

Fixed income managers: evolution or revolution

Traditional approaches to managing fixed interest funds rely on benchmarks that may not represent optimal risk and return outcomes. New techniques based on separate alpha and beta management should improve portfolio performance.



SUSAN BUCKLEY is Managing Director,
Active Management Division, QIC.
Email: s.buckley@qic.com

IN AN INCREASINGLY COMPETITIVE investment environment, fund managers need to meet client objectives and contribute meaningfully to overall portfolio outcomes. While most investment institutions still rely on the relatively static strategic asset allocation (SAA) framework developed in the 1990s, there is an emerging trend away from the 'traditional' approach to techniques that achieve client objectives more effectively and efficiently.

The traditional approach uses fixed income assets mainly as risk-reducing allocations tied to an ineffective benchmark. Subsequently, the active return target is generally low and even when a fixed income manager strongly outperforms their benchmark, their weighted contribution to the client's total fund level is negligible.

Aside from currency markets, the fixed interest market is the largest and most liquid securities market in the world, providing a wide and ever-increasing range of investment options. This breadth of opportunities facilitates the delivery of scalable and capital-efficient pure alpha strategies that can sit over any beta return.

This paper outlines weaknesses of the traditional approach. It discusses evolving techniques to separate activities aimed at achieving alpha and beta, and argues that these will lead to the eventual dilution of the traditional style of management.

Global fixed income markets

Fixed interest investing continues to evolve from traditional government and corporate bonds to more innovative sub-asset classes and derivative instruments. Investors have typically held bonds in their portfolios for three reasons:

- *most bonds provide a level of fixed income;*
- *diversification:* bonds and equities are generally lowly correlated (that is, with interest rate risk although, over the recent past, this correlation has increased with the expansion of credit markets); and
- *protection against economic slowdown or deflation:* in periods of strong economic growth, inflation typically

risers and a fixed income portfolio's stream of income becomes less valuable; the converse applies in periods of weak economic growth or deflation.

However, through the development, innovation and evolution of fixed interest markets, investors are now able to target specific fixed interest risk premiums and to structure a portfolio to effectively meet a variety of investment objectives at a meaningful level.

Underpinned by deep and broadening fixed income physical or cash markets, there has been strong growth and development in over-the-counter (OTC) derivative securities including interest rate swaps, inflation swaps and, particularly, multi-name and single name credit default swaps. The Bank of International Settlements (May 2008) estimates that notional outstandings in CDS at the end of 2007 was US\$58 trillion.

Traditional approach

The traditional approach to active bond investment typically involves managing a dedicated fixed income portfolio relative to a specified benchmark. For Australian investors, the UBS Composite Index is the most popular benchmark. Active management entails managing portfolio risks within specified constraints to retain the overall market characteristics that the fund is also seeking. The focus of active risk management includes:

- the portfolio's duration and yield curve positions relative to benchmark;
- the credit quality of the portfolio relative to benchmark;
- the maturity structure of the portfolio, based on the expected changes in the relationship between bonds with different maturities;
- the mix of fixed interest asset classes and countries depending on the investor mandate; and
- tracking error.

In general, fixed interest benchmarks present a number of complex issues. Issues arise because these benchmarks are capitalisation weighted and all-inclusive. The two major inefficiencies relate to the duration problem and the 'bums' problem.

The first problem stems from the fact that the duration of the benchmark comes from issuer preferences and does not necessarily reflect the best interests of a given investor. The proportions of bonds in short, intermediate, and long-term categories reflect the maturity or duration preferences of issuers seeking to minimise their cost of capital. Moreover, an investor usually has specific time-horizon preferences that make one duration more advantageous than another. These preferences do not necessarily match those of issuers in the aggregate, whose preferences are reflected in the benchmark.

Second, the 'bums' problem is that the biggest debtors (either companies or countries) have the largest weight in the benchmark – the biggest 'bums' – so the benchmark is not likely to be mean-variance efficient. If a manager is

Another issue related to fixed income benchmarks arises from the recent growth in the size of the credit market. The recent trend includes a reduction in the size of Treasury debt and an increase in corporate issues. As a result, broad-based bond benchmarks are more exposed to tail events than they have been in the past.

tracking such a benchmark, when a security is issued they have to buy it in proportion to its capitalisation weight to minimise tracking error, even if the quality of the security is only just high enough to make it into the index. Such securities would seem to be the most likely to be downgraded or to default.

Another issue related to fixed income benchmarks arises from the recent growth in the size of the credit market. The recent trend includes a reduction in the size of Treasury debt and an increase in corporate issues. As a result, broad-based bond benchmarks are more exposed to tail events than they have been in the past.

Disappointing bond returns

As the downward trend in inflation and interest rates abated over the past few years, fixed interest market (beta) returns have disappointed Australian investors. It is not unusual for one-year Australian Bond Indices (UBS Composite Bond Index) returns to underperform cash. Figure 1 illustrates the long-term decline, followed by stability of cash returns, and falling returns and volatility for the Australian and global fixed interest benchmarks.

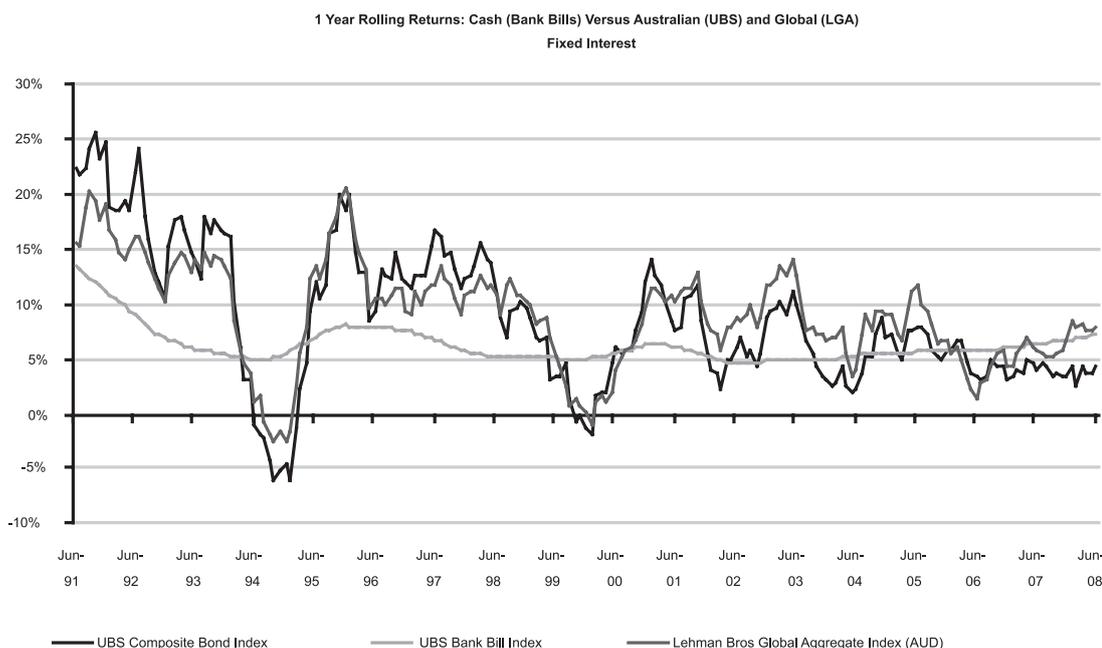
With the prospect of higher global inflation and interest rates, the potential for extended fixed income capital gains within traditional fixed income benchmarks will be limited. For investors focused on traditional benchmark returns this approach may not be an optimal strategy.

Historical analysis of managers' returns highlights that while fixed interest benchmark returns have been declining, many managers have struggled to outperform the benchmark. We believe that this is due to a reliance on strategies that are tied to benchmark characteristics and often do not represent the optimal risk/return structure for investors.

Comparing the 12-month rolling correlations of the UBS Composite Bond Index (Australian benchmark) and the Lehman Global Aggregate Bond Index (global, hedged in Australian dollars) with the median fixed interest manager returns, the following observations can be made:

- there is very strong positive correlation between the benchmark and median manager returns for the Australian fixed interest universe;¹

FIGURE 1: Bond benchmark returns versus cash



Sources: Mercer Investment Consulting, QIC and Bloomberg.

- there is greater variability in correlation between global benchmark and manager returns² compared to Australian fixed interest; and
- overall, active fixed income management has not been evident (until very recently) in traditional portfolios in the last decade.

Weaknesses of the traditional approach for fixed interest investment management include:

- a preoccupation with benchmarks and a reluctance to hold significant allocations of assets that fall outside the benchmark;
- SAAs tend to be static for long periods, even in the face of significant changes in market valuations;
- active mandates are allocated in accordance with SAA weights so some managers are reduced to making insignificant contributions if they manage within an asset class that has a small allocation; and
- active managers tend to be analysed by investors on an unweighted basis. There is seldom any trade-off between a good equity manager and a good fixed interest manager as they vie for a share of the overall portfolio's (alpha) risk budget.

The establishment of an investment framework of independent alpha and beta policy decisions to achieve long-term client investment objectives will address these weaknesses.

Separate alpha and beta

Depending on composition and construction, fixed interest portfolios can provide significantly different risk and return outcomes to investors. By operating

independent alpha and beta policies fund managers can better reflect the investment objectives of their clients.

Beta policy is developed to provide a market return stream (not necessarily a benchmark return). Typical allocations include setting sector exposures (for example, government bonds, corporates, high yield, emerging markets), country allocation, credit limits, inflation exposure and overall duration. The structure should reflect the investment objectives and risk preferences of the client.

Alpha policy is aimed at constructing an absolute return portfolio that provides diversification (multiple alpha sources), a consistent return stream, and an outcome that is not tied to any changes to beta (market) returns. For example, in traditional portfolios the selection of benchmark virtually predetermines the sources of alpha regardless of their quality. Over the medium term, the alpha portfolio should not be subject to the direction of markets. The ability to implement long/short strategies via derivatives allows skilled managers to outperform in all environments.

The most important step in building beta and alpha policy is to understand the investment objective of the portfolio.

Beta risk and return

Broadly speaking, the returns from the fixed interest asset class reflect four fundamental risk premia:

- real interest rate risk
 - inflation uncertainty
 - credit risk – likelihood of default
 - illiquidity risk
- } term premium
 } – shape of the yield curve
 } credit premium
 } – risk of holding

The traditional approach to accessing fixed interest returns has been through benchmarking. These benchmarks often do not represent the optimal risk/return structure to manage physical assets for investors.

There are currently more than 12,300 securities in the Lehman Global Aggregate (LGA) portfolio. Many of these bonds were issued years ago and are consequently illiquid. Thousands of these issues are locked away in long-term bond portfolios and could only be purchased by paying extremely high prices. For this reason, full replication of a broad bond index is highly complex.

Enhanced indexing involves investing in a large sample of bonds such that the portfolio risk factors match the index risk factors (namely, cash flows, sector weights, duration and quality). This portfolio will have higher tracking error than full replication but can be implemented and maintained at much lower cost. Some investment managers estimate that owning bonds from 175 issuers will replicate the LGA with acceptable tracking error.

By using many of the market innovations, investors can effectively replicate most sources of fixed interest return (including credit) via synthetic replication. It is possible for investors to guarantee gross benchmark performance through a total return swap with an investment bank or counterparty. Significant credit risk exists as the investor is tied to the counterparty who offers the swap (generally the owner of the benchmark). The other instruments available to synthetically replicate benchmark performance are bond futures, interest rate futures, interest rate swaps, mortgage futures and credit default swaps/indexes.

Fixed interest alpha is meaningful

Instrument innovations allow skilled active managers to generate high alpha returns for investors. We expect that highly active strategies in fixed interest investments

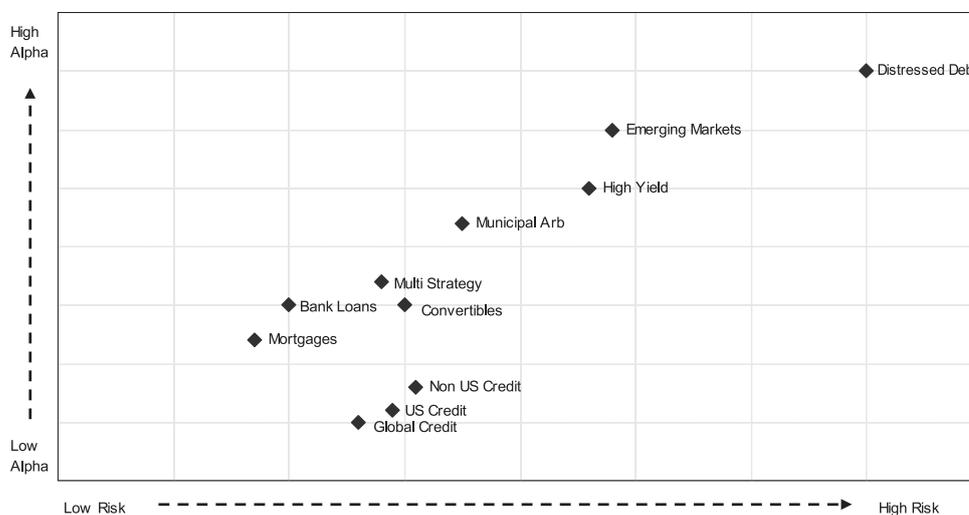
Depending on composition and construction, fixed interest portfolios can provide significantly different risk and return outcomes to investors. By operating independent alpha and beta policies fund managers can better reflect the investment objectives of their clients.

will become more prevalent as market returns continue to disappoint.

At total fund level, fixed interest alpha is meaningful because it provides the following features:

- the flexibility to adjust underlying betas without disrupting alpha sources;
- improved diversification of alpha sources with the switch to absolute return from fixed interest benchmarks;
- low correlation to beta;
- greater capital efficiency with the use of derivatives and overlays (which are generally liquid and have huge capacity in fixed income markets);
- the ability to manage alpha costs including the use of derivatives to lower transaction costs and use of performance fees to align managers to client objectives; and
- alpha becomes more scalable.

FIGURE 2: Fixed interest alpha opportunity set



Source: QIC.

Total alpha should be approached as a single, integrated stream of return (ideally as an absolute return-above-cash concept). It should form a material part of overall risk taking (at levels well above those currently embedded in typical Australian superannuation fund risk budgets). It should be unconstrained in structure and sourced from as many independent sources as is efficient. The alpha stream should be evaluated on an after-fee, after-tax basis.

In determining opportunities to generate meaningful alpha, fixed interest managers need to also consider a variety of fixed interest sectors via a thorough analysis of the broad global opportunity set. This analysis should explore an unconstrained universe of fixed interest sectors, focusing on those opportunities with the greatest potential for alpha. Although the opportunity set is large, it may be further expanded to incorporate a variety of additional subsector market opportunities.

Figure 2 displays the fixed interest alpha opportunity spectrum; typically the higher the alpha the greater the risk. Figure 3 shows the potential strategies used by a fixed interest manager to drive alpha risk budgets.

Scalability

Scalable fixed interest is relatively easy to achieve due to the depth and liquidity of global interest rate and credit derivative markets. Implementing strategies through synthetic instruments provides access to exposures with minimum cost and low tracking error.

The derivatives market allows a fixed interest manager to implement short and long positioning across country yield curves, indices and individual corporate securities.

The key risk with derivative-based strategies is that the price may differ from that of the underlying physical assets. During the 2007–08 credit crisis, derivative credit spread indices and single-name contracts maintained significant volatility while physical securities spreads did not move with the same volatility. This is highlighted in Figure 4 which shows the credit spread movement of Commonwealth Bank securities with similar maturity.

While the market outlook for fixed interest returns remains relatively subdued, instrument innovations have allowed skilled active managers the facility to generate high alpha returns for investors. We expect that highly active strategies in fixed interest investments will become more prevalent as the market return continues to disappoint.

Using the returns from global benchmarks, it is clear that global fixed interest alpha can be uncorrelated to fixed interest beta, highlighting that it is a pure alpha source of return. A skilful manager translates research and portfolio construction into alpha by taking advantage of inefficiencies and breadth of opportunities within fixed interest markets. Table 1 shows that fixed interest alpha is also uncorrelated to equity beta.

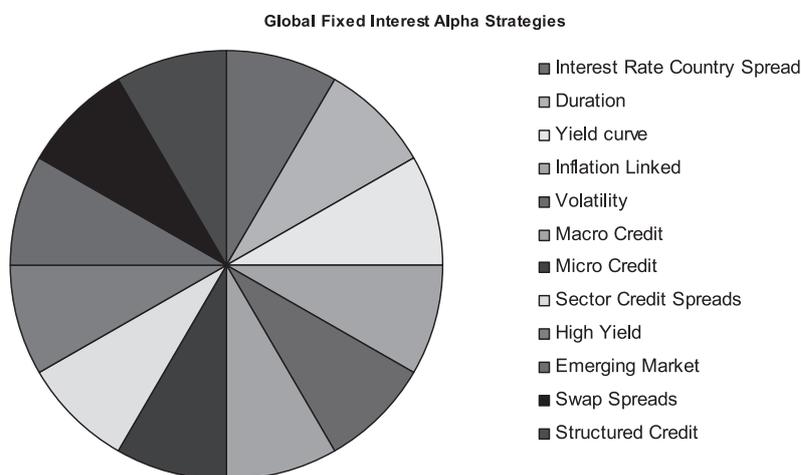
This low or negative correlation to equities makes an allocation to fixed interest alpha attractive for a balanced fund as it reduces risk at the total portfolio level.

TABLE 1: Global fixed interest alpha correlations

Global Fixed Interest Alpha Correlation vs	
Australian Equities (S&P/ASX 200)	-0.09
International Equities (MSCI World ex-Australia)	0.02
Australian Fixed Interest (UBS Composite Bond)	-0.29
International Fixed Interest (LGA)	-0.16

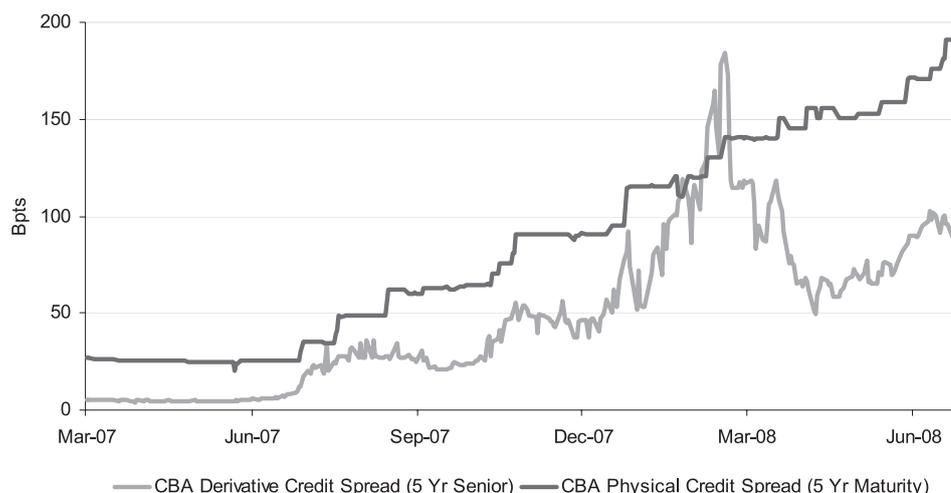
Sources: Mercer, QIC – based on 2004–08 returns. Global Fixed Interest proxy is derived from QIC GFI Alpha Fund and QIC Diversified Fixed Interest Fund Overlay.

FIGURE 3: Diversified alpha pie



Source: QIC.

FIGURE 4: Commonwealth Bank physical and synthetic credit spreads



Sources: QIC, Bloomberg, UBS.

Conclusion

While the market outlook for fixed interest returns remains relatively subdued, instrument innovations have allowed skilled active managers the facility to generate high alpha returns for investors. We expect that highly active strategies in fixed interest investments will become more prevalent as the market return continues to disappoint.

This paper has briefly touched on the intricacies and complexities of managing a fixed interest portfolio. The key themes are:

- the importance of understanding clients' total fund objectives and structuring mandates that will deliver beta (market) and alpha (active) returns most effectively and efficiently;
- fixed interest benchmarks commonly used by investment managers often do not represent the optimal risk/return structure for investors because duration and composition is impacted by the issuers;

- synthetic replication of fixed interest benchmarks has been shown to be effective. By using many of the market innovations it is possible to replicate most sources of fixed interest return;
- fixed interest alpha offers investors great opportunities to improve returns and reduce risk across their portfolio due to the lack of correlation to equity beta; and
- the breadth and scalability of fixed interest markets allows delivery of capital-efficient alpha at fund level.

For the traditional fixed income portfolio manager, evolving separate alpha and beta management capabilities and products may feel revolutionary, but it will provide techniques to improve clients' portfolio performance. The alternative to this evolution away from traditional fixed income management is to fall behind those asset classes and managers who can construct beta portfolios and deliver meaningful alpha returns. ☺

Notes

- 1 Mercer Survey of Australian Fixed Interest to 30 September 2008.
- 2 Mercer Survey of Global Fixed Interest (hedged in AUD) to 30 September 2008.

References

- Bank of International Settlements 2008, *OTC Derivatives Market Activity in the Second Half of 2007*, Monetary and Economic Department, May.
- Mercer Investment Consulting 2008, 'MPA Wholesale Survey Historical Returns', May.