

Absolute Return Credit:

An Answer to Client Short-Termism and the True Costs of Yield-Targeting

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Summary: *Investors who initiated or increased exposures to credit investments in the post GFC period may have viewed them as a form of high-yield term-deposit.*

At this point in the cycle, lower prospective returns will give rise to behavioural frictions that arise from emotionally driven decision-making. Weak returns from a credit portfolio in such situations can lead to strategy abandonment at the worst possible time.

High yield credit funds have seen significant cash flows in recent years. Investors may have invested in products which had an inferred yield target of some kind. Yield targeting requires portfolio managers to deepen their exposure into credit when it is most expensive and can lead them to reduce exposure when it is cheapest. This reduces expected total returns over a full cycle and increases volatility of investment outcomes. Such approaches can increase behavioural costs.

In order to address these issues, credit exposures obtained via fund managers who adopt an absolute return mindset may produce better longer-term outcomes for clients and stronger relationships between them and their advisers. These absolute return oriented funds acknowledge the mental link between credit and cash yields whilst also allowing for variations in the state of credit markets in a way that is not pro-cyclic.

Credit is turning: the cracks will appear

Indications of a turn in monetary policy bias are widespread with Canada, the United Kingdom and the United States in a tightening rate cycle and a wind-down or reversal in QE now apparent in the Europe, UK and the United States. Australia's RBA is awaiting the appropriate time to raise rates. The IMF has upgraded world-wide growth as a synchronised recovery is now taking place. The low level of wage inflation remains a conundrum and, if labour market tensions should take hold, share of profits will move to households, resulting in a re-assessment of credit quality of corporate and household debt.

The worries and risks remain to the downside: China, protectionism, over-indebtedness and the rising tide of the politics of fear/loathing². The market hopes for a productivity miracle and supply-side reforms. Yet, if these come, it will be at the horizon of a decade or more.

The indications are that credit will be turning or, at least, will have a challenge to compress further from these levels. This will test expectations for clients who equate these exposures with a form of high-yield term-deposit. A review of portfolio settings may be warranted.

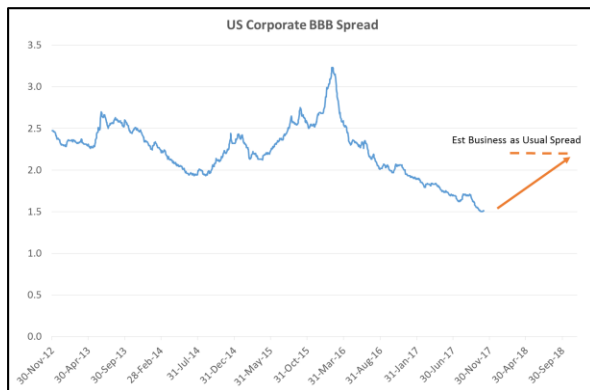
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² IMF; 2017; "World Economic Outlook", October Edition

What might credit spreads do in the near future?

We have developed a model which links BBB corporate spreads to Treasury in the US with the following key credit drivers: VIX, 10 year Treasury Yields and Corporate Leverage. The details and econometric outcomes are left for Appendix A. The model helps to provide a reasonable basis to assess what credit spreads might do in various scenarios.

For working purposes, should VIX return to a figure closer to 17.8³, 10 year Treasury Yields rise to 3.8%⁴ and corporate leverage fall to 80%⁵, we would see equilibrium US Corporate BBB spreads at 2.3%. This can be seen as a more business-as-usual level for BBB spreads in comparison to the levels at the time of writing of 1.50%. It makes no allowance for overshoot in the spreads which may occur as positions are unwound, following a re-assessment of market conditions, in an environment of lower inventory availability amongst market makers for these kinds of assets.



This would prove challenging for credit exposures and represent a sharp reversal to the more recent, favourable, experience. If

such a move occurred over a period of a year or less, a floating rate note with a duration of 4 years would be close to incurring losses over the period. It would certainly result in returns below the prevailing deposit rates. Given spreads were at these levels only 15 months ago, a reversal of this magnitude is easily conceived of. The implications for the US markets clearly flow through to Australian investments.

Changes attract attention, but this sometimes leads to unhelpful reactions.

Behavioural Frictions

It would be remiss not to mention Richard Thaler at this juncture. The 2017 Nobel Laureate for Economic Sciences showed that we are human after all and that, when trying to help others make better decisions, sometimes we need to give them a “nudge”.

On a whole, individuals are poor risk takers. We take too much risk, buy high and sell low, and cycle between overconfidence and anxiety in sizing our positions. The activity of changing investment arrangements destroys value for most. For example, nearly 80% of retail contract for difference accounts become inactive within 2 years⁶. When end-investors make switching decisions, they generally would have done better by not switching.

There is a gap that arises from switching investments that is worth around 1% per annum^{7 8} and is generally worse when there are significant turning points in markets because that is when most switching activity tends to occur⁹.

³ Median of VIX level from 1 January 2000 to present. At the time of writing, this was 9.8.

⁴ Sum of FOMC median long term GDP projection of 1.8%pa and Fed inflation target of 2%pa. At time of writing, this was 2.42%pa.

⁵ Median of S&P500 Debt to Equity from 1 January 2000 to present. At the time of writing, this was 97%.

⁶ IG Markets PLC FY2017 Annual Results Presentation, p15

⁷ Barclays; 2013; “Overcoming the cost of being human (or, The pursuit of anxiety-adjusted returns”; White Paper

⁸ Kinnel R; 2017; “Mind the Gap: Global Investor Returns Show the Costs of Bad Timing Around the World”; Morningstar Research Publication

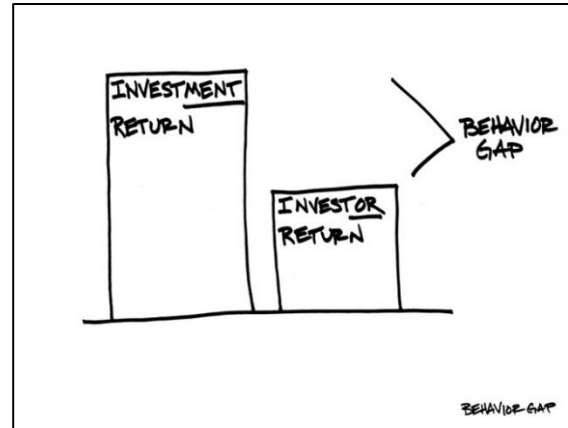
⁹ Gerrans P; 2009; “Member Investment Choice Response to the Global Financial Crisis”; Report to the AIST; CRIFER

That 1% pa is more than the difference in expected return between investment choices that might be called “Balanced” and “Growth”¹⁰. Further, that figure is an average of all investors. Most switching activity occurs within a cohort of older citizens, typically males, with more assets available to them and higher incomes¹¹. These people tend to seek independent financial assistance, retain an interest in their investments and are more likely to intervene. They are more likely to establish SMSFs and control a disproportionate amount of total savings.

Financial advisers, then, have a very significant role to play, if only to help investors stick with a strategy. Over-trading simply consumes transaction costs¹². A tendency to reduce risk after taking losses and increase risk after making gains generally subtracts yet more value from client accounts unless the markets are displaying significant momentum, as they can from time to time [see Appendix B].

As mentioned, these behavioural frictions are borne mostly by a relatively small number of end-investors. However, these people have material balances so the sums involved can still be significant. For them, the concept of a long-term expectation for risk and reward in strategy development is less relevant due to such behaviours. Education on such matters only has a limited impact^{13 14}. Some refer to the behavioural costs incurred from such activities as a Behavioural Gap¹⁵ or an Anxiety Gap¹⁶. When this is acknowledged, investment plans are developed considering results that can truly be achieved rather than those based

more on the application of classical portfolio theory.



Source: Richards (2013), “The Behaviour Gap”

When the potential for avoidable value destruction is clearly apparent, Thaler would recommend encouragement to better decisions or a better matching of choices made for the true ability to absorb the consequences. A significant role for the financial advisers, then, is to restrain clients against their worst impulses. Matching product choices to investor temperament is an important part of this task.

The Credit Compartment

One of the strongest features of human cognition is that we engage in ‘mental accounting’¹⁷. We mentally arrange things in buckets and think of each one separately from the rest. This goes against the edicts of Modern Portfolio Theory¹⁸, but even its creator and Nobel Laureate, Harry Markowitz, engages in the activity. His more recent research efforts are directed to the nexus of mental accounting

¹⁰ Refer AustralianSuper Premixed Investment Options investment objectives (www.australiansuper.com)

¹¹ Gerrans P, Strydom M, Moulag C, & Feng J; 2016;

“Investment Strategy on Retirement Savings: An analysis of the experience of fund members”; JASSA

¹² Barber BM & Odean T; 2000; “Trading is Hazardous to your wealth”; Journal of Finance

¹³ Delpachita S & Rafizadeh; 2014; “The Switching Decision: Are Members of Superannuation Funds Rational and Informed

Investors?”, Australasian Accounting Business and Finance Journal

¹⁴ Barclays, ibid

¹⁵ Richards C; 2013; “The Behaviour Gap”, CFA Institute Conference Proceedings Quarterly

¹⁶ Barclays, ibid

¹⁷ Thaler RH; 1999; “Mental Accounting Matters”; Journal of Behavioural Decision Making

¹⁸ Markowitz H; 1952; “Portfolio Selection”; Journal of Finance

and modern portfolio theory¹⁹. So, human behaviour still prevails over mathematical, portfolio theories even for those who created them.

A related cognitive feature is 'narrow framing'²⁰ which is where we look at pieces in the portfolio without adequate allowance for how the pieces fit in to the whole. For example, investors may compare the returns to credit against cash directly rather than see it as part of a wider portfolio whose characteristics are different to cash.

It is no wonder theoretical plans cannot remain implemented in many cases, particularly if they have not made adequate allowance for our humanity. For these reasons, if watching our investments closely and where the stakes are meaningful in some way, we tend to be over-reactive²¹. We will tend to trade our exposures in a way which destroys value by realising gains too quickly and confining losses to the bottom drawer²² until emotional exhaustion leads to capitulation²³.

Central banks lowered interest rates in the post-GFC period, deliberately encouraging the movement of personal investments to higher yielding assets²⁴. If an investor has a mental plan for the cash in the portfolio and regards credit as a cash substitute or high-yield deposit, there is a good chance that they will be reactive to a disappointing return from credit investments.

Perhaps a degree of preparation is appropriate to minimise the degree to which there may be a misalignment between expectations and outcomes.

Yield Targeting is a wealth hazard

In seeking a superior alternative to term deposits within a low interest rate environment, a market grew for products which delivered yields which were subject to some expectation of a minimum yield above cash. To clients, these may have appeared as elusive high-yield accounts in a low yield world.

Such products are easily identifiable by the actions of the portfolio managers. In response to falling credit spreads, to maintain yield expectations, managers need to engage in a combination of: increasing credit duration and decreasing credit quality. Buying high.

To deliver a consistent targeted yield from a market which inherently does not produce such outcomes, fund managers need to extend credit exposure when rewards are narrowest and, potentially, lower them when rewards are highest. This activity of buying high and selling low is part of the product design.

The portfolio management approach has much in common with portfolio insurance and volatility targeting. Portfolio insurance activities were implicated in the 1987 stock market crash and volatility targeting is regularly raised as a concern given the exceptionally low market volatilities and leverage within the financial system. These strategies all buy high and sell low. This activity reduces return expectations relative to a more strategic alternative [see Appendix C]. This is different to saying that the approach is flawed. It is what is necessary to deliver a targeted outcome.

Managers operating in this manner are also subject to strong peer-related competitive pressures given the objectives are similar

¹⁹ Das S; Markowitz H, Scheid J and Statman M; 2010; "Portfolio Optimization with Mental Accounts"; Financial Analysts Journal

²⁰ Kahneman D; 2003; "Maps of Bounded Rationality: Psychology for Behavioural Economics"; The American Economic Review

²¹ Barber BM and Odean T; 2011; "The Behaviour of Individual Investors"; Working Paper

²² Shefin H and Statman M; 1985; "The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence"; Journal of Finance

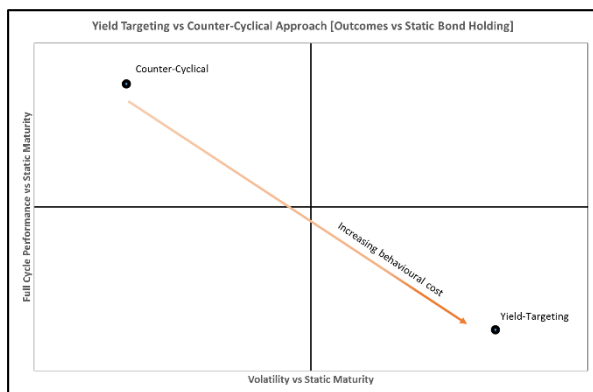
²³ Barclays *ibid*.

²⁴ Bernanke BS; 2012; "Monetary Policy since the Onset of the Crisis"; Speech at Federal Reserve of Kansas City Economic Symposium

within the high-yield universe. Much like banks who compete for deposits. Securing high rankings on performance tables is an important business imperative and, especially when further encouraged by performance based fee structures²⁵, can create a difference between what is truly suitable for the client over the long term and what is best for the fund manager²⁶.

We acknowledge that such managers are simply operating to their stated mandate and that problems arise mostly from the choice of product. In some cases, it may pay to clarify whether products described as absolute return in nature are, in fact, yield targeting to some degree.

In combination, these may lead to additional behavioural costs on the part of investors who also tend to buy high and sell low. Costs multiplied by costs. Remembering that the net result is what counts, yield targeting funds come with higher behavioural costs in addition to return diminution from pro-cyclic investment activities.



Having enjoyed very strong returns in the post GFC era, clients may benefit from reconsidering whether yield targeting truly is the most appropriate approach for them to take over a full credit cycle.

Yield Targeting within Pooled funds or Managed Discretionary Accounts

Mental accounting and narrow framing can be greatly reduced when investors access markets through diversified pooled funds or managed discretionary accounts. Nonetheless, examination of member investment choice activities in major superannuation funds suggests challenges to sticking with a strategy remain for the vulnerable demographic discussed previously.

If yield targeting approaches are present in these arrangements, they too may benefit from a review at this time. We highlight that it is unusual for any other asset class in most diversified investment arrangements to structurally increase risk when markets rally or reduce risk when markets fall. More likely, rebalancing activities move against this. Yet, as outlined above, yield targeting approaches actively move in a pro-cyclic fashion.

Yield targeting funds have clearly enjoyed an environment of falling credit spreads. It would be a shame to dissipate some or all of these gains with the onset of a secular widening of credit spreads. This is particularly so if the appropriateness of pro-cyclic approaches to credit exposure, a market which is clearly cyclical in nature, is questionable in the context of a wider strategic approach which otherwise prefers the maintenance of natural risk exposures or moving in to market dislocations²⁷. Further, yield targeting within a wider diversified arrangement has questionable value in that the total portfolio yield outcome will hardly be influenced by the yield production within the credit allocation.

Even within pooled arrangements or managed discretionary accounts with targeted yield exposures, advisers can revisit how best to

²⁵ Cooper J et al; 2015; "Super System Review Final Report"; Submission to Treasury

²⁶ Solnick SJ and Hemenway D; 1997; "Is more always better?: A survey on positional concerns"; Journal of Economic Behaviour & Organisation

²⁷ Heatherton H; 2013; "Long Term Investing"; Future Fund Position Paper

help their clients avoid adverse outcomes that will inevitably arise when credit spreads expand again. As monetary stimulus via the portfolio channel diminishes, these adverse outcomes will likely arise at a time when nominal interest rates are rising, placing pressure on valuations of assets as diverse as equities, infrastructure and government bonds.

Absolute Return Oriented Portfolios

If clients see credit investments as a cash alternative, another perspective is to vary credit exposures depending on the value inherent in taking credit risk. Instead of targeting a particular yield through a cycle, this approach accepts only the yield enhancement that makes sense given the prevailing market conditions with a total return mindset.

This approach has the benefit of operating within the same framework of thought that many investors hold. As such, behavioural frictions will be reduced. The net long-term return for the end-investor, after the costs of anxiety are considered, may well be superior to that achievable if invested in structurally higher yield funds. This is especially so for investors who watch their investments closely and most strongly exhibit compartmentalised thought processes. Investors with wealth levels close to their minimum acceptable levels or otherwise particularly sensitive to investment outcomes are also more likely to benefit from the close alignment between their true objectives, allowing for human frailties, and the investment process.

Given the encouragement towards risk taking that can arise from a performance based fee structure, particularly involving credit/carry-

like strategies²⁸, and especially so for portfolios of illiquid securities which result in performance persistence²⁹, a base fee arrangement further aligns the interests of the manager with the end-investor.

The later stages of a credit cycle are identifiable, with the foregone benefits of being a little too early on this call being quite low. When assets are expensive, managers of absolute return oriented funds sell. This reduces risk of capital loss and can provide some benefits from contrarian position-taking as the market evolves.

Absolute return oriented portfolios can represent a more survivable strategy for most investors who introduced or expanded their exposure to credit in response to the low interest rate environment. The value of survivability comes to the fore when credit market conditions turn.

Conclusion

When determining investment settings, the actual behaviour of investors must be considered. Some demographics or circumstances, including personal disposition, lend themselves to increased behavioural frictions. With the credit cycle at a point where we are more likely to see spreads widen than narrow further, behavioural frictions come to the fore for this element of investor portfolios.

To the extent that investors consider credit as an alternative to cash, absolute return oriented approaches attempt to give investors an outcome which more closely matches their frame of thought and associated risk tolerance. This increases the likelihood of maintaining a sustained exposure to credit for the long haul.

²⁸ Carry strategies have a high probability of delivering a favourable near-term return with a low probability of a severe adverse outcome. In the presence of a performance based fee, particularly one without clawbacks, fund managers are encouraged to take more risk as this increases the expected

present value from the mandate and is inherently conflicted as a result.

²⁹ Philpot J, Heath D and Rimbey J; 2000; "Performance persistence and management skill in nonconventional bond mutual funds", Financial Services Review

Targeted yield funds have enjoyed a very strong outcome as credit spreads have narrowed since the GFC. If these are regarded as high-yield cash accounts, to some degree, a significant potential for disappointment awaits. When considered along with behavioural frictions, the net outcome may well be to unwind exposures after some portion of gains has been returned, possibly forgoing the long-term benefits of credit exposures in diversified arrangement.

With a global economic recovery under way and clear moves towards diminishing the portfolio channel of monetary policy stimulus, it is timely to review the arrangements in credit exposures. When doing so, the survivability of the journey is important and this must consider the way a client thinks of this investment along with more classical concepts of risk and reward.

Appendix A: Estimating BBB Corporate Spreads in a Business-as-Usual Environment

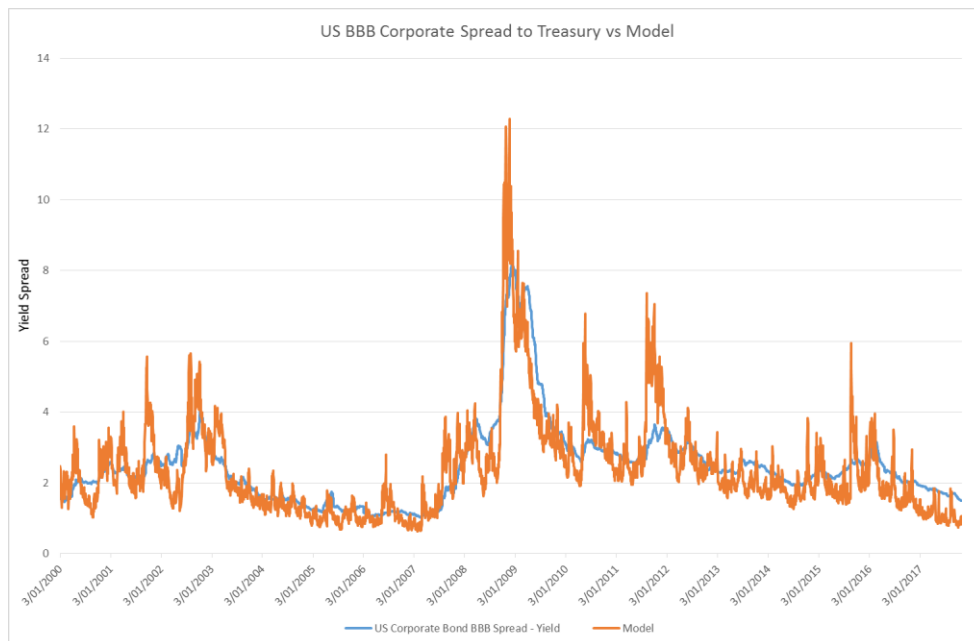
We seek to develop an estimate of the level at which US BBB Corporate Spreads to Treasury would trade at under more normal circumstances. This was estimated using a Johansen cointegration test with daily data from 1 January 2000 to 29 October 2017.

The variables in the equation included:

Variable	Comment
US Corporate BBB Spread	This is the variable we seek to estimate
SP500 Debt to Equity%	Corporate Treasurers adjust leverage according to the relative cost of capital
US 10 Year Treasury Rate	A risk free rate available to investors
VIX	A proxy for risk in the markets and economy
Post GFC Boolean	An allowance for the change in market structure following the GFC

The model strongly confirmed the presence of a cointegrating relationship. In other words, the levels of these variables are related in a stable way.

The equation fits the historical BBB Spread as follows:



Source: FactSet, Author Calculations

The model has a good fit to the BBB spread over the history. The model predictions are more volatile than the spread due largely to movements in the VIX, which is a forecast of equity market volatility over a relatively short period of 30 days. The historically low levels of the VIX have driven the model estimates downwards since mid-2016, leading the BBB spread's compression. Although not explicitly fitted, the skew in the expected VIX distribution is also large at this time and would be contributing to a premium between BBB Spread and model estimates. On the other hand, the impact of ECB asset purchases of corporate bonds would be to compress spreads.

If conditions return to more normal settings, the skew estimates will also do so. The ECB recently announced that the rate of bond purchases would halve to EU 30bn from January 2018. To the extent that these aspects do not normalise, due to developments like a financial market stress event

as an example, our estimates for the BBB Spread will likely prove to be biased to the low side and understate potential mark-to-market losses in credit portfolios.

We have added a post-GFC Boolean variable into the equation. This is a fixed effect intended to capture changes in the market dynamics for credit since the collapse of Lehman Brothers. Such effects may include an allowance for lower liquidity availability due to the closure or downsizing of many proprietary desks who are active in these products and increased risk aversion to credit risk relative to the pre-GFC period. As expected, there is a premium for holding credit risk in the post-GFC period. For BBB corporate credit, this premium is estimated at approximately 0.7% per annum.

By substituting a scenario for the time series variables, we are able to obtain an estimate of what the BBB Corporate Spread would become once adjustments have settled. We have elected to test a scenario of simply returning to historical norms: median observations for VIX (17.8) and leverage (80%), together with a long term bond yield equating to the expected nominal GDP (3.8%pa). The post-GFC fixed effects are left in place. This produces an estimated figure for the BBB Corporate Spread of 2.3%pa.

This estimate is historically reasonable. Also, with the level of the Spread last at this level in July 2016, a reversion to this level within a period of around a year or so is entirely conceivable.

This reversion makes no allowance for overshoot that might occur due to a reversal of volatility compression which cascades³⁰. Under these conditions, Spreads would likely be wider than our equilibrium estimate for a period of time.

³⁰ For example: Adrian T; Sept 2017; "Macroprudential Policy and Financial Vulnerabilities", Conference Speech at the European Central Bank

Appendix B: The Behavioural Cost of Fear and Greed – An illustration

Investors have a tendency to extrapolate recent performance³¹ and to invest differently when they are profitable against some anchor point like initial capital^{32 33}. Overall, this leads to an increase in position size following recent gains and reduction in position size following recent losses.

In order to give some sense as to how such activity can adversely impact investment performance, we undertake a simulation where a trader varies their exposure to the ASX 200 according to its recent performance. Although we are using the ASX 200 as the 'risk asset' for the simulation, it is serving as a proxy for a trading strategy which has positive edge. In other words, the trader has predictive ability.

The baseline is a portfolio which begins with a 50/50 exposure to a cash account earning RBA Cash Rate interest and the ASX 200 (as a proxy for a profitable trading strategy), and continually rebalances to this weighting scheme. We compare this against an alternative where this exposure varies with the total return of the ASX 200 recorded over a lookback period, for example, the prior month. If the prior return on the equity market over this period was negative, the day trader moves to cash. If it was positive, the trader moves to become fully invested in equities.

The magnitude of portfolio movements, between fully invested or divested, in the simulation is not commonly observed but serves to highlight what happens at the margin when investors switch a portfolio of their investments reactively. For example, if a reactive trader tends to move weightings by 10%, then this analysis may be relevant when examining that portion of their arrangement. It will still show that the impact is material within this context.

In order to conduct the analysis, we obtain 20 years of ASX and RBA cash data for the period ended 30 June 2017. This was a favourable period for equities, which achieved a compound annualised return of approximately 8%. We then conducted a Monte Carlo simulation by randomly sorting the daily returns and comparing what the 'rebalancer' and 'trader' would have done under those market conditions. This approach breaks any auto-correlation effects that might exist in the single historical sample but otherwise preserves the average return and other distributional properties. As mentioned above, the ASX exposure is a proxy for a profitable trading strategy whose profits on a day to day basis have no correlation to each other but are positive overall.

For each look-back period shown below, we conduct ten-thousand simulations of how an account balance for the rebalancer and trader would have fared, starting from a common level of \$100. These are compared over the course of the re-sorted 20 year period and the outcomes for the simulations are summarised via a cone chart that shows the 10th, 50th and 90th centiles of the difference between the trader's portfolio value vs that of the rebalancer's portfolio as the simulation progressed.

The charts overleaf show the outcomes for lookback periods of a week, 1-month, 3-month and 6-months. It shows that reacting to historical outcomes by selling after a weak period of performance and buying after a strong period of performance tends to destroy value. The more reactive the

³¹ Barber BM and Odean T *ibid*.

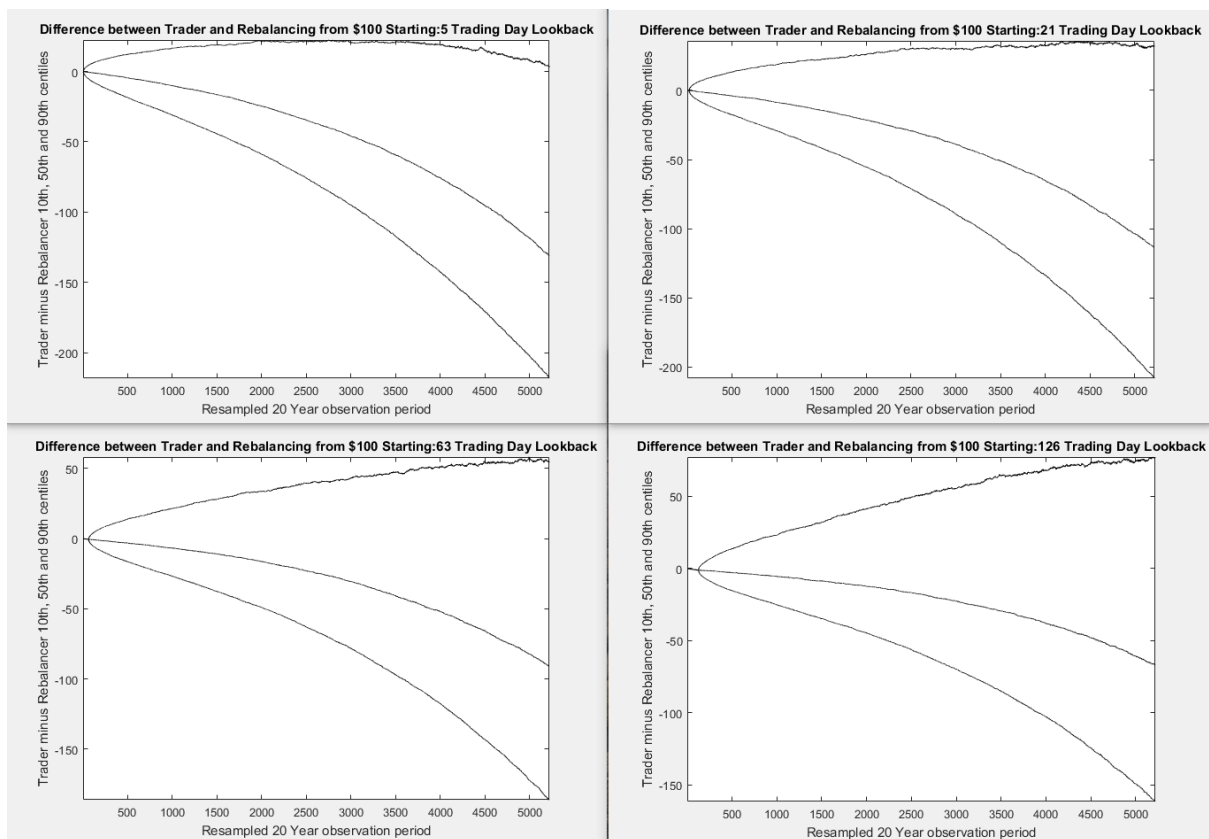
³² Kahneman D and Tversky A *ibid*.

³³ Thaler R & Johnson EJ; 1990; "Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice", *Management Science*

trader, the worse the outcome. No transactions costs have been considered in this analysis. These would increase the difference even more.

It is clear that investor reactivity is generally, but clearly not always, harmful to wealth. Investors who are older and have greater balances tend to trade more frequently (as do males)³⁴. This demographic represents the bulk of the savings pool for separately managed accounts and self-managed superannuation arrangements.

Quite clearly, the importance of financial advice to simply restrain this behaviour, or to prevent it in the first place by more accurately matching products to behavioural sensitivity, is significant. In the case where a credit portfolio is seen as an alternative to cash, the trigger point for movement is more likely to consider the relative performance of the credit portfolio over a lookback period and the current deposit rate.



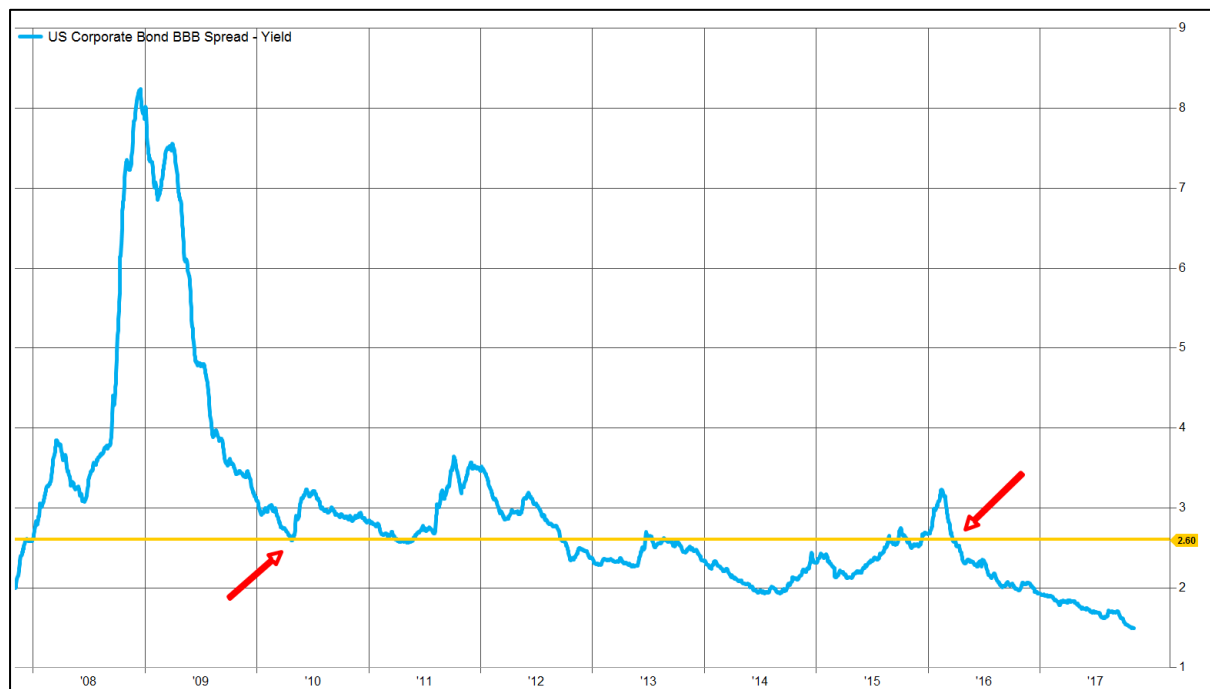
Source: FactSet, Author Calculations

³⁴ Gerrans P, Strydom M, Mouland C and Feng J *ibid*.

Appendix C: The Cost of Yield Targeting over an Interest Rate Cycle

Yield targeting strategies require a portfolio manager to increase risk when yields are low and they can decrease risk when yields are high. As yields are mean reverting in nature, this is essentially a process which buys high and sells low. Doing so comes at a cost to portfolio returns. This appendix aims to illustrate the magnitude of the cost.

We extract the US BBB Corporate Spreads between 2010 and 2016 as shown below³⁵. Spreads moved in a full cycle around a figure of 2.6% per annum within a window bounded by the red arrows. This figure is close to the scenario previously outlined where business as usual settings in the current environment produce a modelled spread of 2.3% per annum.

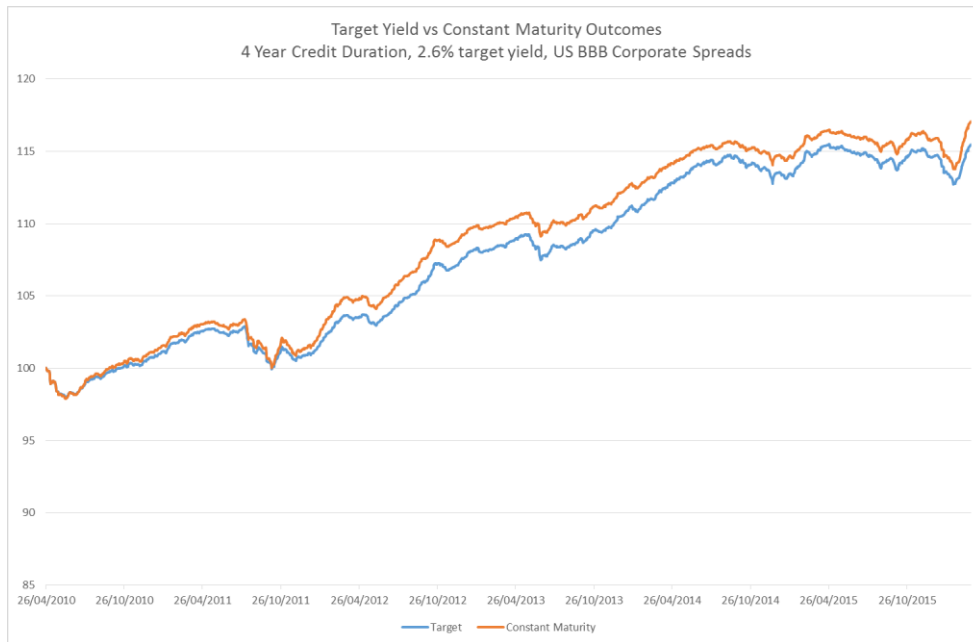


Source: FactSet

We then undertake a simulation whereby a manager aims to maintain a spread of 2.6% over the full period. They achieve this by varying the portfolio exposure between treasuries and a zero coupon bond with constant maturity of 4 years. For this purpose, we can assume the treasury yield is zero throughout. We also allow for a two week lag to match the target yield to allow for delays in position changes as a result of lower liquidity and other frictions. No allowance has been made for transaction costs. These would be materially larger for yield targeting portfolios.

³⁵ The precise dates are 26 April 2010 to 22 March 2016

The outcomes are compared in the following chart.



Source: FactSet, Author Calculations

The difference equates to a figure of 0.3% per annum over a period of relative calm in the credit market where BBB spreads experienced a full range of 1.72%. The cycle from the late 1990s to the pre-GFC period saw a range of twice this figure, over a comparable time frame.