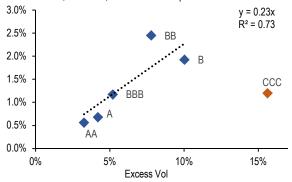
For comparison, we add a row in the table that shows the excess (spread) returns on the HG rating categories calculated by our HG Credit research team based on duration matching each and every bond in our HG index, using UST benchmark 5s, 10s, and 30s. The excess returns are similar to our overall index-based duration matching, but are not available for BBs and other HY rating categories.

To show the superior returns to risk of BBs more graphically, Figure 1 depicts the risk-return tradeoff line of excess returns versus volatility of the different rating categories on the longer history since 1988. The dotted line is the fitted risk-return tradeoff line, which we show ex. CCCs given their very low returns versus risk. With zero vol assets in principle not providing a return over cash, we make the line go through the origin. The slope of 0.23 is within the long-term 0.20-0.35 range that we have observed for major asset classes. Note how **BBs nicely "stick out" above the line**, by 70bp, displaying their superior return to risk.

^{**}Spread returns calculated by our HG Strategy team bottom up on a bond-by-bond basis, then added up to the index level. See methodology in <u>Capturing Credit Excess Return.</u>
Toublan et al., Sept. 25, 2018.

Figure 1: Excess Return and Vol of US credit over USTs by rating category

%, Dec'88 – Jul'19, Return on y axis. Vol on x axis. Dotted line is best fit risk-return line, ex CCCs, and zero intercept.



Source: J.P. Morgan, ICE BofAML. Last obs. is Jul 2019.

EM external debt

The US ratings indices used above have been analyzed excluding USD-denominated EM debt. There is now just over \$3trn in USD-denominated bonds for both sovereign and corporate issuers from Emerging Markets. Our market-leading indices—EMBIG Diversified for EM sovereigns and CEMBI Broad for EM corporates—each have a capitalization of just over \$1trn, with both about 60%/40% HG versus HY.

The market for EM external debt is different from that of local US issuers in one important aspect relevant to our investigation of BBs. The fund management for US domestic issues is broadly divided between HG and HY managers, creating a segmentation that is likely one driver of the excess returns on BBs, as discussed above. This segmentation is much less prevalent in EM, as the majority of EM buyers are EM-focused managers, of which only about one in five is restricted to investment grade, and only a small part is held by US HG managers. As a result, the segmentation prevalent in US credit is largely missing in EM external debt.

Table 3 presents the salient returns and risks for both our EM sovereign EMBIG Diversified and corporate CEMBI Broad index,⁵ and unlike our US corporates, the EM ones do not produce the highest Sharpe in BBs,

whether in sovereign or corporate space. In EM sovereigns, BBBs did best, and among EM corporates, Bs did, with BBBs in second position. Figure 2 shows this more graphically for EM corporates as a risk-return tradeoff line, similar to the US one in Figure 1. This makes us confident that the HG/HY market segmentation in the US credit market is responsible for the superior returns on BBs.

Table 3: EM USD-denominated bonds, sovereign and corporate %

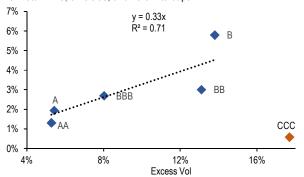
Index	Metric	Α	BBB	BB	В
	Return over Cash	3.9%	5.8%	6.6%	7.4%
	Volatility over Cash	5.9%	7.7%	10.3%	17.8%
EMBIG since	Sharpe Ratio	0.65	0.75	0.65	0.42
Dec 1997	Return over USTs	1.5%	3.0%	3.9%	4.6%
	Volatility over USTs	5.1%	8.0%	11.1%	18.7%
	Sharpe Ratio	0.30	0.38	0.35	0.25

Index	Metric	AA	Α	BBB	BB	В	CCC*
CEMBIBD since Dec 2001	Return over Cash	3.9%	4.6%	5.5%	5.8%	8.3%	2.5%
	Volatility over Cash	5.6%	5.8%	7.7%	12.6%	13.2%	16.8%
	Sharpe Ratio	0.69	0.78	0.72	0.46	0.63	0.15
	Return over USTs	1.3%	1.9%	2.7%	3.0%	5.8%	0.6%
	Volatility over USTs	5.3%	5.4%	8.0%	13.1%	13.8%	17.7%
	Sharpe Ratio	0.25	0.36	0.33	0.23	0.42	0.03

Source: J.P. Morgan. Last obs. is Jul 2019. EMBI Global Diversified (EMBIG) Duration Matched with Constant maturity 5- and 10-year UST. CEMBI Broad (CEMBIBD) Duration Matched with Constant maturity 3- and 7-year UST.

Figure 2: Excess Return and Vol for EM USD corporate credit over USTs by rating category

%, Dec'01 – Jul'19, Return on y axis. Vol on x axis. Dotted line is best fit risk-return line, ex CCCs, and zero intercept.



Source: J.P. Morgan, CEMBI Broad. Last obs. is Jul 2019.

⁵ Note that the EM returns to risk are slightly higher than their US equivalents as EM corporates on average pay about a ½%-pt higher yield than US HG issuers, adjusted for rating, maturity and sector. We reviewed the relative performance of EM external debt in <u>Strategic questions on EM allocations</u>, Loeys et al., 28 Sept. 2018. We also commented that while EM external debt outperformed US credit at the index level due to this extra yield, that part of this excess is paid away to the higher costs, and thus fees of managing an EM bond portfolio.

^{*} CCC is since Aug'05 as per data availability.

European BBs

Table 4 shows similar returns and volatility data for the iBoxx Euro-denominated corporate bond indices since January 2003. On a total return basis, returns steadily rise as ratings fall. All Sharpe ratios are very high, especially on HG, which are longer duration, because over the near 20 years of our index, the yield on this market fell from 5.4% to only 20 basis point today.

Table 4: Euro-denominated iBoxx High Grade and High Yield Corporate bonds

%

Index	Metric	AA	Α	BBB	BB	В	CCC
iBoxx EUR since Jan 2003	Return	3.8%	3.8%	5.2%	7.5%	7.3%	9.0%
	Volatility	3.1%	3.9%	4.3%	8.1%	10.9%	18.9%
	Return over Cash	2.6%	2.6%	4.0%	6.3%	6.1%	7.8%
	Volatility over Cash	3.1%	4.0%	4.4%	8.2%	11.0%	19.0%
	Sharpe Ratio	0.82	0.65	0.91	0.76	0.56	0.41

Index	Metric	AA	Α	BBB	BB	В	CCC
iBoxx EUR since Jan 2003	Return over Bunds	0.0%	0.0%	1.6%	4.4%	4.5%	6.1%
	Volatility over Bunds	2.6%	4.0%	4.7%	9.0%	11.8%	19.7%
	Sharpe Ratio	0.01	0.01	0.33	0.49	0.38	0.31

Source: J.P. Morgan.

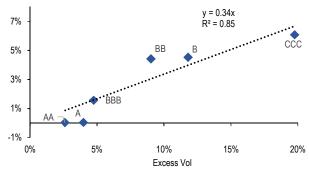
Duration Matched with Bunds: Constant maturity 3 and 7y for AA, A, BBB, BB, B, and CCC.

Deducting the underlying government bond returns through duration matching allows us to compare bonds on the same duration basis, and confirms the superior Sharpe ratio of BBs on display in the US credit market. This is consistent with our prior as the Euro corporate bond management business is also divided into HG and HY managers, thus creating the same segmentation force that we found in the US market. Figure 3 shows graphically how BBs stick out, by 140bp, above the overall risk return tradeoff line for Euro credit spread returns.

Note the anomalous zero spread returns on AA and A rated euro corporate debt. This is due to Financials that saw major losses during the EMU sovereign debt crisis of 2011-12. If we instead had limited our analysis to Non-Financials, then AA and A rated corporate bonds would have shown positive spread returns (0.4% and 0.6%, respectively), but with Sharpe ratios of 0.19 and 0.24, which are still inferior to the return to risk of BBs.

Figure 3: Excess Return and Vol for Euro corporate credit over Bunds by rating category

%, Jan'03 – Jul'19, Return on y axis. Vol on x axis. Dotted line is best fit risk-return line with zero intercept. Non-financials only.



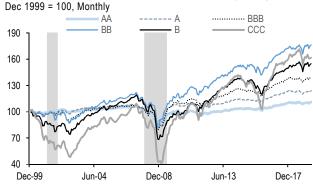
Source: J.P. Morgan, iBoxx. Last obs. is Jul 2019.

Future excess returns

How can we judge that these superior spread returns to risk will still be with us in the future? For that we need to understand better the behavior over time of these spread returns. In particular, are they trending down and under what conditions could they disappear?

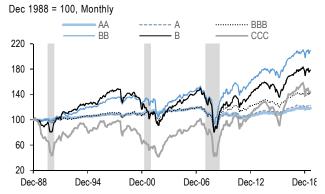
In Figure 4 and 5, we do this by looking at the cumulative spread returns of the different US rating categories in our two indices. It shows for each clean **cyclical** behavior, with negative spread returns during and right after recessions, when most defaults and downgrades happen. It also shows stable upward trending behavior, which indicates that spread returns have not weakened over time.

Figure 4: J.P. Morgan cumulative spread return by rating



Source: J.P. Morgan. Grey bars are recessions. Last obs. is Jul 2019.

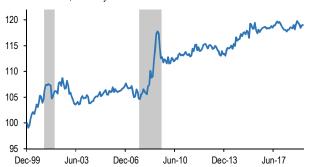
Figure 5: BofAML cumulative spread return by rating



Source: J.P. Morgan, BofAML. Grey bars are recessions. Last obs. is Jul 2019.

Figures 6 and 7 in turn assess the time behavior of BB **spread returns** relative to its two neighboring rating categories—BBBs and Bs. The volatility of BBs is almost exactly halfway between BBBs and Bs, incorporating both their different durations and spread volatilities, and we thus compare BBs with a 50/50 portfolio of its two neighboring rating categories. The figures are expressed as the ratio of the cumulative spread return of BBs over the average of the other two.

Figure 6: J.P. Morgan BB credit spread return over BBB/B mean Dec 1999 = 100. Monthly



Source: J.P. Morgan. Grey bars are recessions. Last obs. is Jul 2019.

Figure 7: BofAML BB credit spread return over BBB/B mean



Source: J.P. Morgan, BofAML. Grey bars are recessions. Last obs. is Jul 2019.

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The relative cumulative return of BBs over BBBs and Bs steadily trends up, performs especially well during a recession, but then gives back part of its relative gains early in the recovery. The biggest give-back was in April of 2002 when one large company, WorldCom, was first downgraded from BBB to BB, becoming a fallen angel, and then was rapidly moved down to CCC in June, before defaulting in July. WorldCom had some \$22bn in bonds downgraded from HG to HY in May 2002. That amounted to 4% of the BBB market cap that month, but would have added one-third to the BB index, if it had stayed there for long.

This highlights the risk of what is known as the **Value Trap** in equities: Just because an asset has fallen substantially in price, and thus may appear cheap, does not mean that it cannot fall a lot further.

The implications of the observed time behavior of BBs are that 1) the excess spread return on BBs versus other rating categories has not weakened over time, and thus is likely to stay with us in the medium term; and 2) BBs do particularly well versus other ratings in a recession, but then give back part of this relative gain late in the recession, or early in the recovery, likely as some fallen angels continue to fall.

Fallen Angels

With much of the superior returns of BBs thought to come from fallen angels that lost excessive value when they were moved from HG into the BB rating category, several index providers have created fallen angel indices, typically consisting of bonds downgraded over a rolling 24-month period. Several ETF providers have then created funds based on these indices. Figure 8 shows the ratio of the capitalization of the ICE BofAML US Fallen Angel High Yield Index, now at \$106bn, relative to its own US BB Index. On average, some 43% of the BB rating category has consisted of bonds downgraded over the previous 24 months.

Clearly, the current record long duration of the US expansion has led to a dearth of downgrades and has thus reduced the population of fallen angels in the US market (also see Beinstein). As a result, by now, less than 20% of the BB market consists of issues downgraded over the last 24 months.

Figure 8: Share of US Fallen Angels in US High Yield BB market

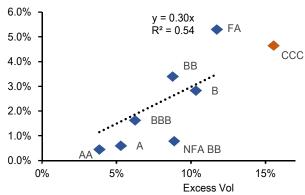


Source: J.P. Morgan, ICE BofAML. Last obs. is Jul 2019.

Since February 2004⁶, the ICE BofAML US Fallen Angel High Yield index has earned 9.4%pa, compared with only 7.2%pa on its BB index. In spread return terms, Fallen Angels beat the overall BB index by 1.9%pa as they were slightly longer duration (0.4 years on average). Figure 9 shows the spread risk-return trade off line, which we showed earlier (Figure 1), but now only since February 2004 and adding both the Fallen Angel Index and the rest of the BB asset class, excluding Fallen Angels⁷, Figure 9 shows that **fallen angels are completely responsible for the historic excess return on BBs** and that without these bonds, BBs are not that great of an asset class.

Figure 9: Excess return and Vol of US credit over USTs by rating category

%, Feb'04- Jul'19, Vol on x axis. Dotted line is best fit risk-return line, ex CCCs, and zero intercept. NFA BB means non-fallen angel BBs. See footnote 7 for construction.



Source: J.P. Morgan, ICE BofAML. Last obs. is July 2019.

⁶ ICE BofAML US Fallen Angel High Yield Index starts in 1996, however, we only had access to complete return, duration, and other metrics from early 2004 on.

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Fallen Angels do show a **different cyclical pattern** than the overall BB rating category (Figure 10). BB spread returns do well early in a recession, and only underperform other ratings early in the recovery, likely as that is when many defaults take place. Fallen angels, in contrast, underperform the broad BB class and neighboring ratings late in the expansion, in the run-up to a recession, and during the early part of the recession, with the caveat we only have one such recession—the Global Financial Crisis—as our data point. However, we can also see that during periods of economic stress—the slowdown in 2011-12 (Euro crisis) and 2015-16 (oil price crash)—fallen angels underperform. Note how fallen angels have been underperforming modestly over the past year, as they did in 2007, quite plausibly showing the market thinks it is already very late in the current cycle and a recession is not far away.

Figure 10: US Fallen Angel cumulative return versus BBs and BBB/B barbell, duration matched

Spread return ratios, Feb 2004 =100



Source: J.P. Morgan, ICE BofAML. Grey bars are recessions. Last obs. is July 2019.

On a more short-term tactical basis, Bailey and Doctor, European Corporates: Rising from a record low fallen angel rate (pp. 35-37) in The rise of corporates: Is a triple-B cliff on the horizon, Oct 2019 and in Rise and Fall, How to trade fallen angels, 2 May 2019, show that, when liquidity is available, one is best off buying fallen angels within days after a downgrade to below HG as price action is fast. Buying a fallen angel in the euro area within a few days has historically produced a return of 4.5% over the next 90 days.

Is today a good entry point into BBs and fallen angels?

A good long-term return on BBs and fallen angels versus other rating categories is a pre-condition, but no guarantee that today is a good time to buy them. We are now likely late in the cycle, and our economists are giving us close to even odds of a US recession over the next 12 months (see Edgerton, *Taking stock of recession risk: Would it be so bad?(*pp. 12-16) in The rise of

⁷ The non-fallen angel BB asset class is created by deducting from BBs the Fallen Angels Index returns multiplied by their share in BBs, shown in Figure 8 above.

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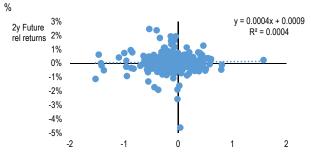
corporates: Is a triple-B cliff on the horizon, Oct 2019).

In the approach to the 1991 and 2001 recessions, BBs greatly outperformed the BBB/B barbell, but then gave it all back in the first year of the recovery (see Figure 7). In the last recession (2008-09), which was the worst post-WWII recession and in our mind less of a prototype for what the next one will look like, BBs outperformed both in the recession and the following years. Hence, from a cyclical timing point of view, today is a good time to stay OW BBs, but once a US recession is confirmed (6-12 months after onset⁸) one should take profits and not buy again until a year into recovery. Investors who invest in size in funds, or who invest in individual bonds, may not have access to the liquidity needed to exit and reenter BB rated bonds on a tactical basis. Thus, they are better off investing on a longer-term horizon, say five years out, over which staying OW BBs remains a good position to have.

As to fallen angels themselves, their recent slight underperformance is symptomatic of the global economic weakening we are seeing right now in trade and capital spending, likely in response to trade uncertainty. With our economists giving us close to even odds of a coming recession, now is not the time to buy fallen angels. Wait until the NBER establishes that a recession has started, typically sometime after onset, to go overweight fallen angels.

Does relative value suggest whether today is a good entry point into BBs? For this we look at whether the yield spread of BBs versus the BBB/B barbell has in the past been a good signal of relative future performance. For this, Figure 11 shows the yield spreads on the horizontal axis against the relative performance of BB spread returns versus the BBB/B barbell over the following two years. We find no relation on any horizon from one to five years, concluding that relative yields have no signaling value for relative future performance of BBs versus other ratings.

Figure 11: 2-year relative performance of BBs versus BBB/B average, versus starting yield spread



Current yield diff between BB and linear combination of BBB and B

Source: J.P. Morgan, ICE BofAML. Last obs. is July 2019

Conclusion

With little deterioration in trend BB outperformance in USD (ex EM), or Euro denominated corporate bonds, strong historic performance into a recession, and no value signals, we feel confident to be *strategically* overweight fallen angels and BB rated US and Euro corporate bonds against other rating categories for bonds of the same duration. In EM external debt, a rating strategy does not work as the lack of strong market segmentation between HG and HY managers means all EM ratings offer comparable, attractive long-term spread returns to risk. Fallen angels themselves have started underperforming and should not be bought *tactically* until an actual recession has been confirmed by the NBER.

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⁸ Since 1980, the <u>NBER Business Cycle Dating Committee</u> (https://www.nber.org/cycles.html) has taken on average eight months to establish that a recession (peak in economic activity) has started. In contrast, it has taken 15 months on average to establish the recession has ended (trough in economy).

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