

QIC

# ACTIVE MANAGEMENT

Skill, breadth and flexibility drives outperformance across investment cycles

QIC Global Liquid Strategies

## Summary

The “climate wars” pitting the two major political parties against each other has been one of the most debilitating features of the public policy debate in Australia over the past decade. It’s been a zero-sum game in which neither side can concede even a sliver of merit in their opponent’s position.

The endless passive versus active contest is the investment industry’s equivalent. It’s time to declare an end to the passive versus active wars.

Active and passive investing are complementary, not at loggerheads. They serve different purposes within portfolios.

We are passionate advocates for active investing. That, however, doesn’t mean that we turn up our noses at passive investing.

It does, though, mean that based on findings from decades of investment research, there is compelling evidence to support the proposition that markets go through periods of inefficiency where they vary from fundamental value. By doing so, they create opportunities for active investors to outperform benchmarks by intelligently exploiting desired risks and avoiding undesired ones.

With the Global Financial Crisis and subsequent quantitative easing era as live stress tests, we show that there is value in allocating dynamically across sub-asset classes and that active approaches offer the opportunity to outperform across key fixed income sub-classes.

Moreover, performance data shows that active management has been able to generate similar return outperformance either side of the GFC by utilising the full spectrum of investment tools across full market cycles.

Over the last quarter century, we have found that co-creating active fixed income solutions with clients makes the most of the full quiver of options active approaches bring.

## The times they are a-changin’

A decade out from the Global Financial Crisis, most investors have not experienced a massive, unseen drawdown of capital, and their expected risk levels are less volatile and at multi-decade lows.

This muting of the business cycle and lower volatility has been accompanied by secularly low interest rates, with markets acting like these lows will last into the foreseeable future.

However, the future is rarely a simple extrapolation of the present. History, and the phenomenon of mean-reversion, would suggest that these conditions will not hold. The difficulty for passive investors, and the opportunity for active investors, is that the cycle will shift, and mean reversion will see growth and risk measures move away from their current comfort zones.

The tailwind from being long the index is now poised to morph into a headwind as major central banks are winding down ultra-accommodative monetary policies and gradually moving towards something approaching normalisation.

A static, index-only approach is unlikely to be investor friendly. At best, we believe that passive indices will be an income source, but risk capital attrition in the coming phase of adjustment.

See ‘Two intellectual heavyweights square-off’ for another angle on the endless passive versus active dialogue.

Furthermore, amid greater regulatory pressures and changing monetary policy, a greater breadth of return sources is likely to offer more desirable risk-return outcomes — active fixed income has the flexibility to allocate more to these sources as needed to deliver potentially superior Sharpe and Information Ratios.

As the cycle progresses, and rates rise, it is the characteristics and performance of active fixed income approaches that will prove their

### Two intellectual heavyweights square-off

Some disagreements in life have no obvious resolution. One such argument is the merits of active versus passive investment. Another is the famous, long-term disagreement between two of the 2013 Nobel Laureates for Economics, Eugene Fama and Robert Shiller about whether markets are efficient or not - somewhat similar to the argument between passive and active.

Fama, of the University of Chicago, developed the efficient market hypothesis (EMH), the theory that markets are efficient and all information is accounted for in prices. EMH says that since prices reflect all available information, the market price is the right price and there is no mispricing margin to earn excess returns. For passive investors, this powerful idea is fundamental to their purpose.

Shiller, of Yale University, also focused on asset prices, but from the view of behavioural finance, and the psycho-social factors that drive markets beyond rationally expected prices. In stark contrast to Fama, Shiller says psychology deeply impacts markets, driven by biases that cause investors to become irrational, including overconfidence, loss aversion, overreaction to cash dividends, crowd psychology, and so on.

As markets are driven irrationally from fundamental values, active investors can invest at prices that are below true value, or sell at prices that are above true value. Shiller's theory, and history itself, helps underpin active management's view that the market will consistently deliver asset mispricing which brings with it the opportunity for outperformance.

For active investors, the idea that fundamental valuations will eventually prevail over sentiment-driven price volatility, and information asymmetry, brings confidence to invest when the market is mispriced. Under pure EMH, the market is never mispriced as all information is known, so by deduction, there is no good or bad time to enter the market.

Active makes sense for clients as it can take advantage of market imperfections as prices move away from fair value, regularly creating opportunities for active investors to outperform.

worth to clients. Things like active fixed income's role in allocating primary capital on quality, not quantity; the opportunities offered by less price-sensitive investors; active's implicit incentive to avoid moral hazard; and the outperformance opportunities offered by active approaches over passive.

### Active allocates capital on quality, not quantity

Active investors rarely speak of their craft in deep politico-economic terms. That's a pity as active fixed income's role in primary capital allocation serves a virtuous economic purpose.

It actively withholds capital from governments and companies exhibiting financially harmful behaviour; and actively rewards governments and corporations that manage their finances well, with access to capital liquidity and lower borrowing costs. In other words, active investing is essential to the efficient workings of capitalism.

It is active fixed income's role in allocating primary capital, and the ability to discriminate between investments, that will become increasingly important as rates rise and markets become more volatile again.

In the allocation of capital, active managers are price-makers in the market based on fundamental value. Passive investors are entirely price-takers as rather than buying for quality, they must buy on quantity simply to replicate the market irrespective of cost and risk.

Active fixed income managers' mechanisms for capital allocation are subject to exhaustive analytical due diligence on the borrowers' capacity to service their debts, alongside the broader attraction of their businesses and the markets in which they operate.

This contrasts starkly with passive investors who allocate to meet risk-insensitive index holdings, and passively rebalance to match the market as it continuously absorbs whatever bonds and credits are issued.

Passive is unconcerned if primary capital succeeds or fails. It simply trades in the instruments of capital markets irrespective of their purpose and risk.

### Less price-sensitive investors will bring more opportunity for active fixed income

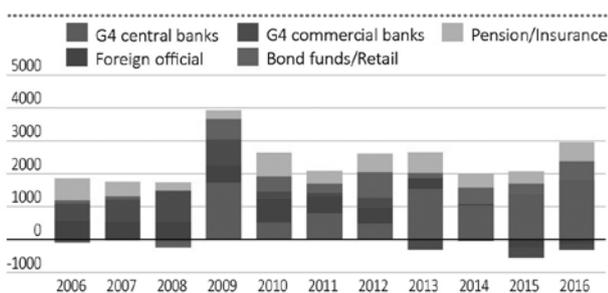
Bond markets differ as an investment to equities, for example, because high-quality bonds serve not just as investments, but also as tools employed by financial institutions to meet regulatory, prudential and liability matching requirements. This brings opportunity to active fixed income investors, because these institutions may be less price sensitive in their primary trading need to meet regulatory requirements.

As central banks unwind quantitative programs, and banks and insurers adjust to changing capital and matching needs, fixed income assets they hold will come into play, offering opportunities for active fixed income at potentially attractive prices.

Since the Global Financial Crisis, central banks, in their position of lender of last resort, have actively accumulated bonds (Figure 1) from banks to provide liquidity under quantitative easing programs, and in doing so, built up massive bond holdings that trade for reasons other than investment return.

Banks are required by central banks, and The Bank of International Settlements, to hold varying levels of liquid capital against their assets and liabilities. As these exposures change, there is a constant need to add or shed fixed income assets used as capital with less sensitivity to price, creating opportunities for active fixed income participants.

Figure 1: Bond demand dominated by less price-sensitive investors in recent years (USD Billion)



Sources: JPMorgan, QIC

By way of example, the Australian banking sector holds some AUD195 billion in APRA regulatory capital requirements, comprised largely of government bond holdings held for their capital value rather than their investment return dynamics.

Insurers, similarly, hold reserves against their gross insured exposures (capital purposes) and ongoing liabilities (income for matching purposes). As exposures change, bonds are traded to meet capital and matching requirements. Insurers may also be less sensitive to price in such rebalancing activity, creating opportunity for active investors.

### Active fixed income is incentivised to avoid risk and hazard

The principle of moral hazard, defined as the lack of incentive for a party to guard against risk where they are protected from its consequences, is fundamental to the proper functioning of markets.

It is also a live issue in fixed income markets. Only active fixed income is incentivised to avoid unnecessary risk, because the active manager rises and falls on being able to achieve returns commensurate with the risks taken.

By contrast, because they just hold the index, the passive manager has no incentive to monitor, analyse, or even avoid troubled assets or hazards. Passive indices simply hold every asset available in the market, including those headed for failure, or on the cusp of default.

The incentive to avoid risks will increase as markets turn. Early default warning signs mean that active managers can manoeuvre to avoid impending defaults. Passive must just hold the growing risks as part of its index mandate.

In passive fixed income, there is an adverse selection problem as there is no incentive to avoid aggregating exposures to companies and bonds that are much more likely than others to deteriorate or default.

Passive also exposes investors to underlying risks for which the agent (in this case, the issuer of the passive index fund) is not also exposed and has no incentive to avoid. Moral hazard, in other words.

Active fixed income approaches employ deep sources of information and analysis to avoid adverse selection and moral hazard, including the application of global environmental, social and corporate governance (ESG) factors.

For example, our active Global Liquid Strategies approach adds additional ESG risk filters to usual active due-diligence that cover initial screening, application of ESG scores, positive and negative screens, and then portfolio construction, and performance and attribution.

An abundance of academic literature and industry research shows that integrating ESG into the investment process has a neutral impact on long-term investment performance, at worst, more likely it has a positive effect on investment returns. See our Global Liquid Strategies team's recent paper 'The evidence is coming in; ESG is positive for fixed income returns' for more on this.

Active managers who stand in the primary capital markets with capital for new fixed income issues undertake significant financial and credit analysis, pricing debt based on stringent financial criteria linked to the expected performance of the underlying business, the security behind the issues, and the credit quality of the borrowers.

Active fixed income investors must necessarily risk-price these issues and allocate capital accordingly for the markets to function. By contrast, in a world entirely comprising passive investors, allocations would just be made on the basis of who needs money most, which in most cases, is the opposite of who should be receiving it from an economic, return and risk perspective.

### Flexible asset allocation delivers across the cycle

Notwithstanding the atypical post-GFC period, investment cycles have not been abolished. They can take on idiosyncratic features, as has been the case over the past decade, but invariably return to more familiar traits.

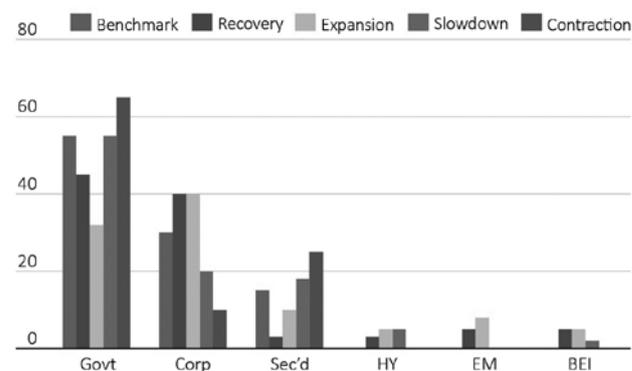
It's no different for fixed income (Figure 2). The persistence of the current cycle and long holiday from volatility may have induced market complacency. That would be unwise, as official interest rates are poised to creep higher.

Active investors welcome this likelihood as it will allow them to exploit mispricings that will emerge.

For example, when the economy is in expansion phase, active managers can allocate more to investment grade and high yield corporate bonds and emerging markets to capture the upswings.

As the economy reaches slowdown, active can pull back on corporate and increase government and secured exposures. In a contraction, active can maximise stability with greater government and secured exposures and pull-back exposures to the corporate sector.

Figure 3: Example portfolio weightings for different parts of the cycle (% weight)



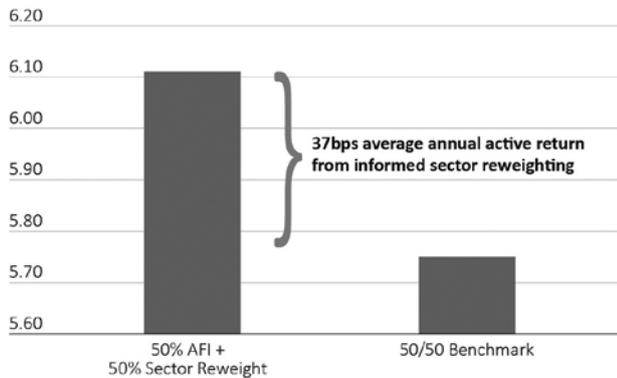
Source: QIC, illustrative only based on benchmark weightings of a global fixed income fund based on Bloomberg Barclays Global Aggregate Index.

Figure 2: Business cycles and asset class settings

Phase	Global Growth Environment	Impact on the term premium
Recovery	Growth is negative but is accelerating	Asset markets bottom out Risk assets start become positive Usually short lived and unambiguous
Expansion	Growth is positive and accelerating	Positive returns from risk assets
Slowdown	Growth is positive and decelerating	Expected returns decline from risk assets Can move to contraction or expansion
Contraction	Growth is negative and decelerating	Risk assets have negative returns

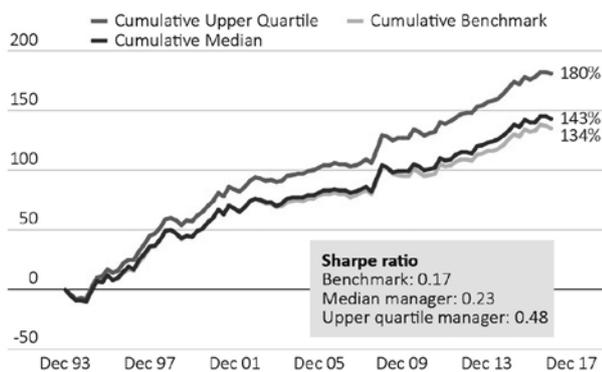
Source: QIC

**Figure 4: Sector allocation adds value (Mar 1994 – Mar 2017)**  
(% Average Annual Return)



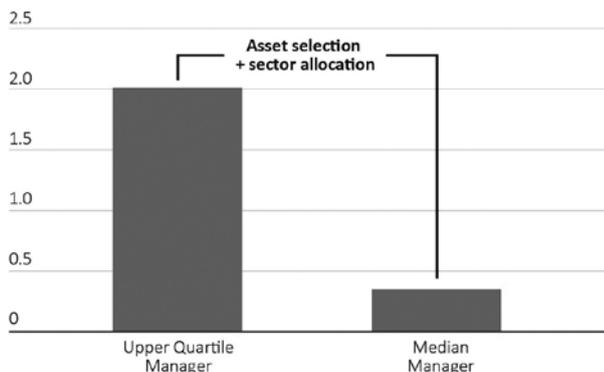
Source: Bloomberg, QIC. Example only.

**Figure 5: Active asset and sector allocation outperform the 50/50 benchmark in both returns and Sharpe Ratios (Mar 1994 – Mar 2017) (Cumulative %)**



Sources: Bloomberg, Mercer, QIC. Example only.

**Figure 6: Active asset and sector allocation outperform the 50/50 benchmark (Mar 1994 – Mar 2017) (Active Average Annual Return %)**



Source: Mercer, QIC. Example only.

As the cycle begins to complete its full rotation towards recovery, active can seek upside by adding more corporate bonds, and increasing exposures to high-yield, emerging markets (EM) and break-even inflation (BEI).

Passive must just take the market setting for risk assets regardless of where we are in the cycle. Active fixed income, by contrast, gives the flexibility to actively manage exposure to risk assets to maximise the benefits and minimise the risks at different points in the cycle (Figure 3).

For many fixed income investors, sector allocation across the cycle is an important internally-managed decision. However, at the GLS fund management level, these active allocations are vital to our sector rotation process. A large portion of the risk allocation in many of our funds is driven by the need to provide constant, defensive carry and limit portfolio losses in large market drawdowns.

To help illustrate our approach, we investigated the value of sector allocation for a typical Australian fixed income portfolio with a 50 per cent weight to a global index (in this case, the Bloomberg Barclays Global Aggregate) and a 50 per cent weight to an Australian benchmark (the Bloomberg Ausbond Composite Benchmark).

In building our portfolio, we designed the sector allocation process to offer steady returns but reweight the global component of this benchmark based on an assessment of the market environment over the next six to twelve months.

This is similar to our GLS' sector rotation process which draws on a confluence of factors, not the least of which is our base case macro-economic outlook. Recession indicators, views on future fiscal and monetary policy, and an assessment of the health of corporates all weigh heavily in this process.

To quantitatively assess the benefit of reweighting between asset classes over a long-time period, this paper adopted a more simplified approach for demonstration purposes.

We used a readily available leading indicator (in actuality, plucking an off-the-shelf leading indicator would be insufficient for such a sophisticated exercise) to proxy the business cycle, and for the purposes of this modelling, we allowed it to fully inform the business cycle which the global economy will move into over the next six to 12-month period.

Based on the direction and pace of change on the indicator (accelerating or decelerating), we defined the business cycle (Figure 2) and consequent weights to the relative fixed income asset classes (Figure 3).

Not only did the ability to reweight the portfolio for the anticipated business cycle bring superior returns (37bps per annum on average), it produced a stronger Sharpe Ratio (0.65 vs. 0.17) from flexibly allocating across the cycle (Figure 4).

### Active sector allocation offers superior risk-adjusted returns

While flexibility to allocate across sub-sectors delivers across the business cycle, active sub-sector allocation also offers superior risk-adjusted returns.

To model this, we first analysed the historical active performance around the same benchmarks discussed previously — the Bloomberg Barclays Global Aggregate and the Ausbond Comp indices. Again, assuming a 50/50 weight between these indices.

The result: we found that both the upper-quartile and median managers outperformed the benchmark (Figure 5).

In summary, the ability to apply informed sector allocation within the portfolio improved risk-adjusted returns. Moreover, active sector allocation and asset selection increased returns above the benchmark for both upper-quartile and median managers (Figure 6).

At the portfolio level, active allocation outperformed the index.

We then looked at whether active returns were possible on the sub-asset classes by themselves.

Our findings show that the median active fixed income manager was able to beat passive index returns: for gross returns before fees; active performance per unit of additional risk over the risk-free rate (Sharpe Ratio); and active outperformance per unit of active return risk above the index risk (Information Ratio or IR) for the core fixed income sub asset classes.

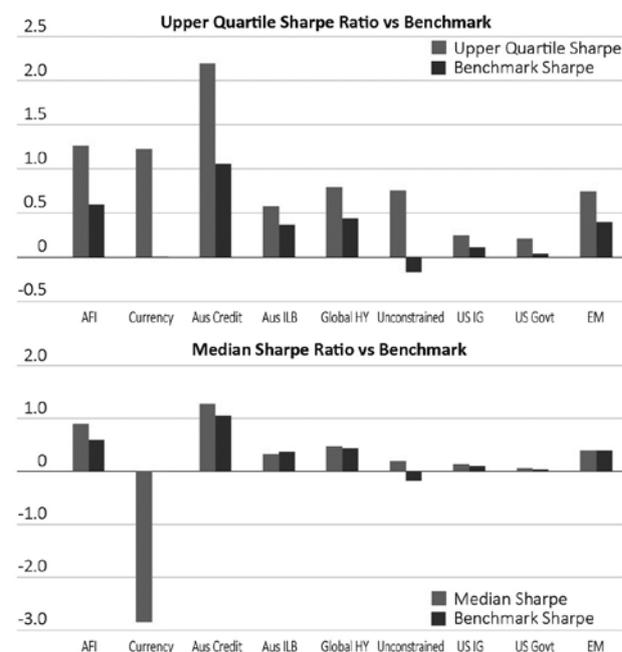
Upper-quartile managers outperformed the benchmarks on these measures for all fixed income sub-asset classes. The following charts illustrate our findings (Figures 7, 8, 9 and 10).

The median active fixed income manager outperformed (Figure 7) the benchmark in seven sub-asset classes, underperforming in just two (Australian inflation-linked bonds, and emerging markets). Upper-quartile active fixed income managers outperformed in all sub-asset classes.

In terms of risk-adjusted outperformance compared to the risk-free rate (Sharpe Ratio); the median active manager outperformed the index in seven sub-asset classes (Figure 8), only underperforming in Australian inflation-linked bonds and currency.

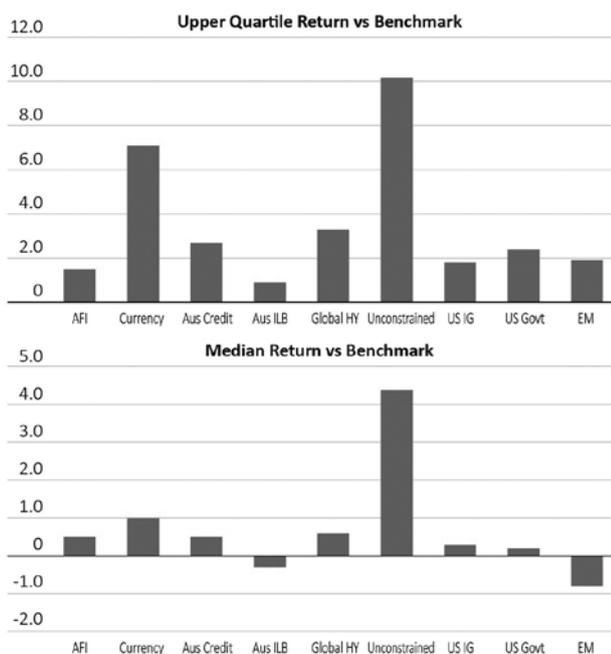
We note the strong negative Sharpe Ratio for currency. While the overall currency return is positive, the average risk free rate for the period was higher, meaning excess performance was negative.

**Figure 8: Active returns are superior per unit of additional risk (2006 – 2017) (%)**



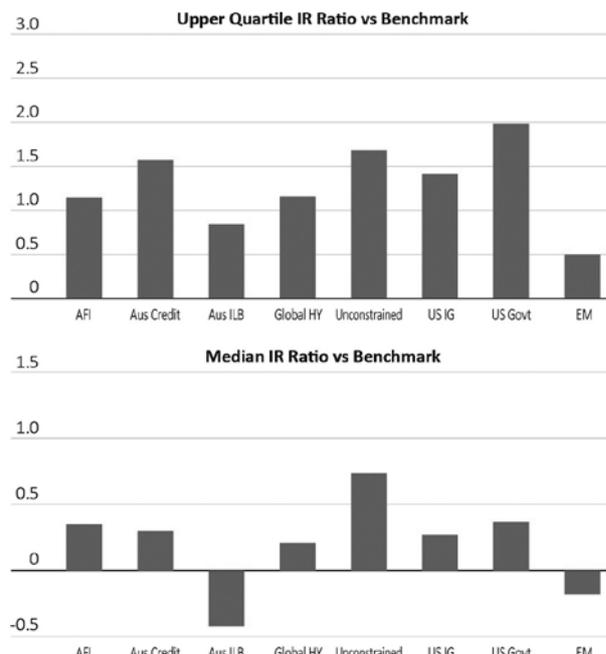
Source: Mercer, QIC. Example only.

**Figure 7: Active returns are superior for median and upper-quartile managers (2006 – 2017) (% per annum)**



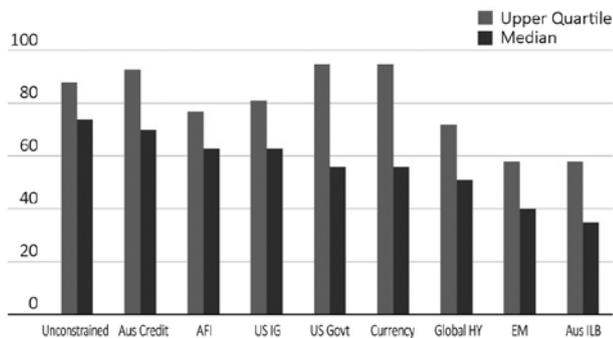
Source: Mercer, QIC. Example only.

**Figure 9: Active approaches are superior for active risk taken (2006 – 2017) (IR Ratio)**



Source: Mercer, QIC. Example only. Currency removed due to zero benchmark overstating ratio.

**Figure 10: Active managers consistently outperform in core fixed income (2006 – 2017) (% of Positive Return Quarters vs Benchmark)**



Source: Mercer, QIC. Example only.

### Some important performance considerations on niche sub-asset classes

It is evident from the research that active returns are more difficult for median managers in the niche sub-asset classes (emerging markets, high yield and inflation linked bonds). There are several reasons for this.

Firstly, as mentioned earlier, it may be a measurement error. For example, active currency mandates take many forms – value, momentum and carry are the key ones. We have not corrected for these different styles in this analysis. Rather, we have assumed all mandates are benchmarked against a zero-return benchmark.

Secondly, the findings speak to the specialised nature of emerging market and inflation management and how these markets take on extra importance when seeking upper quartile managers. For example, the Australian inflation-linked bond (ILB) manager universe can have very different mandates and benchmarks.

Mandate composition measured against the simple index can be deceptive, especially where mandates cover markets that are niche and have lower levels of liquidity than core fixed income markets.

This may explain some of the underperformance in ILB mandates in our analysis.

Further, we believe manager selection is of utmost importance, especially in niche asset classes. As an example, in Australian ILB:

- the market is relatively small and not as liquid as some of its offshore equivalents, requiring careful trading and patient portfolio management,
- understanding the carry profile of Australian (and global) ILBs is a specialist activity,
- there are fewer market makers, so close relationships via a dedicated trading team with inflation expertise are important, and
- understanding future issuance needs of major issuers.

Simply having passive index exposures to niche fixed income asset classes such as ILBs is highly prone to liquidity and replication problems.

We acknowledge that this may be a measurement error due to aggregating many different currency return mandates. Active currency mandates take many forms — value, momentum and carry are the key ones. We have not corrected for these different styles in this analysis. Rather, we have assumed all mandates are benchmarked against a zero-return benchmark.

Upper-quartile active fixed income managers beat the benchmark on risk-adjusted outperformance for all sub-asset classes.

On active outperformance per unit of active risk relative to the benchmark (Information Ratio), median active managers outperformed the majority of sub-asset classes (Figure 9), and only underperformed on Australian inflation-linked bonds, and emerging markets.

Upper-quartile active managers consistently outperform on Information Ratio across all sub-asset classes.

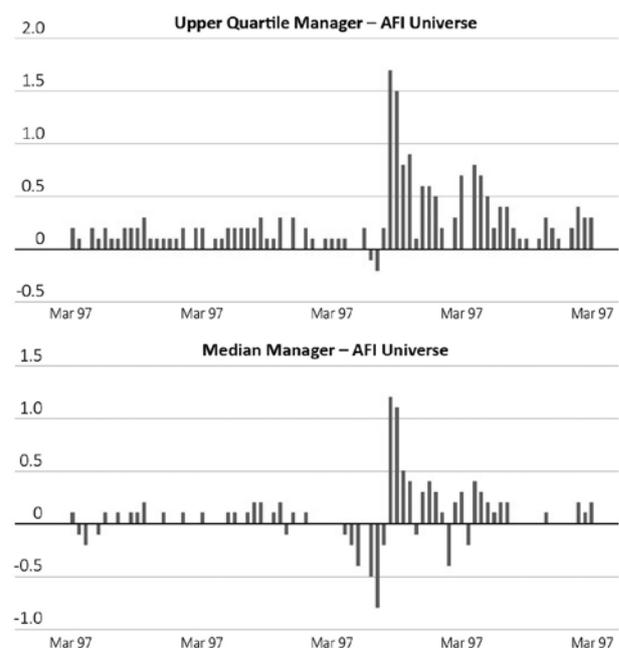
In summary, upper-quartile active managers outperformed the benchmark for all sub-asset classes on a gross return (before fees), Sharpe Ratio and Information Ratio basis. They also have significantly higher positive performance months versus the benchmark; between 75-95 per cent higher for the core fixed income asset classes (Figure 10).

Median active managers outperformed the benchmark for the core fixed income sub-asset classes (Australian fixed income, credit, government, and unconstrained), 50-60 per cent of the time, but their hit-rates were not as strong for more niche sub-asset classes (emerging markets, high yield, and inflation linked).

So, even if you have a median manager, you are still better off than the benchmark in the core fixed income sub-asset classes.

See ‘Some important considerations on niche sub-asset classes’ for some thoughts on the challenges of managing and measuring these asset classes.

**Figure 11: Active quarterly returns before, through and after the GFC (%)**



Source: Mercer, QIC

## Is active outperformance a historical anomaly?

It's remarked that as markets have been less volatile in recent years, there is also less benefit in active management. Our analysis contradicts this belief.

Active approaches to fixed income provided similar performance before and after the GFC for the majority of fixed income asset classes. By way of illustration, Australian fixed income shows stronger levels of outperformance following the GFC for both upper-quartile and median managers (Figure 11).

Both the active median and upper-quartile managers have been able to generate consistent quarterly outperformance since the GFC in the Australian fixed income universe, countering claims that passive is more suited to times of lower volatility.

Unconstrained bond funds, by contrast, showed a deterioration in returns in the post-GFC environment. However, we caution against drawing too many conclusions from this given our expectations, expressed earlier, that times are changing with rising rates and as central banks unwind QE programs.

## Value in giving an asset manager more breadth/ flexibility

Owing to low or negative correlations across the sub-asset classes of fixed income, diversification of return sources is a benefit for active fixed income over passive. Different return drivers work well at different points in the cycle, as markets respond to diverse liquidity drivers, or look ahead to the impact of macroeconomic and geopolitical events.

This speaks to the importance of giving managers sufficient breadth in their portfolio mandates to access different sources of return. For example, allowing sufficient tracking error in Australian Fixed Income (AFI) style mandates to benefit from credit opportunities or inflation opportunities when they present themselves, allows for a higher information ratio in the portfolio.

QIC has a long track record of working with clients in the insurance, banking and superannuation industries to develop solutions to fit their specific investment strategies. Our solutions-driven approach is evident across our range of funds.

Examples include:

- Designing a new benchmark approach for a diversified fixed income mandate. Our diversified fixed income mandate was managed against the broad-based Bloomberg Barclays Global Aggregate Bond Index. Given our concerns about the end of the secular bull market, clients needed a benchmark approach that met the need for interest duration which was more capped than the broad-based benchmark, and to achieve more optimal weights between government and non-government exposures.

We implemented an equally weighted composite of the Citi World Government Bond Index of 1-10 year maturity, and the Citi Broad Investment-Grade Bond Index of 1-10 year maturity. This provides a more appropriate split between government and corporate bonds for their specific mandates.

The change reduced interest rate risk by 25 per cent, improved option adjusted spread, maintained AUD hedging, increased allocations to corporate by 19 per cent as required, and reduced Japanese exposure.

Extreme unconventional monetary policy in Japan is holding the yield curve very flat and very low. The official cash rate is -0.1 per cent and the 10-year target rate is 0 per cent. As inflation slowly

returns, these rates will be allowed to move higher. This, coupled with the fact that duration is now much longer than normal (Figure 12) mean that portfolio losses from Japanese bonds could be significant when interest rates creep forward.

- Broadening active levers to include off-benchmark asset classes. As discussed above, having flexibility across fixed income sub asset classes can improve active returns, even with a benchmark in place. For example, having more flexibility to increase corporate exposure or add currency and inflation sub asset classes at appropriate times is valuable.

A perceived risk with this approach is that the manager does not remain within the key mandate and experiences 'style-drift' or changes the risk parameters. This is where well-articulated risk management levers are important.

Collaboration with our risk and compliance team allows us to design governance measures such as risk budgeting and risk utilisation measures, and risk limits such as cumulative loss limits so that when opportunities arise in off-benchmark asset classes such as currency and inflation, we can access these returns while maintaining our overall target and risk levels.

- Designing a mandate without the need for a benchmark. Some clients have expressed a desire to invest in specific sub asset classes to deliver defensive income streams as they less concerned about the mark-to-market or interest rate risks associated with such exposures.

In such cases, we have designed approaches that are not limited to benchmarks, but provide the specific sub asset class (for example, bank capital risk) coupled with the capacity to adjust for duration in order to help mitigate a cyclical downturn, which may cause the key exposure to underperform (for example, wider bank credit spreads).

The future of investment lies in co-creation with the full suite of active investment tools, not the unproductive debate between passive and active approaches. We know that either approach can be actively developed and incorporated into attractive investment solutions.

However, we believe that only active fixed income approaches can deliver superior risk-adjusted returns; with an implicit incentive to invest in quality, and avoid risk and hazards. We believe this because only active can flexibly access the broadest possible asset and sub-asset classes to negotiate the expected rise in interest rates and volatility as the cycle returns. **FS**

Figure 12: Duration is increasing in key indices (Jan 1990 – July 2016) (Years)



Sources: Bloomberg, QIC