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Russell Communiqué

Current and emerging investment issues: Russell perspective



A fixed income edition

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Russell Communiqué

This publication is written by members of Russell's Consulting & Advisory Services team based around the world. This team is responsible for providing advice on all aspects of the investment process, including governance, investment policy setting, asset allocation, asset class strategy and manager selection.

Russell is one of the world's largest providers of investment advice, with nearly 40 years' experience in this field. Our advisory team would be happy to help you with any of the issues raised within this document.



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Martin Boulanger

Rates rising: Are they? What can you do?

By: Martin Boulanger, Consulting Analyst

Bond yields have been near historic lows for the past several years, during which time many market participants have been predicting interest rate increases. However, yields have continued falling.

While part of the decline in yields has been driven by a progressively stable inflation environment, yields have recently been forced even lower by central banks. In many markets this has made bonds appear expensive. Several central banks force investors to accept low or even negative real yields if they want to hold government bonds at the moment.

As long as there is confidence in central banks' ability and determination to hold bond prices high, yields will remain low.

In this environment, one thing is clear; the returns seen over the past few decades cannot repeat themselves before yields rise substantially. It is also inevitable that yields will rise meaningfully at some point in the future – whether as a result of an economic recovery or rising inflation.

This presents investors with a challenging dilemma. On one hand, investors could put in place measures to counter losses from rising yields, with the risk of acting too early. On the other hand, investors could stay the course and accept potentially significant capital losses.

In this paper we evaluate the risk of rising interest rates for New Zealand investors and assess whether action is warranted, and for whom. We then discuss a number of strategies investors might consider when attempting to counter anticipated yield increases. We build on the discussion of fixed interest investing which began with a recent paper¹.

State of play

Fixed interest markets have performed exceptionally well over the last few decades. Table 1 below contains the returns experienced in global bonds compared with a number of other asset classes from the period 31 December 1988 to 31 March 2013. It also shows the volatility of annual returns over the period. Returns shown for global asset classes are fully hedged to the New Zealand dollar.

¹ Schiltknecht (2012)

Table 1: Annualised returns for the period 31 December 1988 to 31 March 2013

	Global fixed interest ¹	NZ fixed interest ²	Global equities ³	NZ equities ⁴
Return p.a.	10.2%	8.9%	10.2%	7.1%
Volatility p.a.	3.1%	3.6%	14.4%	16.6%

Table 1 shows that fixed interest investments have achieved equity-like returns without nearly as much volatility over the past two-and-a-half decades, primarily as a result of declining yields over this period. Figure 1 below shows this decline in yields, using the yield of the Barclays Global Aggregate Index.

Figure 1: Global aggregate bond yield: 31 December 1990 to 31 March 2013



Source: Barclays. Yield is unhedged.

It is evident from Figure 1 that this decline in interest rates cannot repeat itself without yields first rising substantially. At the very most, they can only fall another 1.7% to their natural lower bound of zero. Further, coupon payments offered to bondholders decrease steadily as issuers refinanced debt at lower and lower interest rates. These factors represent meaningful headwinds when forming expectations of future returns from fixed interest.

The issue weighing most heavily on investors' minds, however, is not low yields as such, but the prospect of yields *rising* from these historically low levels. Indeed, judging by Figure 1, it appears that there is much greater scope for yields to increase than decrease from their current levels.

Should we be worried?

Given current yields, it would be tempting to conclude that the risk surrounding bonds is significant at this point in time, and that allocating away from bonds is a prudent thing to do. However, this is not so straightforward. Low bond yields imply low returns for other asset classes, which are priced relative to fixed income. Thus, investors are unlikely to achieve an improvement in risk-adjusted performance by allocating from bonds to, say, equity.

There are other reasons to caution against allocating away from bonds or reducing duration exposure. We discuss a number of them below.

¹ The Citigroup World Government Bond Index, NZ\$ Hedged is used until December 1998. Barclays Global Aggregate Index, NZD hedged used thereafter.

² NZ Government Stock Index

³ MSCI World Index, NZ\$ hedged.

⁴ The NZSE 40 Gross Index is used until March 2003. NZX50 Gross Index used thereafter.

Yields are held low by central banks

Since the Global Financial Crisis, central banks have become the marginal buyers within certain segments of the global fixed interest market, making them key price-setters in these sectors. The US Federal Reserve (Fed) has been particularly influential within the global bond market. The result has been more expensive (or lower-yielding) bonds across bond market segments as the Fed has sought to encourage spending and lending by making it less attractive to save.

At this stage, guidance from key central banks suggests that accommodative policy will continue for some time. Therefore, there appears to be limited risk of significant yield increases in the near-term. A view to the contrary necessarily implies a significant shift in the market's expectations regarding inflation or the creditworthiness of major issuers, or else a meaningful and sustainable rebound in economic growth. We believe such scenarios are unlikely over the near term.

Diversification

Bonds play a critical diversifying role within a portfolio. Fixed interest has helped to stabilise and improve portfolio returns and improve a balanced portfolios' risk-return profile.

The diversification benefits of fixed interest relate in large part to the often assumed negative correlation between interest rate changes and equity market returns. Reducing a portfolio's duration necessarily limits this source of diversification, irrespective of whether a portfolio's total fixed interest allocation is reduced or not. However, we caution investors from an overreliance on this correlation. For example, it is likely that this correlation would break down in a stagflation scenario.

Active management

Active fixed interest managers have the ability to adjust exposures tactically, including duration, assuming investors grant them the scope to do so. Duration is often a key contributor to a manager's performance versus benchmark. As a result, managers spend much of their time and resources analysing and forecasting yields so they can position themselves accordingly. Additional positioning by the investor at the total portfolio level brings with it the risk that positioning from managers will be either offset or magnified. Furthermore, this could likely happen in an uncoordinated way.

Liability matching

Investors with defined liabilities, such as those who manage defined benefit pension scheme assets, are naturally more concerned about liability mismatch than the interest rate risk and returns of their investment portfolio. In other words, their funded status is best managed under an asset-liability approach rather than an asset-only approach. Having at least a duration matching component within an investment portfolio provides these investors with a partial hedge against changes in the value of their liabilities. For example, an increase in rates will reduce the present value of their liabilities. Thus, shortening duration in anticipation of rising rates might result in an increase in interest rate risk rather than a reduction.

Timing – you will be wrong!

Timing asset class 'tilts' is very difficult to do in practice. Even the most knowledgeable investors will almost certainly get their calls wrong, at least for a period of time. All too often investors who successfully identify significant market misvaluations are proven 'wrong' by the market for some time, sometimes longer than they can afford to hold the position. Investors should decide ahead of time whether they and their stakeholders are able and willing to accept that their positions may take a long time to pay off, possibly several years. As the old adage goes "markets can remain irrational longer than you can remain solvent".

Still worried? Here are some strategies you might consider

A number of solutions are on offer to investors. Some involve adjusting their asset class strategy, where manager mandates are altered or new products included. Other strategies involve adjusting aggregate fixed interest or duration exposures at the overall portfolio level.

The selection of one approach over another (or any at all) comes down to a number of factors. Below we present various options for investors' evaluation, as well as key factors to consider when making a decision. Importantly, these strategies are accessible to most investors.

Strategic tilting

Strategic tilting involves adjusting portfolio exposures away from the strategic asset allocation (SAA) in response to perceived dislocations in markets. Under a strategic framework, the investor takes responsibility for timing portfolio adjustments.

Strategic tilting is used when an asset class moves to an extreme compared to its long-term fundamental valuation and conditions emerge for valuations to reach more sustainable levels. An effective strategic tilting framework emphasises conviction and process. A view must be very strong and the entry and exit criterion very clear before a tilt is implemented.

Note that many of the products offered to investors as solutions to address the risk of rising yield involve an inherent timing decision. For example, allocating to low duration products amounts to a tilt to reduce duration, requiring that investors make a decision (whether consciously or not) as to when they enter and exit the allocation. Thus, such a product is a *tool* for implementing tilts rather than a complete strategy in itself. We would also argue that there are more cost-effective ways of implementing duration tilts.

Absolute return strategies

Absolute return fixed interest (ARFI) is the most unconstrained fixed interest strategy. Multi-sector ARFI products (i.e. those that can invest across rates, currency and credit) can use the same building blocks as global aggregate mandates. In other words, they invest across bond markets and sectors and employ derivatives to build exposures. The key difference is that they are completely benchmark agnostic, meaning positions are not anchored to a benchmark's. Therefore, managers expecting interest rate rises are more likely to create very low, or even negative, duration positions. ARFI strategies effectively outsource the timing decision to active managers, but with a lower duration position on average than a traditional broadmarket bond portfolio.

We would not recommend that investors *replace* their existing traditional fixed interest mandates with ARFI, but include it as a component of their fixed interest allocation. This is because global fixed interest accounts for a considerable part of most investors' portfolios. Allocating only or mostly to ARFI would unduly expose investors to the risks outlined above, in our view.

We also note that even with the addition of ARFI an investor's aggregate duration exposure will remain positive in most circumstances except perhaps the most extreme. This is because ARFI managers typically have permitted duration ranges of plus/minus two to five years, while core broadmarket managers can only tilt one or two years around the market duration of roughly six years. As a result, investors are still likely to suffer some losses if interest rates rise, even if their managers successfully anticipate them. They will almost certainly not *profit* in that event – that would require both the ARFI and broadmarket managers to predict rate increases perfectly and simultaneously position themselves at the low extreme of their duration ranges.

Downside protection strategies

Downside protection encompasses strategies with asymmetric payoffs. Investors receive protection in exchange for the payment of some premium. Such strategies are analogous to insurance contracts, which is why they are often referred to as portfolio insurance strategies. They are generally implemented using options contracts².

While option contracts exist for a number of interest rates, few offer the liquidity required to ensure contracts are continuously available and pricing is reasonably efficient. This means that investors would only be able to take positions in very particular segments of the global bond market (e.g. US Treasuries) to hedge a global broadmarket exposure. This 'mismatch risk' means that if interest rate increases are more pronounced for bonds issued in other currencies, or at different maturities, investors will be under-protected.

Costs are also important. A positive payoff from such a strategy does not necessarily mean the investor profits from the transaction. The payoff must exceed the premium paid for the option. Thus, more modest interest rate increases may still cause such a strategy to be unprofitable. In fact, assuming efficient option pricing, one cannot expect to make a positive return from buying options over time. This is particularly true in markets where the demand for insurance is strong, such as is the case currently.

Conclusion

The 'new normal' in fixed interest may require investors to think more deeply about bond investing. The twin tailwinds of high absolute levels in yields, coupled with a declining yield environment, no longer apply. In light of today's extraordinary yield environment, return expectations must be re-assessed and the risks associated with rising interest rates considered carefully.

For those investors who believe these risks are material and imminent, a number of approaches offer at least some degree of protection. Whether this is done by allocating to more active strategies, tilting between asset classes, or implementing downside protection overlays depends on each investor's unique circumstances and requirements.

However, investors should not forget the overarching principle of managing assets and liabilities in tandem. It would also be a mistake to overlook the potential for long-term diversification benefits of fixed interest within a portfolio and the value that can be added by quality active managers. In our view, the possibility of rising yields should not push investors out of global fixed interest investments altogether.

Table 2 overleaf outlines what kinds of investors might be suited for each of the strategies outlined in this paper.

² Options are derivative contracts which provide the buyer with income when the value of an underlying security exceeds (or in other cases, falls below) a pre-specified 'strike' level. This is provided in exchange for a small premium paid up-front.

Table 2: A guide to choosing a strategy

Action	Suitable for investors who...	Less suitable for investors who...
Absolute return fixed interest	<ul style="list-style-type: none"> › want a low-maintenance strategy › can tolerate a lower-than-market duration position on average › have more modest governance budgets and resourcing levels › have conviction in their manager's ability to predict yield changes › want or can accept a modestly positive duration position overall, even if their ARFI manager predicts yield increases 	<ul style="list-style-type: none"> › require control over tilts/duration › are unwilling to pay higher fees/performance fees › need strategies which are more easily benchmarked and/or modeled › require a high level of liquidity across their portfolio › unwilling to consider more complex and potentially levered fixed interest strategies
Strategic tilting (in-house)	<ul style="list-style-type: none"> › have considerable governance budgets and resourcing levels, including experienced market strategists and implementers › want maximum control over tilts › lack conviction in managers' ability to anticipate interest rate rises 	<ul style="list-style-type: none"> › have more typical governance budgets and resourcing levels › lack expertise in market analysis or the management and implementation of transitions/overlays › want a low-maintenance strategy
Strategic tilting (outsourced)	<ul style="list-style-type: none"> › do not require full control over tilts › have moderate governance budgets and resourcing levels › lack conviction in the manager's ability to anticipate interest rate rises 	<ul style="list-style-type: none"> › want direct control over asset class tilts › have low confidence in third parties' abilities to time exposures
Downside protection (passive)	<ul style="list-style-type: none"> › are particularly concerned about large increases in yields (such as the scenarios outlined on page 4) › are not concerned about closely matching their economic duration exposure › are willing to sacrifice a meaningful proportion of returns for certain downside protection › have less confidence in their and/or others' ability to time exposures 	<ul style="list-style-type: none"> › expect more modest interest rate increases › want to target specific duration levels › are not concerned about large interest rate increases or are seeking protection against modest interest rate increases



Jeff Hussey



Keith Brakebill

Fixed income in a QE world

By: Jeff Hussey, CFA, Chief Investment Officer, Fixed Income and Keith Brakebill, CFA, Portfolio Manager

Over the last several years, in their search for incremental yield, many bond investors and managers have reaped benefits from the Federal Reserve's quantitative easing (QE) policies. In its efforts to stimulate the U.S. economy in the wake of the financial crisis and to offset the deflationary effects of private-sector deleveraging, Fed policy brought down both short and long rates and compressed spreads in all markets. Bond investments, active and passive, have benefited.

At present we are just beginning to see the first potential signs of a winding down of the Fed's QE policies, or at the minimum, a decrease in their deployment, and we think it's wise for investors to assess their bond portfolios now. Specifically, we are concerned about passive investments in the current environment, and we are also leery of how typical core-plus strategies may perform if bond yields start to rise.

Introduction

With the US Federal Reserve (Fed) the marginal buyer of all Treasury and agency mortgage-backed securities, falling prices in these sectors is the most likely direct impact of the Fed reducing or stopping its purchases (all things being equal). Alternatively the Fed could decide to sell the \$2.77 trillion¹ in securities it has amassed over the years (an unlikely scenario in the intermediate term, since other tools could be used to drain liquidity). It's difficult to know what the equilibrium market value would be for Treasury and agency bonds absent of the Federal Reserve buying out the curve.

Aside from the direct impact of the Fed reducing or stopping its purchases, our primary concern is that, because benchmarks have changed greatly over the last several years, they do not have the same buffer in terms of "yield to worst"² if rates should rise. We believe that in the current environment, traditional ways of creating potential buffers in active management space – including strategies we have embraced,

such as overweighting riskier sectors – will involve more risk than usual. Thus, globalising a portfolio and seeking unique sources of potential return can offer investors an alternative buffer as they seek to achieve a positive outcome for the bond portion of a multi-asset offering.

While in this paper we point out some of the more interesting places in which investors and managers may seek to build yield buffers, it's important to acknowledge at the outset that we have generally cut our overall exposure to riskier sectors, given conditions in the broad macroeconomic environment and the reduced compensation investors are now receiving for taking on risk. However, pockets of potential added value do still exist, and we continue to hold positions in such risky sectors as non-agency mortgages and bank loans (which we discuss below) as we seek to build in yield from credit that may compensate investors fairly for the risks they bear.

Domestic investment-grade benchmarks are riskier than they've ever been

The markets in which the Fed has been active make up a large portion of the Barclays U.S. Aggregate Bond Index, the benchmark investors typically use for U.S. fixed income. Government and agency mortgage-backed securities, the bonds the Federal Reserve has been buying, make up 55.8% of the benchmark.³ More specifically, the Fed owns just over 28% of the Treasury market and more than 20% of the

¹ Excludes covered bonds, which made up for 0.02% of the Barclays U.S. Aggregate Bpmd Omdex as of February 28, 2013

² Yield to worst: The lowest potential yield that can be received on a bond without the issuer defaulting.

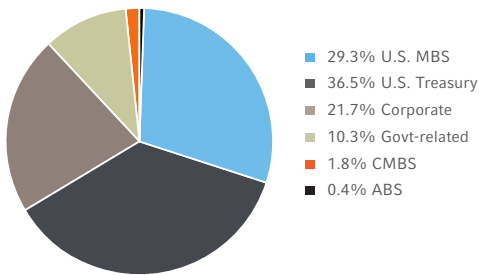
³ See footnote 1

⁴ See footnote 1

⁵ Toner, Ian. (2010, November). "Conscious Currency: A New Approach to Understanding Currency Exposure." Russell Research

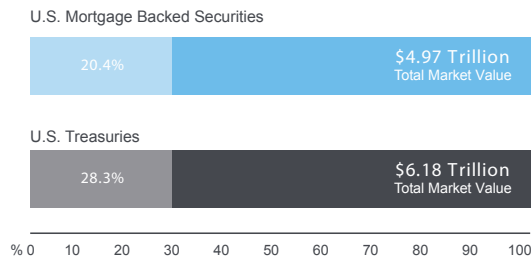
agency mortgage market^{4,5}. When the Fed stops buying, these sectors at the margin are more likely to be hit negatively as a direct result of having been the most influenced by the Fed's activity:

Figure 1: Sector breakout of the Barclays U.S. Aggregate Bond Index



Source: Barclays Live, as of February 28, 2013

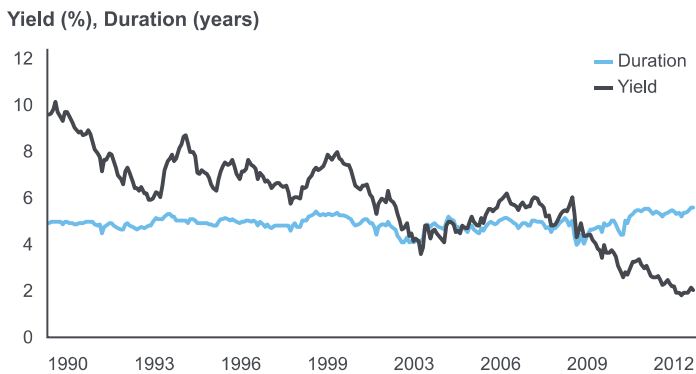
Figure 2: Federal Reserve exposure of the total market value outstanding of U.S. mortgage-backed securities and U.S. Treasuries



The Fed held \$1.75 trillion in U.S. Treasuries, \$1.02 trillion in mortgage-backed securities and 7.0% in agency debt as of February 28, 2013. <http://www.federalreserve.gov/releases/h41/current/h41.pdf>

This primary benchmark has become more risky over time. Figure 3 shows that because issuers have been issuing longer bonds at lower coupons, the market has moved out in its overall duration by roughly half a year relative to its long-term average. At the same time, yields have plummeted.

Figure 3: Duration and yield of the Barclays U.S. Aggregate Bond Index



Source: Barclays Live, as of February 28, 2013.

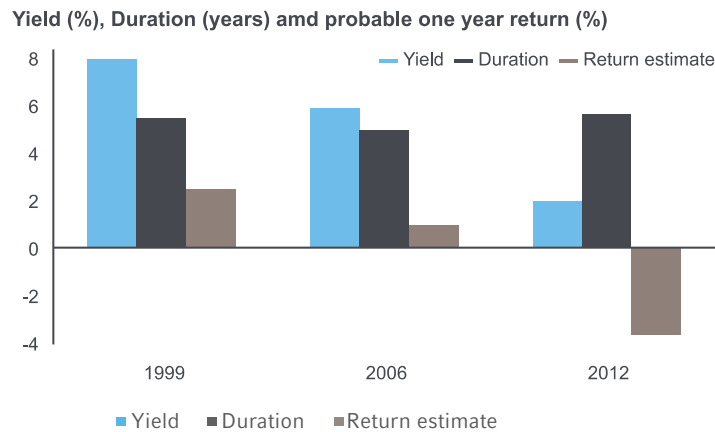
Duration is critical, because it is a measure of what happens to a portfolio when rates rise or fall. We can arrive at a very rough approximation of a reasonable return if we assume that defaults and spread widening will be minimal. If we know the duration of a bond portfolio, the current yield to maturity and the expected rate increase, we can calculate a one-year return.

$$\text{One-year return} = \text{yield to maturity} - (\text{duration} * \text{rate change})$$

Bonds get hit worse in the current environment because the duration on the index is longer, and because there is simply less cushion in terms of yields that could be compounded to offset the impact of a rate rise. This makes holding the bond benchmark index riskier.

Using this formula, we can look at how the benchmark may have performed with a 100-basis-point rate increase over time. In the figure below, we compare three periods to estimate a one-year return.

Figure 4: Estimated one-year returns given a 1% rate rise



Conclusions

We wrote in 1999 that indexing was a bad idea in fixed income, due to the sheer magnitude of the amounts indexed; the institutional rigidities brought about by guidelines or non-total-return behaviour; and the incomplete nature of fixed income benchmarks. Today, many of our beliefs about portfolio positioning attempt to exploit these effects, for example by owning out-of-index securities; finding advantage in the fact that some market players are constrained from buying below-investment-grade bonds; and making sure a portfolio is globalised so as to access a broad swath of opportunities above and beyond the narrow U.S. bond benchmark.

These strategic philosophical beliefs are important to examine from a tactical perspective. Over the short to intermediate term, with yields currently at such low levels, any rate increase, be they rising Treasury rates or rising credit spreads, will be more damaging than ever in terms of nominal returns. Further, the typical active-management strategy of

owning riskier securities has been impacted by the Fed's quantitative easing policies, and many high-yield sectors now represent less value, all of which necessitates investors' looking for alternative ways to build a buffer.

We have faced these problems by running shorter-duration portfolios, trimming exposures to more mainstream risky assets, and emphasising yield-enhancing strategies that we believe show greater opportunity. Finally, we have also globalised our portfolio so as to own potentially high-real-yield securities as a means of adding more yield cushion, while using currency strategies to augment active-management returns.

In today's environment it is especially critical that investors remain vigilant about the risks being put into their portfolios, and to take active approaches to averting deleterious potential outcomes as bond yields rise – in what we expect will be a gradual, not sudden, process.

Q&A: Don't fight the Fed

By: Jeff Hussey, Chief Investment Officer, Fixed Income and Heather Myers, Managing Director, Non-profits

With interest rates stagnant at historically low rates, institutional investors are starting to get concerned about where they will find yields in fixed income. We have put together the following short Q&A providing Russell's views on favouring a proactive strategy for non-profit investor's fixed income allocation.

What is the current state of the fixed income markets?

Over the last several years, active and passive investors have benefitted from Federal Reserve policies which have brought down both short and long term rates and have compressed spreads in all markets. These policies have been aimed at stimulating the economy and offsetting the deflationary effects of private sector deleveraging. While we are just beginning to see the seeds for either a reversal of Fed policy, or a decrease in their activity, we think it's wise for non-profit investors ("investors") to assess their bond exposures now. Specifically, we are concerned about passive investments in this environment and also leery of how typical core-plus strategies will perform as yields start to normalise.

What happens if/when the Fed stops buying up the bond market?

If purchases taper off or stop, which is expected to happen as early as the end of 2013 (although, there is very wide debate on this), the obvious direct impacts will be for prices to fall in the Treasury and agency mortgage securities sectors. The same holds true in the unlikely event¹ that the Fed decides to sell the \$2.77 trillion² they've amassed over the years. Since the Federal Reserve has been the marginal buyer in these sectors, it will be difficult to know what fair value should be in the parts of the market that have been most distorted by their activity.

Is that the only concern in the fixed income market right now?

No, outside of the direct impact of the Fed's actions, our primary concern is that benchmarks have changed massively over the last several years and do not have the same buffer in terms of yield if rates should rise. In addition, we think the traditional ways of creating a buffer in active management space, including over-weights to riskier sectors, have more risk than usual in the current environment. One possible way for investors to achieve an alternative buffer in this environment is to globalize your fixed income portfolio and seek out unique sources of return to help achieve a positive outcome for the bond portion of a multi-asset offering.

In what ways are benchmarks changing?

The market in which the Fed has been active makes up a large portion of the typical benchmark investors use, the Barclays US Aggregate Bond Index. Government and agency mortgage securities, the bonds the Federal Reserve has been buying, make up 55.8% of the benchmark.³ More specifically, the Fed owns just over 28% of the Treasury market and over 20% of the agency mortgage market.⁴ When the Fed stops buying, these sectors at the margin are more likely to be hit negatively as a direct result of being the most influenced by the Fed's activity.

The other concern with indexing is that the primary benchmark has become more risky



Jeff Hussey



Heather Myers

Concern with indexing is that the primary benchmark has become more risky over time

¹ The event is unlikely because the Fed has many other tools at its disposal including letting the portfolio run off or using reverse repos.

² The Fed held \$1.75 trillion in US Treasuries, \$1.02 trillion in Mortgage Backed Securities, and 7.0% of Agency debt as of February 28, 2013. <http://www.federalreserve.gov/releases/h41/current/h41.pdf>.

³ See footnote 2

⁴ See footnote 2

over time. Because issuers are issuing longer dated bonds, the market has moved out in its overall duration or maturity profile by roughly ½ a year relative to its long term average. At the same time, yields have plummeted.

Bonds get hit worse in the current environment because the duration on the index is longer and because there is simply less cushion in terms of yields to compound to offset the impact of a rate rise. This makes bond benchmarks riskier.

What are the issues affecting yield buffers?

Historically, core plus managers have looked to high yield and riskier corporate bonds to build a yield buffer into their portfolios over and above what the index offers. However, this trade has become an increasingly crowded one resulting in new deals coming to market that offer less bondholder friendly terms and appear to be less attractive long term investments.

Russell believes that in this environment of below-average spreads in traditional high yielding fixed income, investors need to look closer at credit. Within the context of taking less credit risk in general given the market environment, two markets that Russell finds attractive today are corporate bank loans and non-agency mortgages.

Currently, non-agency mortgages offer yields commensurate with the risk they represent (not AAA!). Because of this, we think investors should take another look at this sector and its fundamentals, which point toward the sector being an attractive place to potentially build a yield buffer in small doses. Supply has been restrained and while not all investors are ignoring the market, it certainly doesn't have as broad and deep of an investor base as it once did. All the better for active buyers willing to invest in this market.

Shifting to corporate bank loans, the collapse of the collateralized loan obligation (CLO) market (typically a big buyer of bank loans) has created a relative value opportunity for investors to

invest in the bank loan market for a better risk-adjusted yield opportunity. As has rarely happened, bank loans, which offer more security in the event of default and less sensitivity to interest rates, are currently trading at wider spreads than their bond counterparts. Value opportunities such as this won't persist forever as supply and demand dynamics change through time.

All of this highlights the need to constantly review and refresh investment ideas in high yielding fixed income to ensure that the yield buffer you have built does not easily collapse.

Are there other yield buffering strategies investors should consider?


Yes, but building a yield buffer through credit alone has two significant drawbacks for balanced investors; it increases the correlation to equities of your core fixed income allocation, and it sacrifices some liquidity in an asset class that many expect to be a source of liquidity in troubled times. Combined with less value in traditional areas right now, we think investors should also look to globalize their portfolios to add incremental yield. Two of the best strategies for globalizing are to buy government bonds of high real yielding countries (yields after expected inflation) and to engage in active currency strategies. Both have the added benefits of offering solid liquidity and diversification on top of being incremental buffers.

In addition, there are significant annual return deviations across government bond markets which creates an opportunity for investors to further enhance returns by not only going long high yield real bond markets, but also shorting the most negative real yield markets.

Similarly, volatility across currencies creates relative value opportunities for active management to provide additional returns on top of high quality assets. A variety of active currency strategies have proven capable of generating returns ranging from the more

³ See footnote 2

⁴ See footnote 2



systematic to the more thematic. Because Treasuries are some of the most appropriate securities to serve as collateral backing currency derivative positions, Russell doesn't believe investors should zero-weight Treasuries by any means. Instead, investors can use currency forwards to create a return buffer on top of the return from Treasuries, which should provide some insulation against the risks created by today's low rate environment.

Based on this outlook, how should investors be approaching the management of their fixed income allocations?

Russell has 3 key observations to help non-profits navigate today's fixed income environment.

1. Be active with your portfolio

Russell believes there is still opportunity in the market, but it's fleeting, and you need an active management strategy to capitalize on them. When you review your current fixed income exposures, consider incorporating shorter duration securities, trimming exposures to more mainstream risky assets, and emphasising yield buffer strategies that show greater opportunity.

2. Don't tie yourself so tightly to the benchmark

As we mentioned above, the make-up of the Barclays US Aggregate Benchmark is strongly tied to the actions the Fed has taken or is taking in the market. Consider looking at alternatives, such as corporate bank loans, non-agency mortgages, or global bonds to create yield buffers in your portfolio.

3. Don't worry about the bond markets, yet

As we outlined above, opportunities do exist in the current markets, and Russell feels strongly that investors should take a close look at their goals and their total portfolio exposures and incorporate those opportunities as appropriate. It is especially critical in today's market that investors understand and vigilantly manage the risks they are including in their portfolios so that when shifts happen in the market, they can react to them quickly.

Non-price fixed income

A potential improvement but active still wins the day

By: Lloyd Raynor, CFA, Senior Consultant, Consulting

Capitalisation ('cap') weighted fixed income assigns weights based on the amount of outstanding debt trading, problematic if the largest issuers are simply those most in need of funding (and hence of lower quality). This deficiency helps explain why passive approaches have been unpopular in fixed income. It also explains the rise of formulaic 'non-price' approaches that seek to lower the allocation to the most indebted issuers by assigning weights based on GDP or fundamental measures of an issuer's ability to service debt. However, such strategies suffer from two primary drawbacks. Firstly, any formulaic tilt away from a measure of indebtedness can take a very long time to pay off, notwithstanding the recent move by ratings agencies to downgrade increasingly indebted sovereigns such as the US and UK. Secondly, any measure of an issuer's ability to repay debt is necessarily subjective. While non-price strategies can make better comparators than cap-weighted indices, we continue to advocate active approaches in fixed income.

Cap weighted fixed income is flawed

Critics of cap weights in fixed income focus on two key issues:

- › Index composition is driven by cycles of issuance and retirement of debt, and as a result the largest issuers may be those most in need of funding and therefore less creditworthy—the 'bums problem' as it has been labeled; and ;
- › Cap-weighted fixed income indices can also be poorly diversified.

Below we evaluate these criticisms with respect to developed market sovereigns, Emerging Market Debt, and credit.

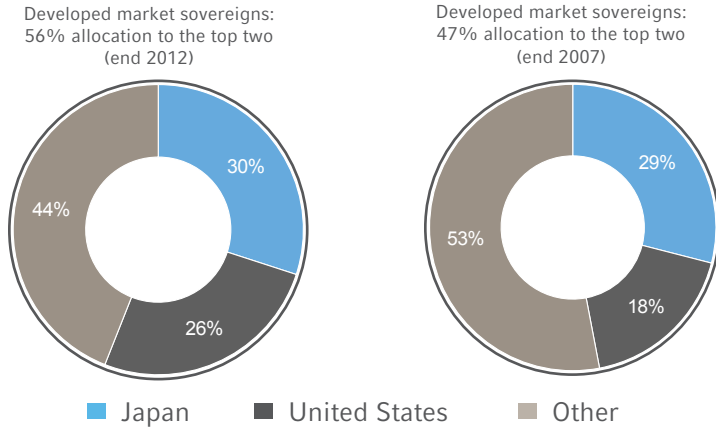
Developed market sovereigns

Following the financial crisis there has been a build-up of debt amongst a number of developed market sovereigns. In response the traditional sovereign debt indices have become more concentrated amongst the largest issuers. For example, Japan and the US, the top two

largest issuers, comprised fully 56% of the universe as at the end of 2012¹ as compared with 47% as at the end of 2007. This can be seen in figure 1 on the following page.

In turn, the increased concentration in developed market sovereign indices has occurred not only as a result of higher issuance, but also as a result of the yields on some of the largest issuers actually declining relative to average since the financial crisis, potentially increasing the exposure to less creditworthy issuers. For example yields on US sovereign debt were 8% above average at the end of 2007 but 36% below average at the end of 2012¹. This change occurred against a background of US debt-to-GDP worsening in relative terms over the same period!² In essence, developed sovereign indices have become more poorly diversified and also increasingly exposed to the more indebted nations.

Figure 1: Developed market sovereign indices become increasingly concentrated

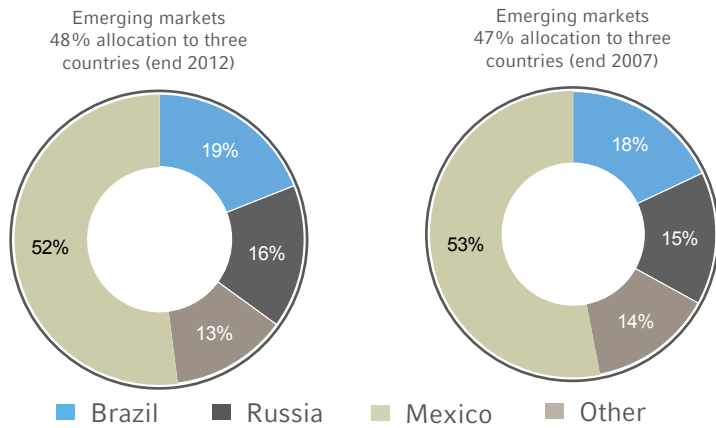


Source: Bloomberg, Barclays: Global Agg Treasuries Index

Emerging market debt

As can be seen in figure 2 below the issue of concentration is also acute in emerging markets, a longstanding issue meaning that cap-weighted fixed income indices also appear sub-optimal in this space.

Figure 2: Emerging market indices have remained concentrated



Source: Bloomberg, Barclays: Global Emerging Markets Index

¹ Source: Barclays. The yield on US debt had been 3.7% compared to the average yield of 3.4% in 2007 for the Barclays Global Aggregate Treasuries Index. US debt yield fell to a 0.9% yield by the end of 2012 while the average yield for the Barclays Global Aggregate Treasuries Index fell to 1.3% as at the same date.

² Source: Barclays. It went from 39% below average to 35% below average over this period. US Debt to GDP had been 61% compared to the average Debt to GDP of 93% for the Barclays Global Agg Treasuries universe. US Debt to GDP increased to 74% by the end of 2012 while the average Debt to GDP for the index increased to 121%.

Credit

While cap-weighted credit indices should not be considered optimal, concentration and lack of responsiveness in the face of market conditions is less of an issue in this market. For example, the top three holdings in the Barclays Global Aggregate Corporates Index accounted for only 5.6%³ of the index as at 31/12/12. In addition, the market effected a significant reduction in the weight of financial issues during the financial crisis. For this reason, non-price approaches to fixed income have to date been more focussed on developed and emerging market sovereigns as opposed to credit.

A range of non-price strategies exist

There are a number of alternative fixed income strategies, and these can broadly be grouped into GDP-weighted approaches (such as the PIMCO GLADI and Barclays Capital GDP Weighted indices) and fundamentally-weighted approaches (such as the Citi RAFI and Barclays Capital Fiscal Weighted indices)⁴. We have included past performance statistics for sample approaches from both families in figure 3 below, with the differential performance of approaches within the same family indicative of the contrasting construction methodologies in each area.

Figure 3: Past performance of sample non-price fixed income approaches

Past performance of sample GDP-weighted approaches (30/07/08 to 31/12/12)



Source: Barclays, Research Affiliates, PIMCO

Past performance of sample fundamentally-weighted approaches (30/11/08 to 31/12/12)



Source: Barclays, Research Affiliates, PIMCO

While a number of non-price fixed income approaches exist, caution should be exercised before ditching traditional active approaches.

³ Source: Barclays

⁴ There are many more non-price fixed income indices, which we would be happy to disclose on request.

Increasing indebtedness is not always penalised quickly

To state that increasing indebtedness is not always penalised quickly is in essence the 'bums' problem restated: certain cap-weighted fixed income indices become overexposed to poor quality issues as the 'market' fails to penalise increasing indebtedness. This means that non-price approaches may take a great deal of time to reward investors with superior performance relative to cap-weighted

fixed income. This is especially the case with respect to sovereign debt as governments can use a number of tools to ensure investors keep holding their debt in the face of ever more being issued, a process termed financial repression. Figure 4 shows the debt-to-GDP ratios of the US, Japan and UK before and after the financial crisis as well as the associated yields. Increasing indebtedness certainly hasn't resulted in an increase in yields as one might have expected.

Figure 4: Increasing indebtedness can take some time to affect yields!

Country	31/12/2007		31/12/2012	
	Debt-to-GDP	Yield on sovereign debt	Debt-to-GDP	Yield on sovereign debt
Japan	170%	1.1%	219%	0.7%
United States	61%	3.7%	74%	0.9%
United Kingdom	44%	4.5%	89%	1.8%

Source: Barclays

It is worth briefly asking if increasing debt-to-GDP ratios do actually justify higher yields. To the extent that there is some academic evidence indicating that sovereign indebtedness slows economic growth, the answer would appear to be yes. Reinhart, Reinhart, and Rogoff in *Debt Overhangs: Past and Present*⁵, analyse twenty six periods of public debt overhangs where governments have pushed gross public debt to GDP over 90% and held it there for at least five years. They find that real GDP growth averages 1.2% lower than trend during these overhangs and that real GDP drops by an average of around 25% to the end of the deleveraging episode. However, while increasing indebtedness would seem to justify higher yields in the long-run, the market has not historically penalised indebtedness amongst sovereign nations making the comparative advantage of non-price approaches questionable for the time being.

No objective measure of a country's ability to pay

As well as increasing indebtedness not always being penalised quickly, there is no objective measure of a country's ability to service debt. Given this, it is not clear which type of non-price approach should be adopted even if increasing indebtedness were to be penalised!

GDP-weighted approaches

GDP itself is a reasonably objective and widely available statistic across countries and it does provide some measure of the resources available to service debt. At the present time weighting by GDP also reduces exposure to the more highly indebted (developed market) sovereigns: these countries account for a smaller proportion of global GDP than their share of global sovereign debt issuance as can be seen in Figure 5 over the page

⁵ Debt Overhangs: Past and Present, Carmen M. Reinhart, Vincent R. Reinhart and Kenneth Rogoff, NBER Working Paper No. w18015, April 2012

Figure 5: Proportion of developed and emerging within capitalisation and GDP weighted sovereign indices

	Emerging markets	Developed markets
Global Agg Sovereign Index	5%	95%
Global Agg GDP Sovereign Index	10%	90%

Source: Barcap—Global Agg Sovereign Index, Global Agg GDP Sovereign Index

However, it seems puzzling that debt-to-GDP-weighted approaches are not used in place of GDP-weighted approaches. Debt-to-GDP is a more direct interpretation of a country’s ability to meet debt repayments. If a country’s debt load increases at a rate faster than its GDP, it would seem sensible to hold that country at a lower as opposed to higher weight within an index as a result. While that would occur in a debt-to-GDP-weighted index, the opposite would occur in a GDP-weighted index.

Fundamentally-weighted approaches

Those approaches focusing on fundamental measures of an issuer’s ability to service debt are an improvement on GDP-weighted approaches; they should avoid becoming skewed towards less solvent sovereigns. However, in the eyes of the market there is no one single objective measure of a country’s ability to service its debt load with the extensive differences in fundamental measures used by sovereign indices in this area illustrating this point. Indeed, the statistical significance of some of the measures detailed in figure 6, notably the land area measure of the Citi RAFI Sovereign Bond Index Series, has been queried.

Figure 6: Varying factors used in fundamental index families

Fundamental index families	Factors used in construction methodology
Citi RAFI Sovereign Bond Index Series	Equally weighted measure of: <ul style="list-style-type: none"> › GDP—broad measure of economic size; converted using Purchasing Power Parity › Population—measure of labour force, key resource input › Land Area—proxy for natural resources, scaled by square root › Energy Consumption—proxy for capital intensity, generally used by more by developed countries
Barclays Global Treasury Fiscal Strength/Universal Fiscal Strength Weighted Indices	Factors representing financial solvency and dependence on external financing are converted into factor scores ranging from 0 to 10: <ul style="list-style-type: none"> › Debt-to-GDP › Deficit-to-GDP › Current Account Balance-to-GDP <p>A weighted average of the factor scores is then calculated to give a single score for each country in the index, and the market value weight of each country is multiplied by its country score.</p>

Source: Barclays, Research Affiliate

Keep using active in fixed income

Non-price fixed income strategies are a legitimate response to the concern that both developed sovereign and emerging market fixed income indices are overly concentrated and potentially diminishing in quality. However, increasing indebtedness is not always penalised quickly and there is no formulaic way to evaluate a country’s ability to service its debt. For these reasons, while useful for comparison purposes, investors may be disappointed by the performance of non-price approaches. Instead investors should keep faith with active management, and consider including benchmark insensitive as well as more traditional benchmark relative approaches.

European sovereign debt default!!! Major banks fail!!!

By: Mary Fjelstad, Senior Research Analyst



Mary Fjelstad

Front page headlines in 2012? Guess again: try Florence, Italy, in 1346. The Compagnia de Bardi and the Peruzzi, the two biggest European merchant banks, went bankrupt: the Peruzzi in 1343 and the Bardi in 1346. These two merchant banks are described as “super-companies” as they were larger than any other medieval banks, including the Medici bank that flourished in the 15th century. Europe had to wait until the 16th century for the rise of the Fuggers to see anything approaching their size.¹ The failure of these two banks was catastrophic for the medieval European economy.

The traditional account of the crisis comes to us from the *Nuova Cronica* of Giovanni Villani, the sole surviving contemporary report of the collapse. According to Villani, the villain of the piece was Edward III of England. It was in 1343 that Edward declined to pay back the enormous sums he had borrowed from the Peruzzi and Bardi banks to fund his war to claim the crown of France—the first stage of the 100 Years’ War. This massive sovereign debt default, Villani claimed, was the sole cause of the banking collapse.

Lending to sovereigns, popes and political entities was a necessary aspect of the banking business in the Middle Ages. Kings, princes, popes and independent cities all needed funds and at one time or another required merchant banks to lend them money in order to continue to do business within their domains. Sovereign lending was a high-risk business, however. Kings were known to imprison their creditors until all loans were forgiven, or to seize assets of lenders pushy enough to demand loan repayment. Nevertheless, sovereign lending could be quite profitable for the banks; for example, Edward III awarded his creditors lucrative contracts for collecting the customs duties on the enormous wool exports from England.

The failure of sovereigns and governmental bodies to honor their debt agreements was a crucial factor in the all the major bank defaults of the Middle Ages, albeit not the sole cause.² For the Florentine super-companies in the 1340’s, there were indeed other contributing factors. Profits from the grain trade plummeted beginning in 1315 as the Medieval Warm Period ended and the years of heavy rains and short cold summers that were the harbingers of the Little Ice Age began. Second, other, more local polities—for example, the City of Florence in 1342—defaulted on their loans, leading to a liquidity crisis. Political rivalry with Naples led to a wholesale withdrawal of Neapolitan assets from the Florentine banks, also in 1342. Consequently, the banks were in a vulnerable state before Edward III failed to make his debt repayments in 1343. The Peruzzi was bankrupt by the end of the year; the much larger Bardi held on until 1346 when it too collapsed.

An interesting comparison to Europe of 2012, perhaps, but why is this a Great Moment? Another factor contributing to the failure of these two banks was their structure: they were all partnerships with no divisions or protective barriers between business lines or regional branches. The liabilities of any one member, branch or part of the business were liabilities of the whole. This was an important learning moment in financial history. It was over 50 years before the rise of the next great Florentine bank, but the lesson of the 1340s had been learned: the Medici Bank, founded in 1397, had a much different organisational structure, designed with strong, protective barriers between branches and businesses. The Banco de’ Medici was, in many essential aspects, the first modern holding company.³

¹ M. Kohn. 1999. “Merchant Banking in the Medieval and Early Modern Economy,” Working Paper 99-5 Dartmouth College February.

² The causes of this collapse of the Florentine banks in the 1340s are, as to be expected, disputed among historians. Revisionists have called into question the accuracy of Villani’s account, particularly regarding 1) the size of the loans made to Edward (and thus the size of the default); 2) whether Edward really defaulted at all (consensus currently is that Edward at the very least restructured the loan payments); and 3) Villani’s position that this one default was the sole cause of the bank failures. See E.S. Hunt, 1994, *The Medieval Super-companies: A study of the Peruzzi Company of Florence*. Cambridge University Press, 1994.

³ Millennium Banking: those Medici, 1999, *The Economist*, December 23. See also R. de Roover, 1963, *The Rise and Decline of the Medici Bank, 1397-1494*, Harvard University Press.

Russell research from around the globe



[Falling interest rates cause further damage to the pension world's \\$20 billion club in 2012](#)

Liabilities once again grow faster than assets

By: Bob Collie, FIA, Chief Research Strategist, Americas Institutional

When trying to evaluate key characteristics of a retirement plan, it is common practice in the defined contribution (DC) industry to ask, "How does our plan compare to other plans?" Plan sponsors and their advisors then benchmark their plans versus industry averages to see how their plans measure up. Is that what we should be striving for? Should being average, or slightly better, be our goal?

This paper describes the following seven key attributes that we believe all excellent DC plans share and the actions you can take to help make sure your plan is positioned for excellence.



[Measuring the success of a managed volatility investment strategy](#)

By: Bob Collie, FIA, Chief Research Strategist, Americas Institutional


A new breed of investment mandates is growing in popularity. In this paper, we focus on one: how to report investment results in a managed volatility investment strategy. We discuss the implications of this approach and that multiasset mandates need metrics that fit the specific objectives in mind, and that no single metric is necessarily sufficient to capture all of the goals of a multi-asset mandate.



[Rates rise and you lose – right?](#)

By: Gannon, FSA, CFA, EA, Director, Asset Allocation and Risk Management

Many defined benefit pension plan sponsors are concerned about the effects of increasing interest rates on their fixed income portfolios, and some are considering shortening the duration of those portfolios. A potential problem with this approach, which Bob collie identified in a paper last year, is that taking a shorter-duration position is unlikely to result in better performance, 'unless the expected (interest rate) increase is greater than the increase already priced into the yield curve. If such an increase does not occur, staying the course in a longer-duration portfolio is likely to be a plan sponsor's best approach. This paper updates Collie's analysis with current data.



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