BOND COMPOSITES AND DURATION: AN INCONVENIENT TRUTH

March 2018

BetaShares
Exchange Traded Funds

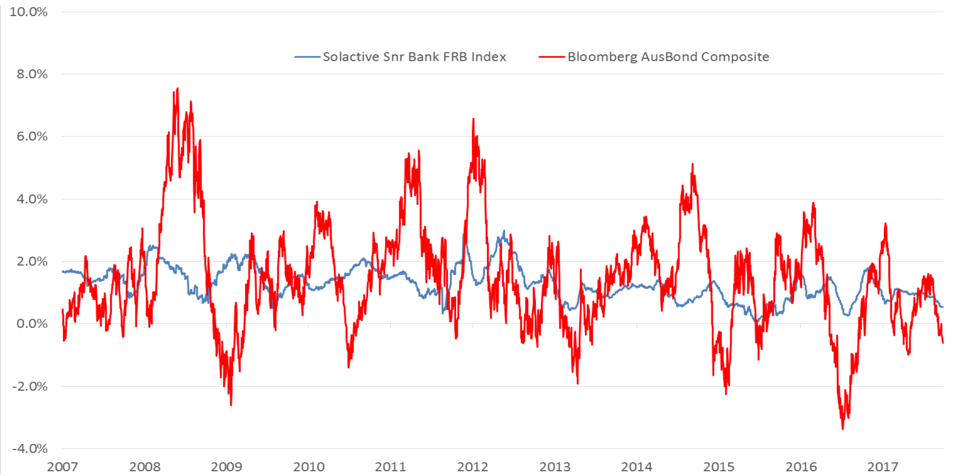
Bonds can play a key role in improving the capital stability and diversification of portfolios, but the recent gyrations in bond markets and underperformance from the major fixed-rate bond indices against floating rate exposures have re-affirmed the risks of carrying duration in a rising yield environment. In spite of this, there has been a steady increase in durations in the most popular liability-weighted broad bond composites over the past 10 years amid record low yields and an increased tendency for long-end issuance from governments. Furthermore, recent events have given rise to the possibility of a perfect storm of longer durations combined with a spike in volatility amid inflation surprises and increased supply, potentially leading to drawdowns not seen in decades. Investors and advisors should be mindful of the various shortcomings of such indices and be aware of the control over risk they give up via conventional dollar-weighted allocations.

Introduction

Over the 3 months to end-February 2018, the most closely tracked bond index in Australia, the Bloomberg AusBond Composite Index, has recorded a total return of minus 0.50 per cent alongside a broad-based increase in global bond yields. This return is not only well below the yield to maturity 3 months earlier (2.41% annualised), but also a significant underperformance relative to floating rate bonds, with the Solactive Australian Bank Senior Floating Rate Bond Index gaining +0.62 per cent over the same period. This recent episode highlights the risks of holding duration in such an environment, which can make even the most credit-worthy government bonds appear to entail "return-free risk".

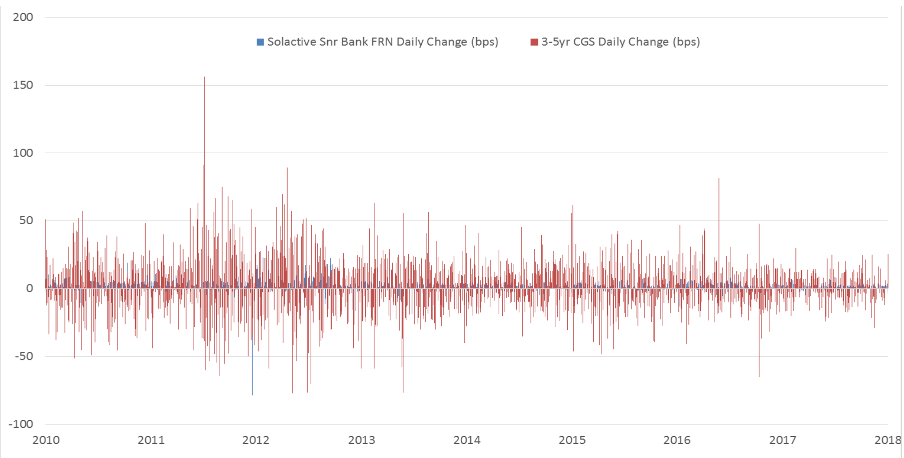
Hedging out duration leaves a residual exposure to credit spread risk, and although it shouldn't be dismissed completely (as the GFC showed), it has historically not been the main driver of bond volatility over the past 10 years. The 3-5 year Australian Treasury Index (a subset of the AusBond Composite investing in Commonwealth Government Securities, carrying duration but arguably no credit risk) has experienced an annualised volatility of 2.9 per cent since 2007, significantly higher than the annualised 0.5 per cent volatility of the largely maturity-matched Solactive FRB index (which carries credit risk of mostly 3 to 5-year bank FRNs, but near-zero duration). However, duration on its own isn't the main problem with bond indices, but rather the control over risk that investors relinquish.

Chart 1: Fixed vs Floating, Rolling 3-month Returns



Source: BetaShares, Bloomberg. Past performance is not an indicator of future performance.

Chart 2: Volatility Comparison of Duration vs Credit: 3-5y government bonds vs 3-5y FRNSs



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Risk and control

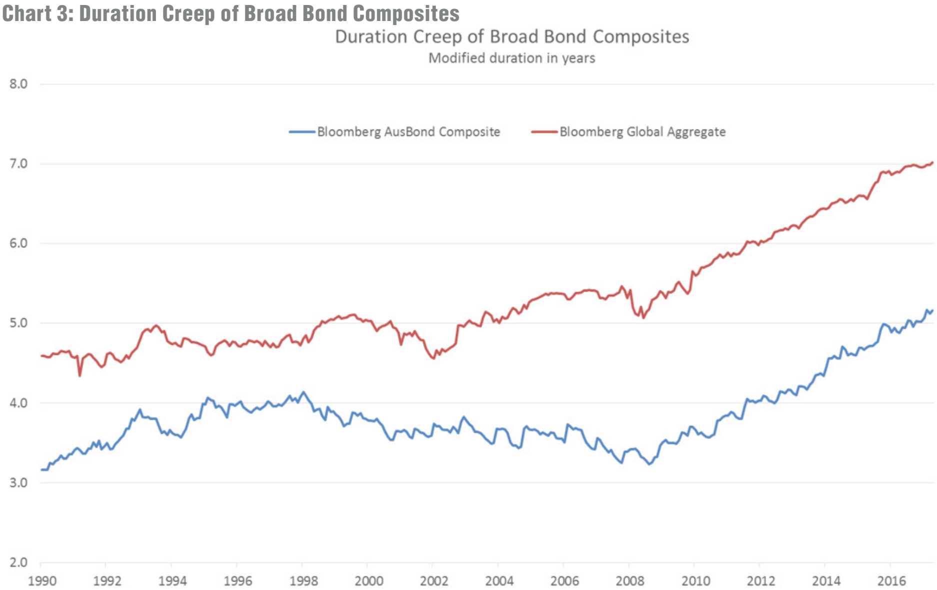
Unlike equities investors, bond investors tend to have a much greater degree of control over risk in that the two main risk drivers – duration and credit exposure – can be carefully fine-tuned. Although the volatility of yields can vary over time (like equities, we tend to observe periods of volatility clustering), through duration, we can control the impact basis point changes in the overall yield curve can have on our bottom line. Duration in many ways is like leverage: it magnifies the daily mark-to-market swings from yield movements and, to compensate, we should receive a higher yield, all else equal. However, when investing our fixed income allocations into broad bond composites, we give up control over these levers, with duration and credit profiles fluctuating with issuance behaviour and not investor objectives.

Liability weighting and duration creep

One of the great flaws with liability weighting in bond indices is it effectively gives issuers the power to set their own weights and the AusBond Composite has become dominated by one issuer in particular over the past 10 years: the Federal Government. Commonwealth Government Securities have gone from a weight of 26.9 per cent of the index in 2009 to 51.1 per cent in 2017, while corporate bonds have gone from 30 per cent to only 16 per cent over the same period. Furthermore, within the Federal Government's issuance program, there has been a clear trend of longer maturities, with the AOFM building out the 'ultra-long' part of the curve – introducing a 20-year bond in 2013 and a 30-year bond in 2016. This has resulted in an increase in the average maturity from 5.8 years to 7.5 years in the post-crisis period, resulting in the effective duration of the overall AusBond composite increasing from 3.2 years to 5.2 years, a 62 per cent increase in yield exposure.

This trend of increasing maturities from sovereign issuers hasn't been limited to Australia, with the average maturity of the Bloomberg Global Treasury Index increasing from 7.4 years in 2004 to 9.5 years today. The past 5 years in particular have seen the rise in ultra-long issuances largely unseen in the post-WW2 period, with governments looking to lock in historically low borrowing costs amid unprecedented central bank buying as part of quantitative easing (QE) programs from the US, Eurozone and Japan. Some notable examples include 100 year "century" bond sales from Austria (in Euros, with a 2.1% coupon) and Ireland (in Euros, with a 2.35% coupon) last year and in 2016 respectively. As a result of the maturity extensions from sovereigns, we've seen the average duration of the overall Bloomberg Barclays Global Aggregate increase from a low of around 4.5 years to 7.04 years at the end of 2017.

Chart 3: Duration Creep of Broad Bond Composites



Source: Bloomberg. Past performance is not an indicator of future performance.

A perfect storm?

An implication of the increased duration most broad indices are holding is that they are more exposed than ever to an increase in the volatility of underlying global yield movements. One commonly cited measure for yield volatility is the Merrill Lynch MOVE index, which measures the annualised standard deviation (in basis points) of movements of 2, 5, 10 and 30 year US Treasury yields, as implied by the options market (similar to how the VIX captures expected volatility for the US equity market). For much of the pre-crisis period, the implied volatility on Treasury yields was around 100 basis points and the post-crisis period has seen this index trend lower alongside QE operations from global central banks, dropping to a historical low of 44 basis points in November 2017.

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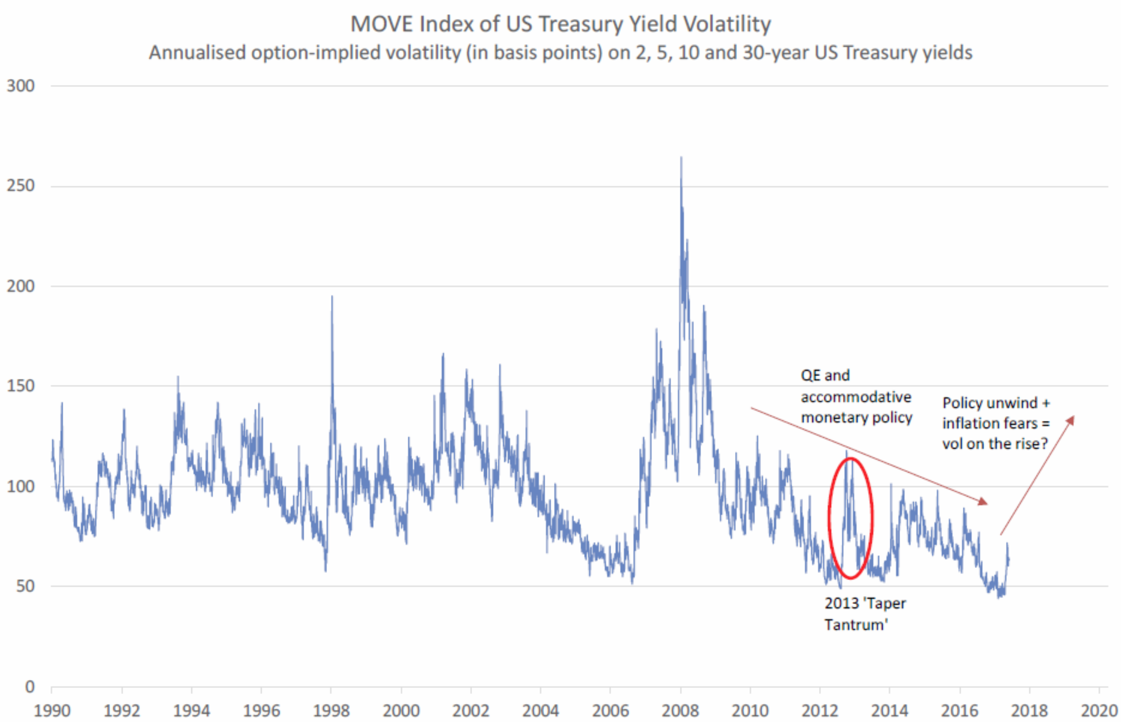
The jump in inflation concerns following the release of higher-than-expected US average hourly earnings data sponsored a jump in global bond yields this month and bringing the notion of higher volatility front of mind. The other and arguably more significant risk to bond prices is in the large expected increase in supply, both in terms of absolute issuance and a scaling back of central bank buying as the Fed, ECB and Bank of Japan look to normalise monetary policy over the coming years. As a result, it is a fair assumption that we will see a pick-up in yield volatility over the next 12 months, with central bank announcements, government bond auctions and the release of economic data now key risk events to an even greater degree than before. Ultimately, it is important for investors in Australian fixed-rate debt, passive or otherwise, to be aware of the fact they are exposing themselves to elevated global macro risks, which can dominate domestic factors. Furthermore, investors and advisors should carefully assess whether allocating to bond composites is truly in the best interests of their portfolios, given the increased exposure to such risks. Duration can have some benefits, even at relatively low yields, but it's important not to lose control over it.

Chart 4: MOVE Index of US Treasury Yield Volatility



Source: Merrill Lynch, Bloomberg. Past performance is not an indicator of future performance.

Allocating to Floating Rate Bonds

For those advisers interested in allocating to Australian Floating Rate Bonds, BetaShares Australian Bank Senior Floating Rate Bond ETF (ASX: QPON) provides exposure to a portfolio of some of the largest and most liquid senior floating rate bonds issued by Australian banks, with income paid monthly.