

# BBBs and 'Fallen Angels': Hellish Risks or Heavenly Returns?

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There has been a proliferation of press coverage in recent months about the growth of the triple-B rated corporate bond market. Some market participants are concerned that the next economic downturn could spark a wave of downgrades of companies rated BBB to high yield, with these ‘fallen angels’ potentially exposing investors to mark-to-market losses at best, and defaults at worst.

We think the risks have been grossly overstated, and that fears of a meltdown in BBBs are overdone. TwentyFour’s extensive analysis shows that far from being an asset class to be exorcised from portfolios, these bonds have consistently produced the very best total returns and the very best risk-adjusted returns across the global fixed income market.

## CORPORATE LEVERAGE – CAUSE FOR CONCERN?

Over the last ten years, corporate leverage has been suspected to increase for companies who borrow through the bond market. This would seem to be a natural response to consistently falling yields and thereby the cost of capital. As lower funding costs make more marginal balance sheet expansions profitable, leverage as a consequence should go up, as corporates chase opportunities that did not make economic sense when funding costs were higher. This is not necessarily a bad thing, as long as the leverage cycle does not become so stretched that an economic downturn means coupons and ultimately principal cannot be repaid to bondholders.

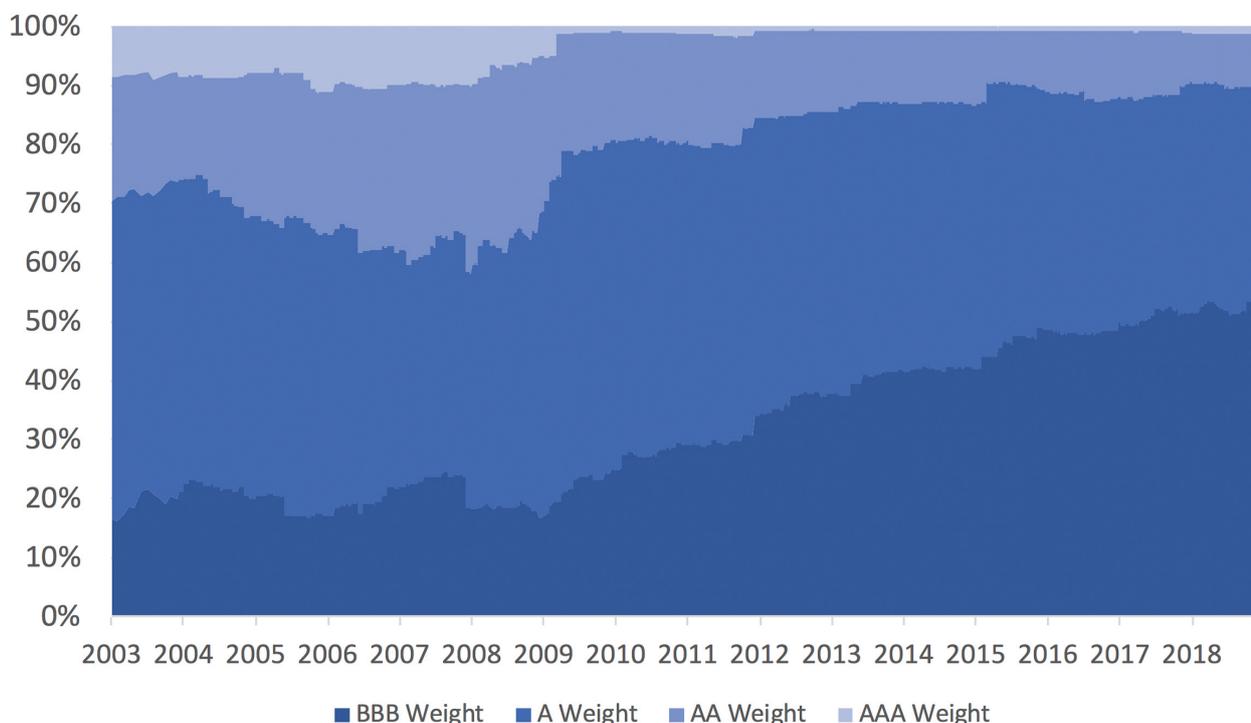
The events of 2008 and 2009 were an extreme example of that across many sectors, where a sharp fall in GDP and very limited ability to

refinance led to a significant pick-up in defaults. In more recent times, defaults have been restricted to single sectors or stories, such as the Oil & Gas sector three years ago and the retail sector today now becoming a major point of concern for us and others.

Now that we are a full 10 years into a global expansion, there are fears that when the next slowdown does occur, corporates could be excessively levered and default rates could increase dramatically across many sectors, potentially causing significant losses for creditors.

The concern among some is that the increase in corporate leverage has been mostly confined to the lowest quality rating band within investment grade (IG) bonds – that of BBBs – increasing the proportion of BBBs within IG indices to a worrying or possibly dangerous level. As Chart 1 shows, there has been a steady and consistent rise in the proportion of BBB rated bonds within typical sterling denominated corporate bond indices since the start of quantitative easing (QE) in 2009 (we have focused on the sterling market in this paper because it has a greater proportion of BBBs than dollar and euro indices).

Chart 1: Composition of IG Indices, 2003-2019.



Source: TwentyFour Observatory

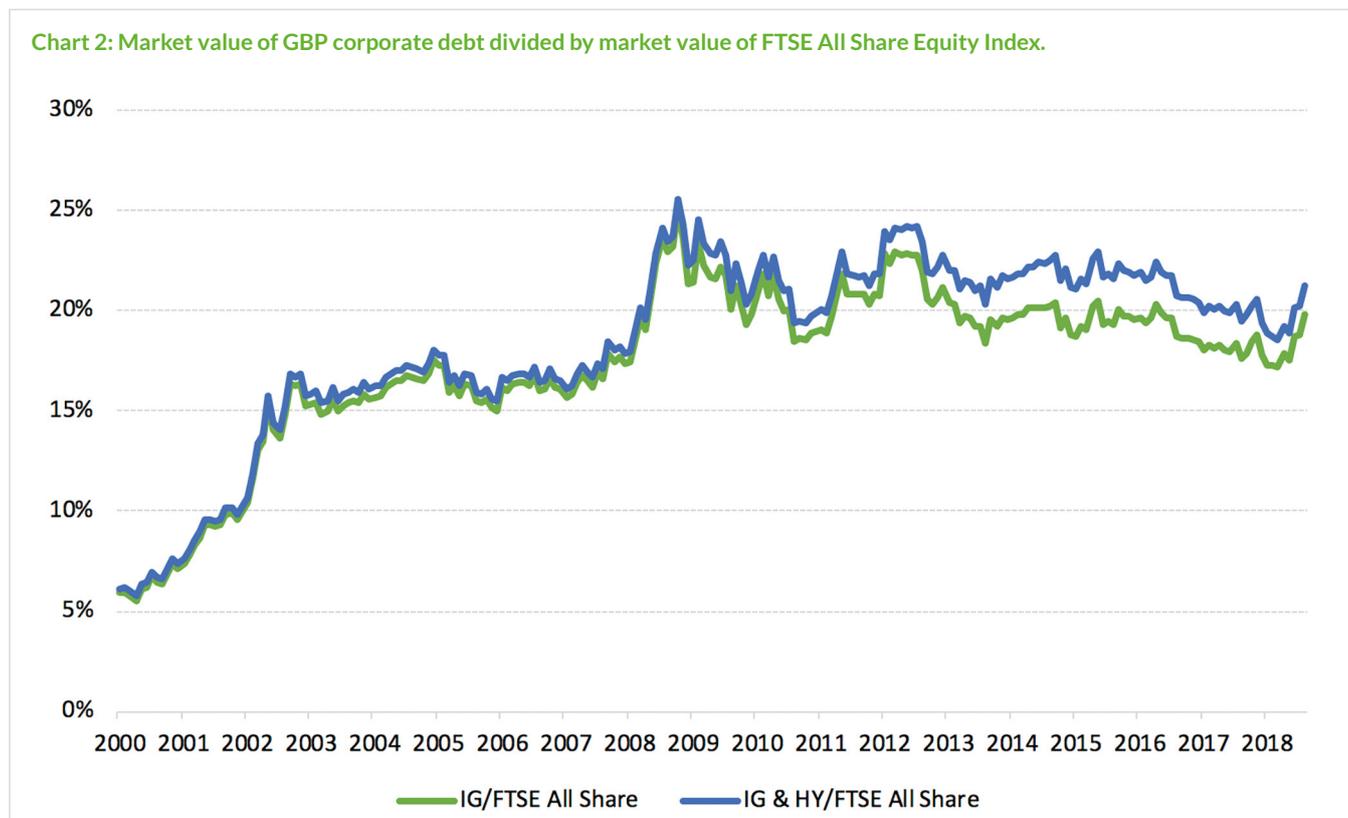
## THE BBB BOOM

It is clear that the two lowest ratings bands within investment grade, BBB and single-A, have gone from 70% of indices to 90%, with BBBs going from roughly 20% to over 50%. For reference, in both USD and EUR indices, the BBB contingent is close to 25%. Staying with

sterling, AAAs have dropped to almost zero, with AAs also being marginalised<sup>1</sup>.

What has driven this BBB expansion? Could it be a significant rise in corporate leverage?

Chart 2: Market value of GBP corporate debt divided by market value of FTSE All Share Equity Index.



Source: TwentyFour, Bloomberg, BAML

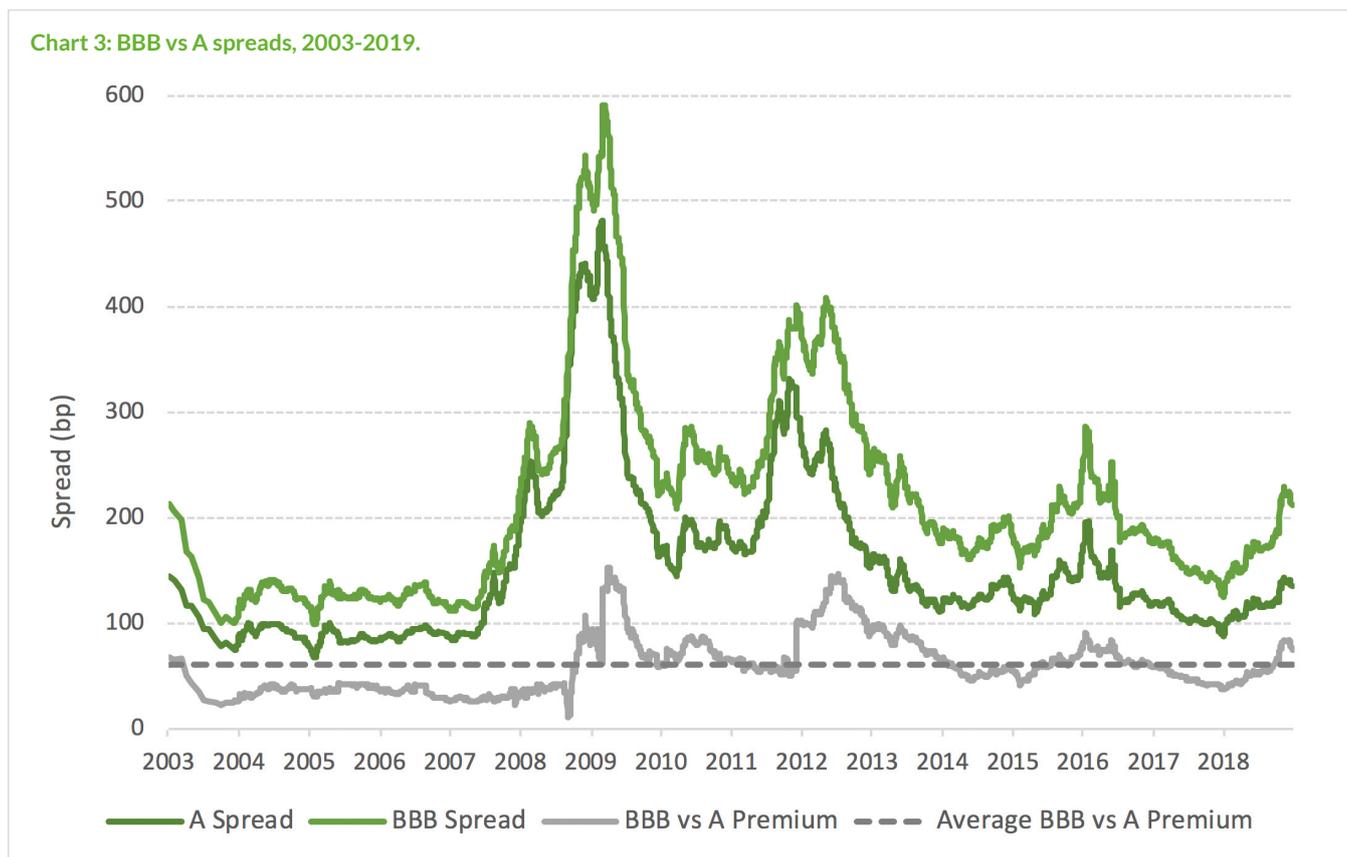
Using aggregate debt value / aggregate equity value (a proxy for corporate leverage), it appears that corporate leverage did increase significantly leading up to the financial crisis. But since 2009, corporate leverage by this measure has gone down. Admittedly this is only a proxy for leverage, as it ignores bank loans, private placements and other debt, while also ignoring cash and receivables. But it does challenge the idea that leverage has been spiralling since 2008.

What else could explain the greater proportion of BBBs?

Many of the articles written recently have pushed a different theory: namely that the main driver has been a compression of the spread premium between single-As and BBBs. In a world of central bank-fuelled liquidity and a hunt for yield, the argument goes, the typical process of increased leverage increasing firms' cost of capital has broken down.

1. For reference, the IG index used here is a pure corporate bond index, not one that also includes sovereign, supranational or collateralised bonds that tend to be higher rated (BBBs in a broader sterling index are closer to 35%, so this shows to a much greater magnitude the changing picture of 'credit quality' in a purer corporate index).

Chart 3: BBB vs A spreads, 2003-2019.



Source: TwentyFour Observatory

However, as Chart 3 shows, the evidence on this is mixed. The premium for BBBs has actually been higher since QE began, and mostly higher than the 15-year average. It appears that spread is not necessarily the driving force of disproportionate BBB issuance.

Instead, all-in BBB yield (instead of spread) may well be a bigger driver of the change in composition of IG indices.

Or could it be that rating agencies have simply sharpened their pencils post-crisis, and apply a much higher bar to bonds being rated single-A?

It is clear to us that many bonds appear to have been ‘sympathetically’ rated pre-crisis. In the past, BBB bonds might have been rated single-A, or possibly A-, but now with no ‘benefit of the doubt’ a BBB+ or lower rating from agencies is more appropriate. We think this is a material factor in the transition.

### BBBs AND DEFAULT RISKS

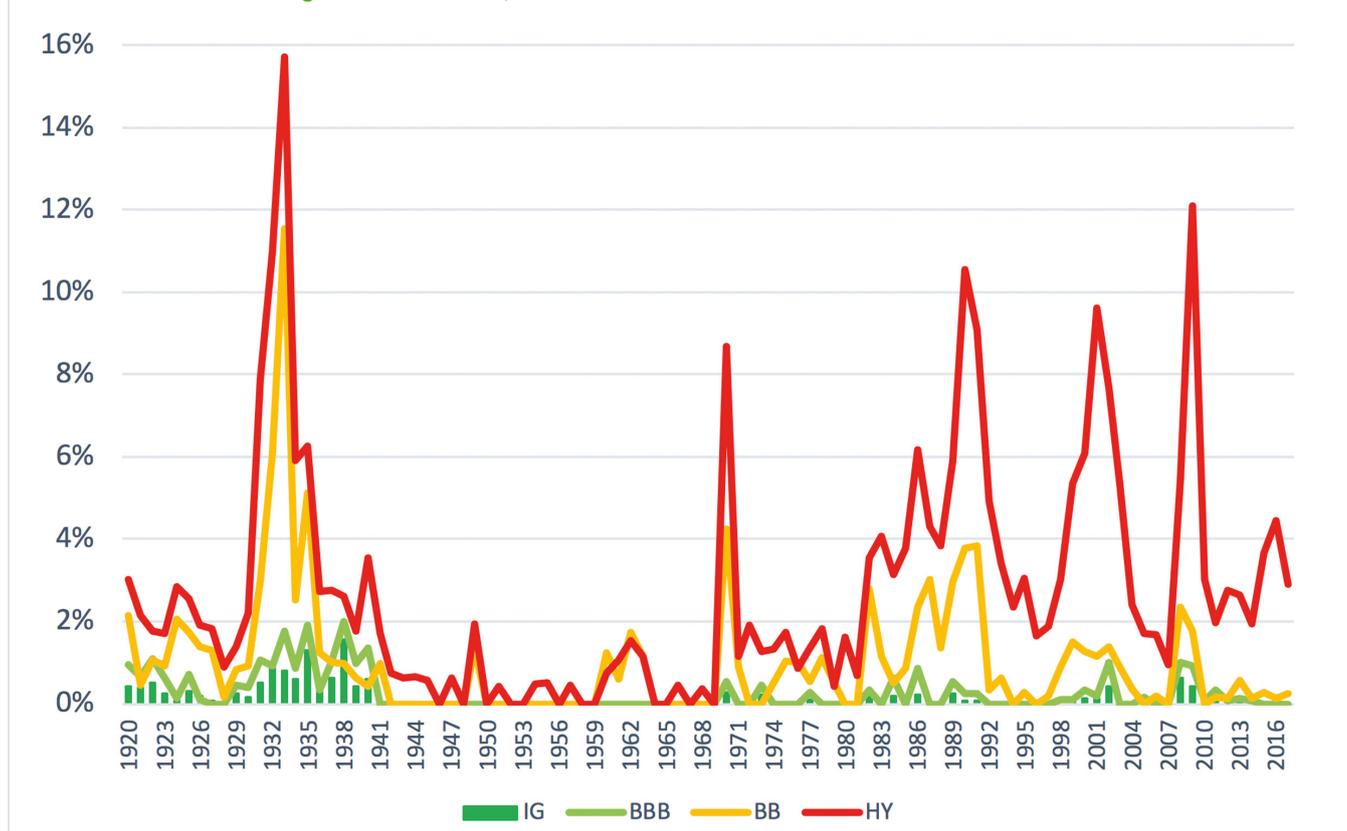
Whatever the cause of burgeoning BBB issuance, the fear is that should there be a mass downgrade of these bonds to high yield, investors could be badly burned with mark-to-market losses at best, and hard losses from coupon deferrals or defaults at worst.

I am now well into my third decade as a credit investor, and as such I remain keenly aware of default risks and the default cycle, and the asymmetric risk of credit. I believe fears of a meltdown in BBBs are significantly overdone, and that the asset class continues to present the very best risk-adjusted return opportunities within investment grade corporate bonds.

To justify these views, let me start with a long-term analysis of actual defaults, using data from Moody’s going back to 1920<sup>2</sup>.

2. Moody’s actually terms BBB bonds “Baa”, but we will refer to them as BBBs for simplicity. For reference, bonds rated AAA, AA, A, BBB are all defined as “investment grade”, while below this (BB, B, CCC, CC, C) are considered “high yield”.

Chart 4: Annual Issuer Weighted Default Rates, 1920-2017.



Source: Moody's Default Study 2017, TwentyFour

There are a number of observations from this data that are important:

- Default rates peaked in the 1930s during the Great Depression, with HY defaults peaking close to 16%
- BB default rates were also very high during this period, peaking close to 12%
- From 1945 until the 1970s, IG defaults were unheard of – literally zero
- Since 1970, there have been four cyclical peaks in HY defaults, with default rates topping at least 8%: 1970, 1990, 2001, and 2009
- But in contrast to HY, since 1970 IG defaults have never been higher than 0.63%, and even that figure was from 2008
- BBB default rates have never eclipsed 1.02% since 1970, and again that was in 2008
- The peak for IG and BBB defaults was 1938
- But what about ‘fallen angels’? In 2008, BB default rates peaked at 2.34%, having hit 3.77% during the previous recession in 1990
- Since 1945, BB default rates have never gone higher than 4.24%
- Default cycle peaks are measured in months, not years

Remember the data shown above is for the entire universe of credit, with no active management impact, therefore no ability to navigate cyclical credit trends. Any rated bond that defaulted is included in this data, and it still shows that even in the worst year on record since 1945, investors have never had more than a 1 in 23 chance that any bond rated BB or better would default that year. Put another way, and assuming zero recovery rates, £100 of capital invested in BBs would have lost a maximum of £4.24 in any year since 1945, leaving investors with at least £93.76.

This century, passively investing in BBs would have produced a maximum loss of £2.34 for investors. Restricting the universe to BBBs, the maximum loss would have been £1.02 (again assuming zero recovery, which is a very conservative assumption for IG companies).

For the sake of argument, let us take the view that this century's default experience has been distorted post-crisis by QE, with ‘zombie’ companies able to survive on ample liquidity when they would otherwise have gone to the wall. That leaves the 1990 recession as a barometer of what can be expected in a ‘normal’ recession where ‘extraordinary’ monetary policy actions are not warranted. Here IG defaults peaked at 0.06%, BBB at 0.26%, and BB's at 3.77% for any single year. For multi-year defaults in the period from 1970-2017, the respective average 3-year cumulative rates were 0.43% for IG, 0.77% for BBB, and 4.38% for BB. A cursory glance at Chart 3 confirms 1990 is far from a cherry-picked date.

These remarkably low default rates, even in the worst economic periods of our post-war history, outline why BBBs, and even selective exposure to BBs, should make economic sense for investors. Further, it illustrates why as a portfolio manager I would never structure a fund that could not invest in them – the risk-reward profile is just too attractive for these assets over short, medium and long dated investment horizons.

But let us also be very specific. The data also shows why I fundamentally dislike owning single-B bonds in IG portfolios, as the default experience is exponentially higher than BBs or any part of IG.

For example, in 1990 alone, single-B defaults reached 13.74%. Those risks, for me at least, are too great to consider a permanent allocation to single-Bs. I can count on one hand the number of times I have owned single-Bs in any portfolio I have run in the last 25 years, and even then, they have been for very specific idiosyncratic reasons, with an investment horizon of typically less than three months.

From a default risk perspective, of course nothing can be taken for granted. Cycles ebb and flow, credit metrics improve and worsen and there are always risks of outright fraud, let alone a deteriorating credit moving from BBB into high yield and ultimately defaulting. As such, I firmly believe credit managers need to be continually vigilant to these risks, and they also need to construct a portfolio liquid enough to be able to exit these positions if the credit story worsens. Liquidity is a topic I will return to later, so for now let us move on to talk about the downgrade risks.

### DOWNGRADE RISK – ‘FALLEN ANGELS’

How many BBB companies get downgraded? And how far do they fall? Using Moody’s rating transition data from 1970-2017, the average rating migration over a five year period for a company rated BBB is 7.96% to a final BB rating, or just 2.55% to a single-B rating. Ending up as a CCC happened in 0.59% of cases, and lower than CCC in 0.09% of cases. Average straight-to-default (mostly fraud cases) over the five year period are 1.46%. This data suggests that over a five year period, even including fraud, 87.35% of BBB bonds remain IG.

This means there is roughly a 1-in-12 risk of a BBB company being downgraded to BB over a typical economic cycle, and then remember as a BB, the 3-year cumulative default rate was 4.38%. The risks of becoming a single-B over that five year period have been very small (but certainly not zero) at 1/39th, and then the 3-year cumulative default rate has been much higher at 12.96%. Again, that is why I do not like single-Bs in IG portfolios.

Estimating default losses is not an exact science, but  $7.96\%$  (probability of downgrade to BB)  $\times$   $4.38\%$  (probability of BB default) = 34bp of estimated capital losses with zero recovery. Or 33bp estimated losses for single-Bs: a much lower probability of being downgraded, but to a rating that has proven to have a much greater probability of default. This means a portfolio that was 100% passively invested in BBBs (with zero recovery) would likely lose about 67bp from ‘fallen angels’ over a multi-year period. These are risks an IG manager could likely live with, passively invested, with no hedging nor stock selection. Of course, any active manager would expect to beat these numbers handsomely, either by avoiding the stocks, changing the risk profile or tactically hedging risks through the cycle. We are active managers at heart and would certainly recommend active management for higher beta positions.

So, although Beelzebub does indeed have three B’s in the name, this ‘fallen angel’ is not a byword for widespread investor destruction or capital losses.

### WHAT IF THIS TIME IS DIFFERENT?

If leverage has systematically increased, and there are increased risks of an economic slowdown ultimately ending in recession, then what else could mean the rating migration and default data understate the risks?

Could ratings agencies be doing things in a different way, or utilising a different methodology that could impact the true risks facing corporates? While it is possible, the focus on rating agency performance through 2008 and 2009 has gone a long way to remove complacency – I for one am more comfortable with ratings agency output than I was ten years ago. In fact, I believe a higher bar for being awarded a single-A rating today compared to pre-crisis is supported by the evidence, and therefore investors can be more confident in the appropriateness of ratings. In my opinion, debt/earnings remains the most fitting rating metric for most companies in most industries, and while this is the case, I have no reason to believe the previous history of transitions and defaults are fundamentally wrong (and we have been through some pretty horrendous economic environments in the last 90 years).

Just because BBBs are a greater proportion of credit indices now, that in itself does not make today’s BBB more likely to default than a BBB from 1990 or 2008, or to transition to BB or single-B and then default.

On this point, much of the current debate is frustrating. There are clearly more BBBs in IG indices than 10 years ago, but BBBs are still rated as such because they are high quality, investment grade investments and the default experience data confirms this. Access to a larger, more diverse pool of potential bonds with the basic characteristics I like is a positive from my perspective. I want more BBBs to pick from, throughout the cycle. Ahead of periods of stress, I would typically rather de-risk portfolios by buying government or supranational bonds rather than owning low returning AA or even single-A bonds in large quantities.

### REFINANCING RISK

The experience of 2008/9 showed that in addition to fundamental credit issues with particular companies, a market environment that prohibits new issuance can also lead to defaults for companies that do not have enough liquidity to refinance their maturing liabilities. This remains a risk, though we would argue that the liquidity facilities created at central banks for lending to commercial banks mean risks of banks going bust for purely liquidity reasons are small. Instead, insolvency from liabilities exceeding assets, and asset quality, are the prime movers for a bank collapse.

In non-financials, lack of market access for refinancing does remain a risk in the event of a systematic shock, or market-wide lack of demand. In the universe of sterling denominated bonds, BBBs have an average maturity of 10.71 years, and BBs 5.77 years<sup>3</sup>, comparable to other ratings bands within sterling, but longer than other currencies such as euros (5.66 and 4.98 years respectively). As such, we see no evidence that liabilities falling due within the next few years are more pronounced in BBBs than other IG, or in the UK market versus Europe. Of course, in a market shock event, BBB firms may find it more difficult to refinance than other IG firms, but they should still find it easier than any HY peers.

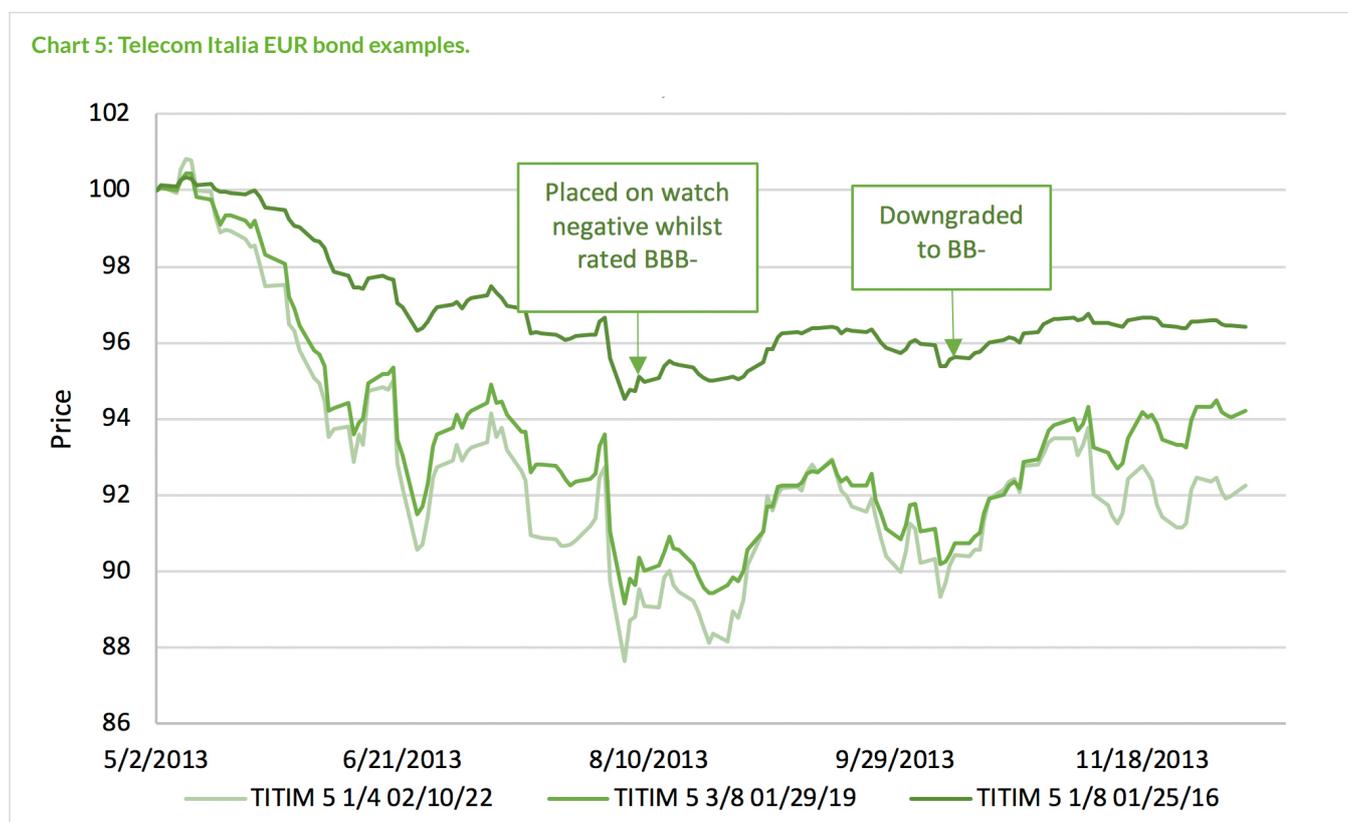
### WHAT ABOUT MARK-TO-MARKET LOSSES?

Mark-to-market risk and default risk are the two main reasons why credit investors should always be actively invested, in my view (leaving maturity, liquidity, sector, diversification and other preferences aside). Things change and portfolio managers need to be able to react to those changing inputs.

When credit quality deteriorates, and investors start pricing in the risk of a downgrade, it has proven to impact cash prices in a negative way, and often well before ratings agencies downgrade the bond. To quantify mark-to-market risk, it is useful to review two high profile 'fallen angels' over the last 10 years – Telecom Italia and Tesco – using short, medium and long dated bonds where available to show the impact on cash prices.

Telecom Italia is an interesting 'fallen angel' in that it was one the largest downgrades to HY seen in recent decades, with €27bn of debt leaving IG indices and entering the HY market. Also interesting is that despite this huge downgrade, the risk of this occurring appears to have been fully in the price. Post the 'watch negative' event, the previous trough in cash prices was never exceeded, and post the actual downgrade the same was also true. As you might expect, the longer dated, higher spread duration bonds declined more sharply, and while they also had steeper recoveries, they never recovered to the same extent as the shorter dated bond.

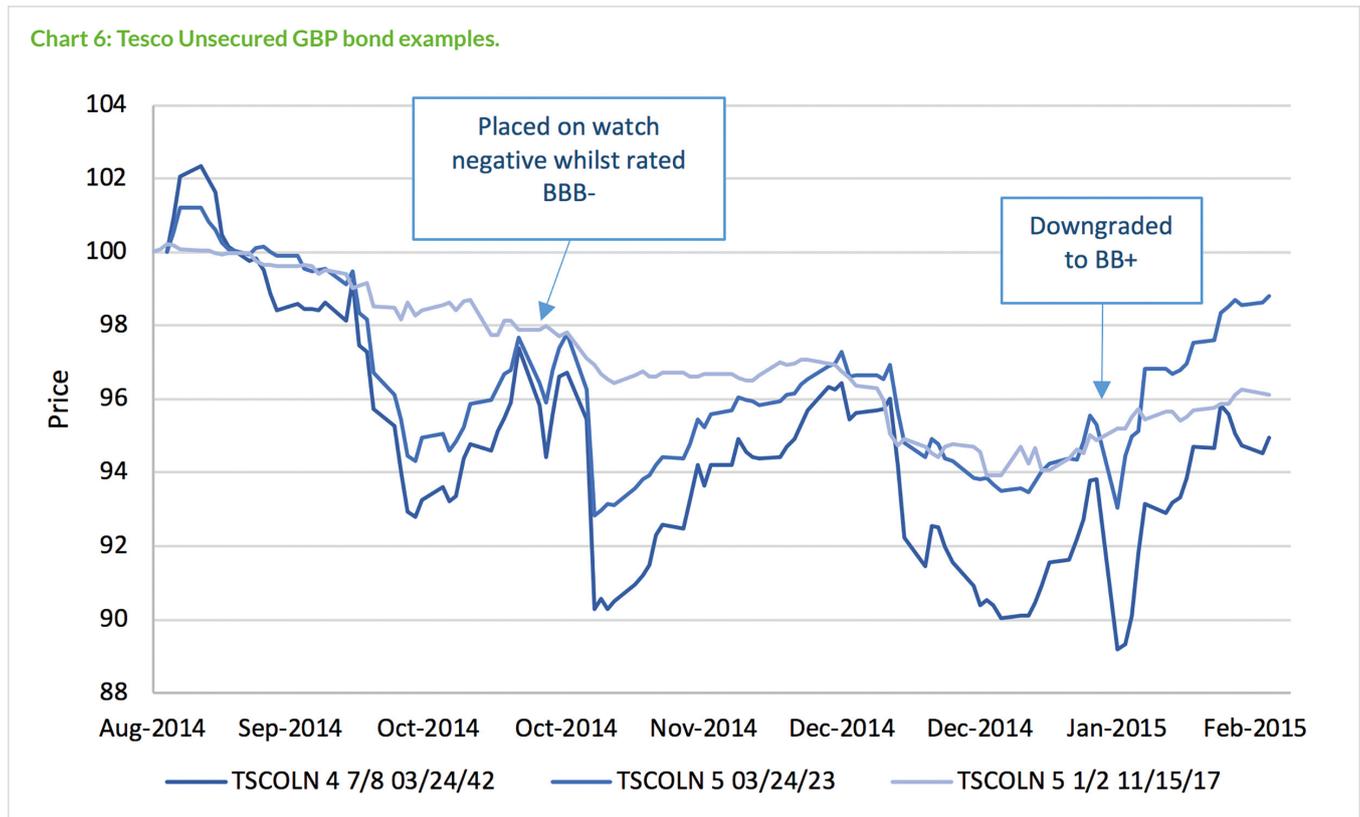
Chart 5: Telecom Italia EUR bond examples.



Source: TwentyFour, Bloomberg

3. Source: TwentyFour Observatory, January 2019.

Tesco, by contrast, had perhaps a more 'textbook' outcome.



Source: TwentyFour, Bloomberg

In Tesco's case, it is clear that the risks of the watch negative event had been partly priced in beforehand, and similarly the actual downgrade was partly priced in, though the long dated 2042s still had a large negative price shock on both the watch negative event and the actual downgrade. It is also evident that in both cases, recoveries were seen in the cash price, underlining the reason why mandates that exclude HY bonds need to allow portfolio managers a grace period in which to sell those 'fallen angels'. Clearly, not being a forced seller on the day, or even week of the downgrade has the potential to preserve capital for the client. It is also clear that the short dated bond was impacted by the deteriorating credit trend of Tesco, but does not appear to have been affected on the day of the watch negative event or the actual downgrade, and had a 6% negative outcome at the worst point. The longer dated bond had more than 10% losses at one point.

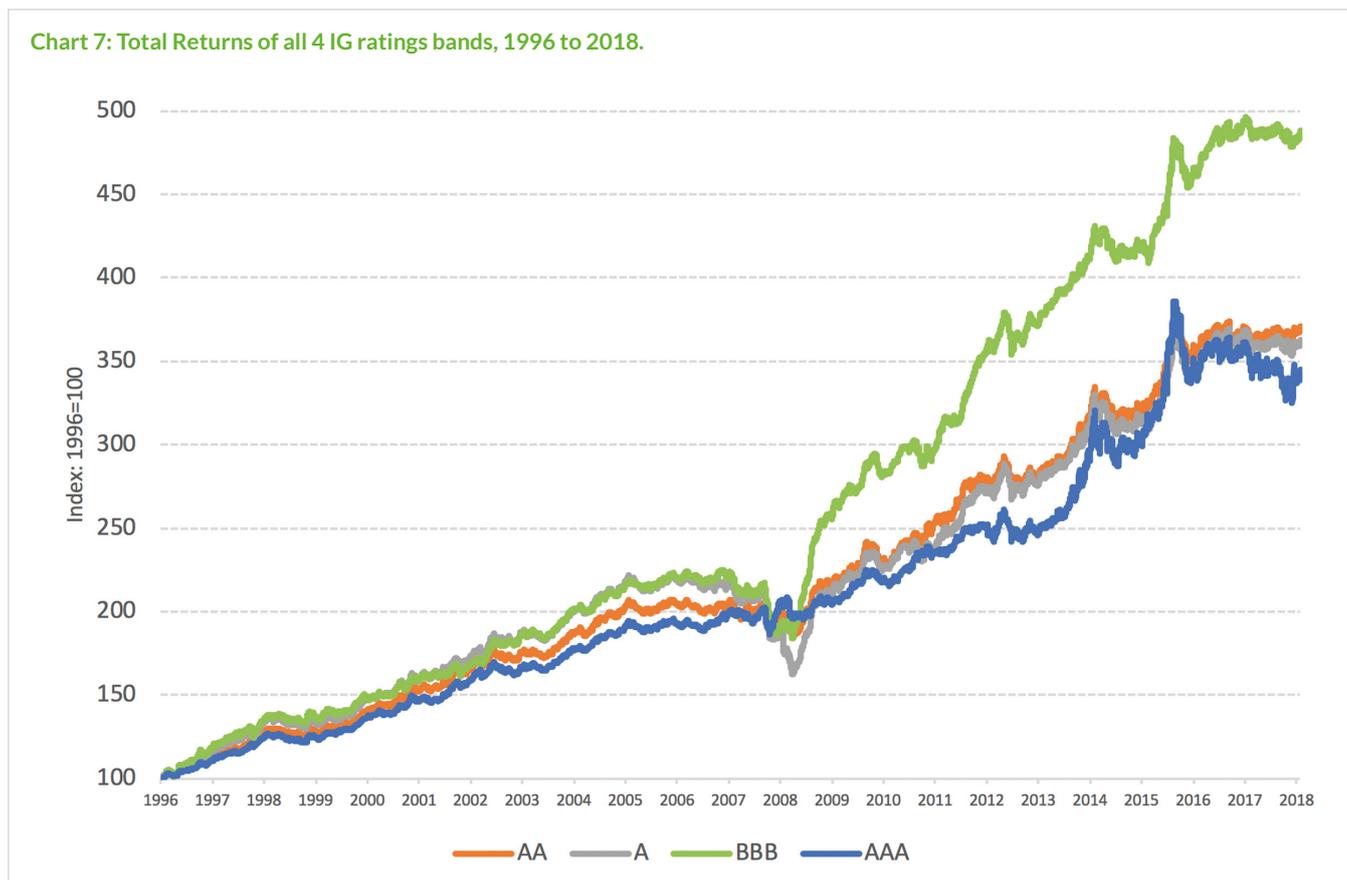
Having a view then, ahead of the market, that a company is a downgrade risk and then selling that bond from the portfolio can clearly be a benefit – provided you have enough liquidity to exit the

position. The actual downgrade event itself is not always where the greatest losses occur – typically they happen much earlier as earnings start to disappoint. Also clear is that the longer dated the bond, the greater the expected capital losses, even if risk of default is very remote. The maturity of the bond, or as a derivative of that, its spread duration, is therefore one of the key predictors of potential capital losses from any corporate bond and needs to be actively managed to try to protect portfolios. Spread duration is a topic that I will return to, but the bottom line is that our analysis has shown mark-to-market risk for a deteriorating credit to be a far smaller capital impact event than hard default, which we have already quantified above. Nevertheless, it is a risk that should be actively managed against.

#### WHAT ARE THE POSITIVES OF BBBs?

Yield has been the major driver of returns over the long term for fixed income, and BBBs are expected to have the highest yield in IG. So, do they outperform the other ratings bands in IG?

Chart 7: Total Returns of all 4 IG ratings bands, 1996 to 2018.



Source: TwentyFour, underlying data BAML

It is clear that the extra yield has produced considerably greater returns for BBBs, nearly 400% total return compared to around 250% for AA's and A's, with AAAs consistently the laggard, excepting 2008. What is notable post-2008 is that BBBs have accelerated their outperformance versus the other bands during their period of greater issuance, and that AAAs have become more volatile than BBBs. The Brexit vote in 2016 and the general sell-off in 2018 provide evidence for this – the dark blue line has been more volatile than the green line for at least the last five years. This is possibly due to the typically higher duration of many AAAs compared to BBBs – at certain points in the cycle, duration risk has been a bigger threat to capital than credit risk.

Of course, higher yield in an efficient market should also mean higher credit risk, and therefore a greater probability of hard losses and mark-to-market losses for any individual bond. What is less commonly known is that the expected higher yield in BBBs can be so much higher than other IG bonds that investors would be more than compensated for those higher risks. What is the evidence we have for that statement?

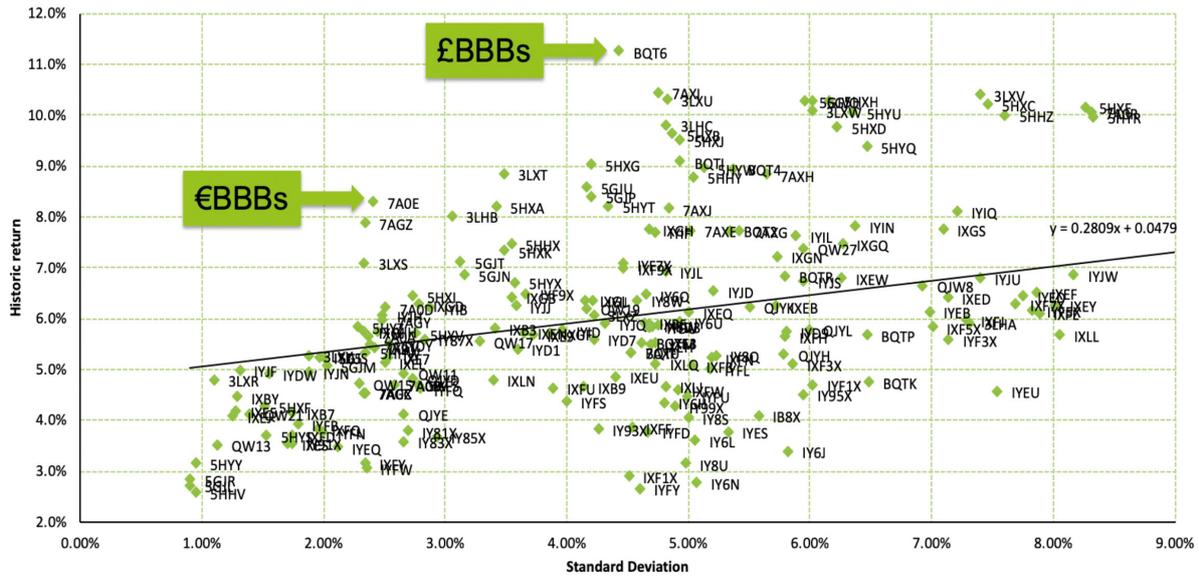
The extensive testing we have done on European IG over many years, together with US IG, shows that through time and through geography, BBBs within these, the two largest bond markets, have

consistently produced not just good risk-adjusted returns, but the very best risk-adjusted returns. This may seem counter-intuitive, but the evidence is very clear, and I must admit it did slightly surprise me (the quantum of outperformance at least) when first conducting this work in 2014. The driver of this work was the preparatory work we did when designing our long-only Absolute Return Credit Strategy.

The motivation for this research was to find out which assets in fixed income consistently produced the highest Sharpe ratios, and not just in good years for risk, but through the economic cycle. We identified the 204 separate iBoxx IG indices in euros and sterling that gave us enough granularity to lead to high quality decision making<sup>4</sup>. When we plotted the annualised returns of these 204 indices, I was literally astounded to find that the two indices with the highest Sharpe ratios were the entire sterling BBB index and the entire euro BBB index. This was a dataset that included the worst return year for credit in the modern era (2008), and another one with significant losses for many areas of credit (2011). So how could it be that the riskiest overall indices for each of the two currencies in the test, both produced the highest Sharpe ratios and therefore were on the efficient frontier? We realised that the attractive combination of higher yield (carry), plus the higher yield curve roll-down capital gain (from the steeper credit curve in BBBs) led to returns that more than offset the higher capital volatility and default risks.

4. Examples of some of these indices, for illustrative purposes, were 1-3 year AAAs, 3-5 year BBB's, 5-7 year financials, financials excluding Tier 1s, etc.

Chart 8: Annualised risk versus return for 204 European iBoxx indices, 2000-2014.



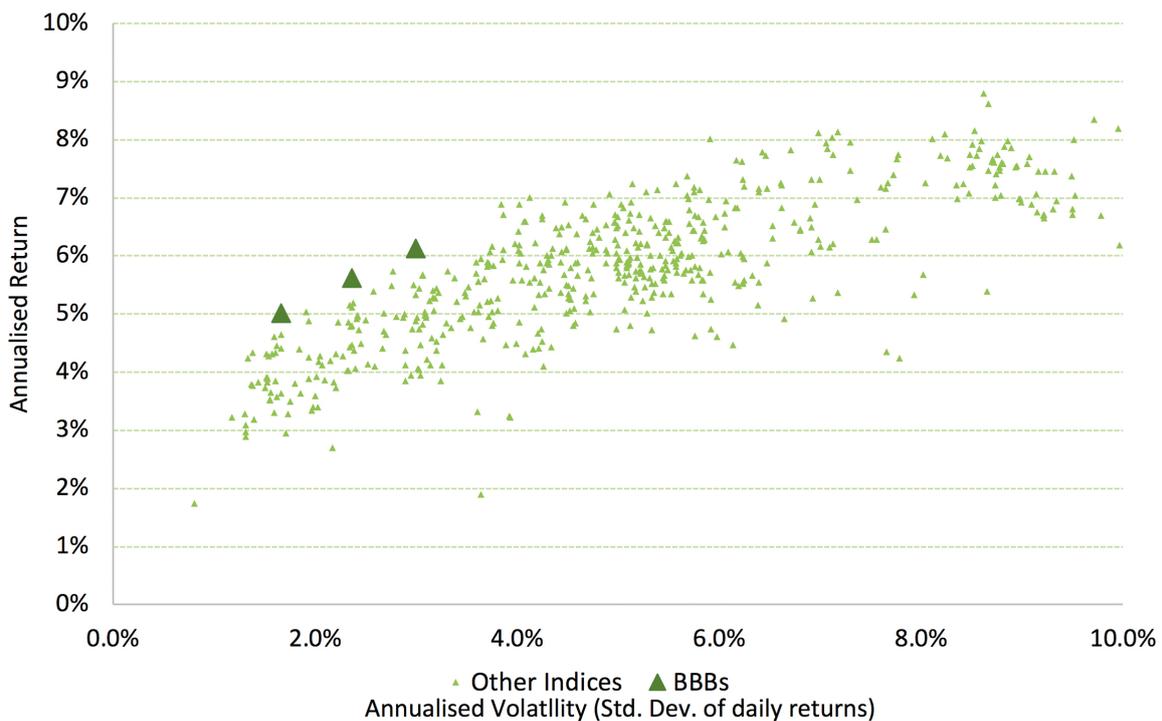
Source: TwentyFour, underlying data iBoxx

The dataset used here only had returns for European credit going back to the year 2000; consequently, that roughly 15-year period did not include a full economic cycle that included central bank rates rising. To address that problem, we sought a dataset that had data back to at least 1994, and we also broadened the dataset to include both investment grade, high yield, and indices that combined both credit and rates. We found that the US market provided the best dataset.

The results stunned us. Just like in Europe over a 15-year period, so in the US over a 27-year period with a wider dataset, BBBs again

produced the very best risk-adjusted returns. Over this period, we have seen a full cycle, with the Fed hiking rates by 250bp in 1994, the Asia crisis in 1997, the LTCM/Russian default in 1998, the dot-com crisis in 2000, the financial crisis in 2008, the southern European crisis in 2011 and the normalisation of monetary policy starting in 2015 and continuing through 2017. Despite all of that, BBBs, (especially shorter dated BBBs which have typically up to five years to maturity) produced the very best risk-adjusted returns. Better than high yield. Better than any other part of IG. Better than rates.

Chart 9: Risk vs Return of 560 US\$ indices, IG, HY and Rates, using daily returns from 1991 to 2017.

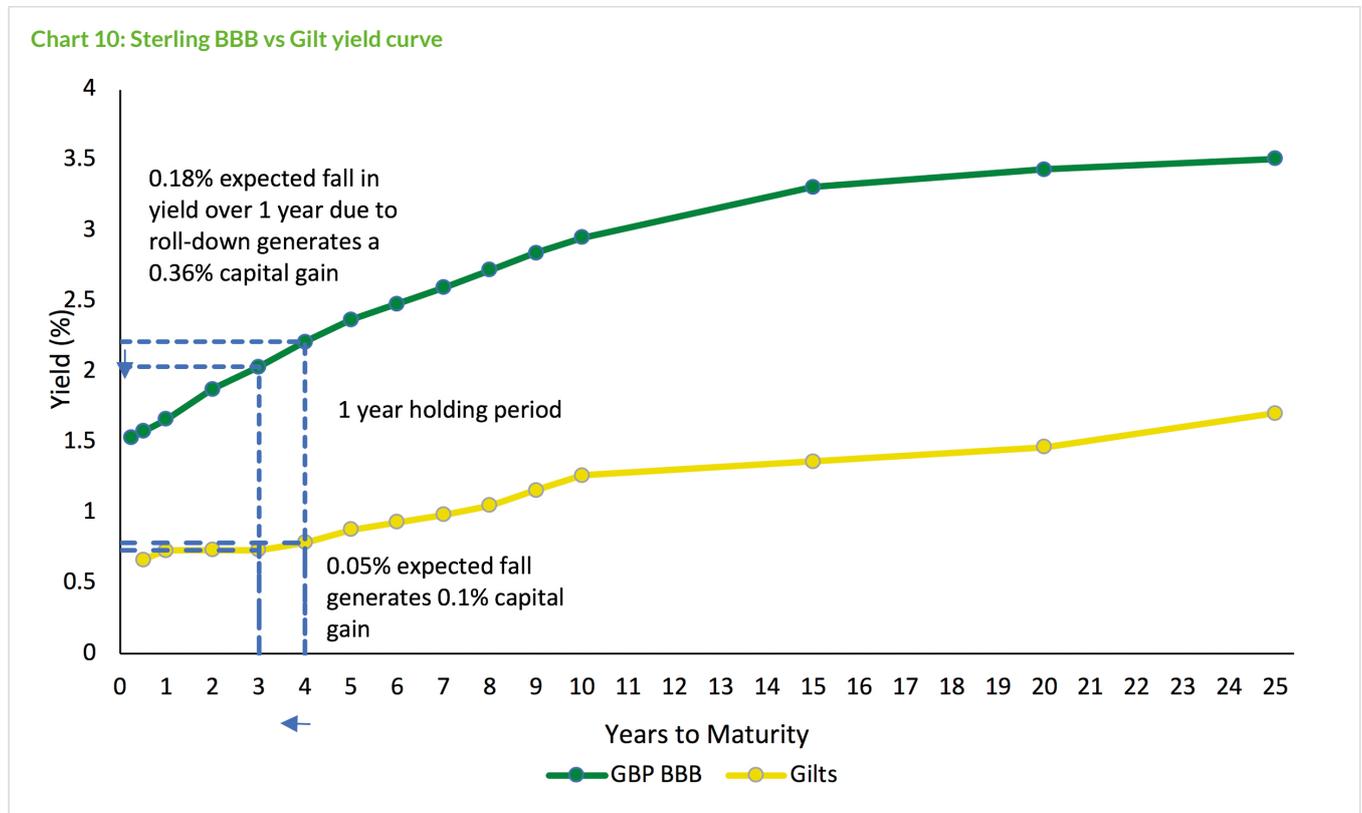


Source: TwentyFour (underlying data BAML)

## YIELD CURVE ROLL-DOWN

Another positive feature of BBBs is that they tend to have steep credit curves, even when sovereign curves are flat (such as in the US and UK right now). The greater the steepness of a curve, the greater the capital gain from yield curve roll-down (other things being equal) will be. This is not always a free lunch, because sometimes the

steeper parts of yield curves can be parts where duration is high, and therefore volatility and potential capital losses can lurk. But one especially attractive feature of BBBs is that you can still achieve a steep yield curve, and therefore roll-down impact, with short dated bonds that avoid the duration risks.



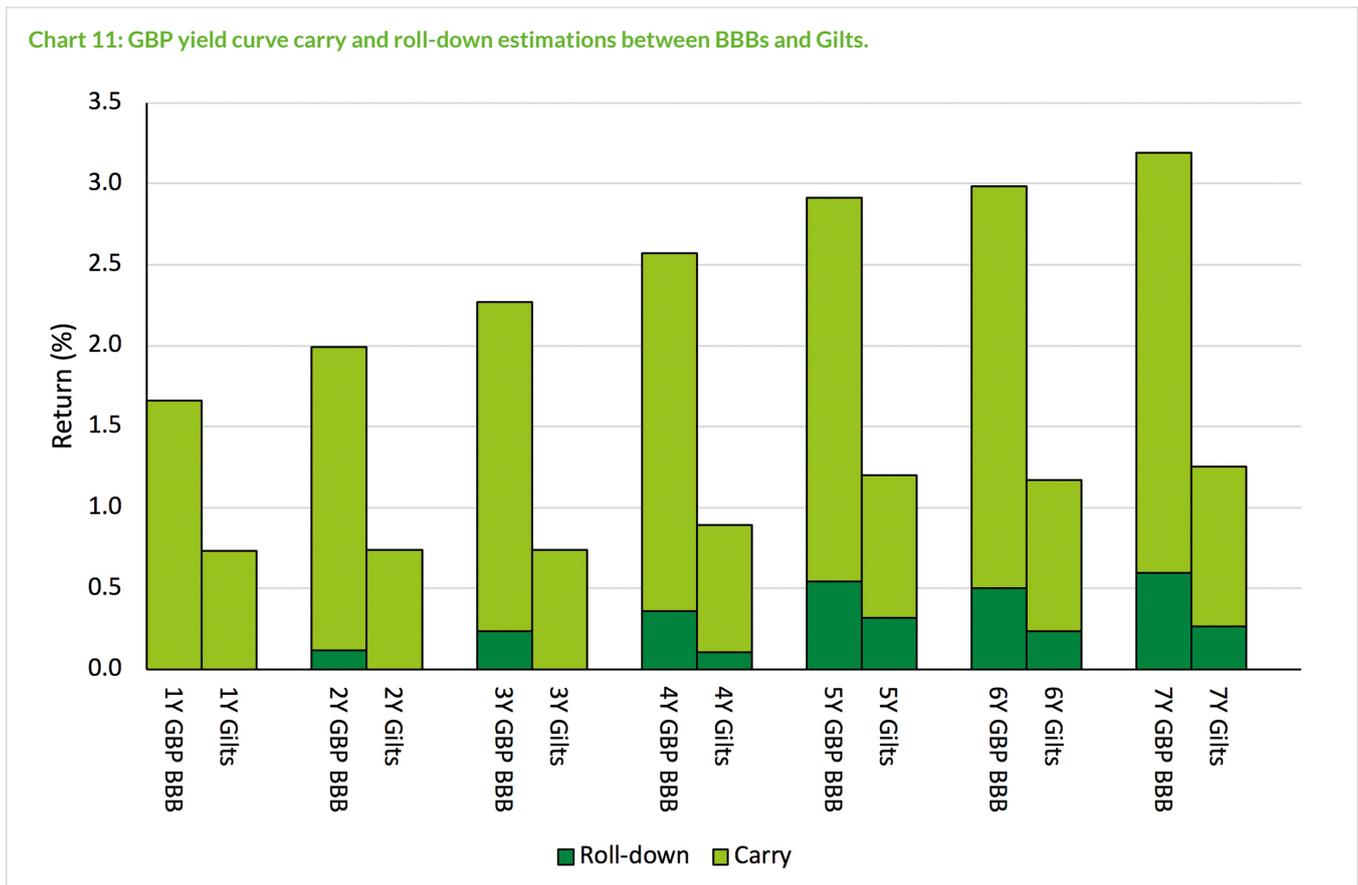
Source: TwentyFour

The yellow line shows how flat the Gilt curve is; the green line shows the relative steepness of sterling BBBs. Assuming a holding period of one year, and with no market moves, buying a 4-year Gilt and holding it for one year sees its yield fall by 5bp, generating a 10bp capital gain. Doing the same with a 4-year BBB generates an 18bp fall in yield and a 36bp capital gain. A 36bp gain with today's market yields for IG credit is approximately an additional 10% return. This roll-down

effect, on top of the yield, is a very helpful factor in elevating total returns for BBBs to give them that much better chance of a positive return in a volatile environment, and additionally offsetting capital volatility.

So how far out on the yield curve do investors need to go to maximise roll-down gains? In our view, not beyond five years to maturity.

Chart 11: GBP yield curve carry and roll-down estimations between BBBs and Gilts.



Source: TwentyFour

The dark green segments of the above bars show that beyond five years to maturity, roll-down gains do not significantly increase; therefore, why take the additional maturity, duration and volatility risk at this point in the cycle?

### CREDIT SPREAD DURATION

This raises again the issue of spread duration. Spread duration can be one of the most significant drivers of alpha for credit investors. A high duration corporate bond which benefits from spread tightening or yield decline will have a large capital gain as a consequence – this is why many corporate bond investors deliberately seek capital gains through calling the spread or yield environment on longer dated positions correctly. However, the trouble typically starts when spreads widen or yields rise, or where markets are directionless but volatile. In these circumstances, capital losses can appear quickly, and market volatility can also translate directly into high portfolio volatility with high spread duration bonds. BBBs, typically being higher beta, tend to have more volatile spreads. That spread volatility can lead to higher capital volatility, but only normally when spread duration is moderate to high. Data from TwentyFour’s Observatory system – a proprietary system that seeks out the most compelling relative value securities by regressing years of historical data combined with analysis variables such as yield, price volatility, sector, spreads etc. – clearly shows that with short dated BBBs, modest spread volatility does not translate into high capital volatility unless that modest spread volatility becomes extreme spread volatility.

It is no surprise then that we find the best risk-adjusted returns are not just in BBBs, but even more so when restricted to short dated BBBs. As discussed above, 1-3 year BBBs have the best risk-adjusted returns, with 3-5 year BBB’s a close second. This is why the dominant assets within TwentyFour’s IG strategy are BBBs out to five years in maturity. Of course, portfolios following this strategy often own longer dated BBBs as well as government bonds or selected single-As, but longer dated BBBs are more tactically owned given their higher spread duration.

For more strategic investors, we believe having a core allocation to moderate and low spread duration BBBs best balances yield, yield curve roll-down and lower capital volatility.

### LIQUIDITY

Liquidity is of course a risk to all fixed income investing given it is an over-the-counter (OTC) market. It is a topic we take so seriously that we capacity limit all of our fund strategies at TwentyFour. It is a topic on which we have publicly disagreed with the UK regulator in the past, when they published a paper claiming liquidity had improved since 2008. And it is why in our daily priced open-ended funds we take extreme care in the assets with which we construct the portfolios. For example, the TwentyFour IG funds never buy private placements, and we have a permanent allocation to a ‘liquidity bucket’ of government and supranational bonds which are expected to be extremely liquid. Additionally, we do not think unrated bonds have enough price transparency (they are mark-to-model as they are not members of indices), nor liquidity (many pension fund and insurance company mandates cannot buy bonds without an explicit rating), to be significant parts of our open-ended funds.

What are the liquidity characteristics of BBBs specifically? One of the paradoxes we have noticed since the financial crisis is that while overall market liquidity has definitely declined, primarily due to Dodd-Frank and other pressures on capital ratios and balance sheets for banks, liquidity within short dated BBs and BBBs has been the best available from the market. We suspect this is for two reasons: one, they are typically higher beta, and therefore allow traders to potentially make more money from them, and two, they normally have significantly higher carry (yield).

The second half of 2018 saw large outflows from fixed income funds as an asset class, and additionally from the enforced wind-up of several funds. The inherent liquidity characteristics of short-dated, good-carry bonds meant they were often the assets that were most naturally sold. Not because they were inherently higher risk – simply because they were assets managers believed could most easily be sold for close to their valuation price. Many assets, such as private placements and unrated bonds, often cannot be sold for close to their valuation marks in periods of reduced risk taking, such as H2 2018.

As corporate bond traders ourselves, we certainly do not view BBBs as having any less liquidity than any other corporate bonds.

## SUMMARY

We recognise there has been a lot of press commentary recently on the increased size of the BBB market potentially becoming a large risk for IG investors, given the prospects of ‘fallen angels’ ultimately defaulting. We have certainly had many client enquiries as a result. But we believe the reports of the death of BBBs as the best risk-adjusted returns you can find in all of global fixed income are exaggerated, for the following reasons:

- BBBs have become the largest ratings band within IG indices
- As corporate leverage has increased, spread premiums for BBBs vs single-As have tended to rise as well, therefore there has been no systematic spread compression that would explain the issuance trend
- Focus on rating agency performance since 2008 may help explain the greater proportion of BBBs in indices: we suspect the bar for achieving a single-A rating is now higher

- BBBs tend not to default: the peak for BBB defaults in any year since 1970 is 1.02%
- Transition data over five-year periods show downgrades to BB have had less than 8% probability
- The total cumulative default rate for BBs is less than 5% over a three-year holding period
- Expected losses for a portfolio of 100% passively invested BBBs, assuming absolutely no recovery whatsoever, combining probability of downgrade and probability of default, is: 0.34% for bonds downgraded to BB, and 0.33% for bonds downgraded to single-B. That means total expected losses of 0.67% with no active management, hedging or risk-mitigation, nor recovery value
- BBBs have generated and continue to generate significantly higher returns than other subsets within investment grade
- BBBs have produced the best risk-adjusted returns in all of fixed income; in Europe and the US, compared to broader IG, HY and rates assets
- BBBs have the best potential roll-down gains, even with low spread duration
- Nothing beats BBBs with less than five years to maturity in terms of risk-adjusted returns
- They are anticipated to be liquid, and especially more liquid than other credit products
- Keeping spread duration moderate to low should be the best protection against capital volatility

Investors in credit can never be complacent: the asymmetric risk profile must always be respected and managed. But we believe a wholesale avoidance of the best absolute and risk-adjusted returning product set would be the worst possible outcome for fixed income investors.

BBBs do have inherent risks, and some are elevated compared to other assets within fixed income, but the benefits can comprehensively outweigh these manageable risks. In our view there are no better assets – but you must be actively invested in BBBs to capitalise on their virtues and avoid ‘fallen angels’ as far as possible.

Instead of the hellish return scenario painted by some commentators, I would argue BBBs are heaven sent, and you avoid them at your peril.







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