Colonial First State
Global Asset Management

THE ART AND SCIENCE OF PASSIVE INVESTING

Australian Fixed Income

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or…why there is nothing passive about managing a passive fund!

Passive investment has become increasingly popular over recent years as risk budget allocations, active performance outcomes and overall portfolio costs have all come under increased focus. While passive investment strategies do not seek to add value through deliberate skewing of the aggregate risk profile of a portfolio against its benchmark (eg duration, curve and aggregate credit risks), there are still a number of conscious decisions that need to be made in order to deliver index-like returns in the most efficient way.

In theory passive investment strategies that fully replicate a given benchmark, mirroring all asset holdings and the timing of any index changes, should be relatively simple. In practice, they are anything but for a variety of reasons.

These reasons include:

- Transaction costs: The index process itself typically assumes zero transaction costs, and a month end rebalancing process that is able to execute any volume at the precise monthly closing level. In reality, there are a number of reasons that this ideal is unattainable.
  - There is usually a bid/offer spread that needs to be paid, which increases as liquidity of the underlying investment decreases.
  - Minimum holding and parcel sizes also mean that precise replication is impossible, with some degree of rounding necessary. For indices with very large numbers of constituents (and large volumes of very small holdings) many of these will fall below minimum holding requirements.
  - Finally, some assets are simply not investible after issue. In less liquid markets, some lines will be tightly held and trade rarely, if ever. Seamlessly increasing and decreasing exposure to these assets at each month end is simply not possible.
- New Issues/Maturities/Coupon flows:
  - It is not only the month end process which is difficult to replicate. Any other material change intra-month will also require additional trading/rebalancing, further increasing the number of potential transactions required for perfect replication.
- Applications/Redemptions:
  - Flows in and out of funds will again result in rebalancing trades, with smaller flows likely to be affected by minimum parcel size/holdings constraints.

The result of these impacts is that, even in highly liquid indices with a small number of constituents, a full replication approach will result in transaction cost-based performance slippage, and small divergences between portfolio and benchmark exposure weights. For indices of less liquid assets or broader holding universes, these costs and mismatches will become more significant. Managers must therefore come up with strategies to minimise performance drag and risk without targeting full replication.

We generally consider a range of alternative strategies for managing passive funds:

Replication:

- Where possible, full replication is still a viable strategy choice. In the Australian or New Zealand Government bond markets, where liquidity in the limited number of index constituents is generally high, efforts to replicate can make sense. However, these efforts must be undertaken with the understanding that there will likely be small mismatches at the individual holding level, and rebalancing costs due to month end/coupon and application/redemption flows. These will result in a modest drag from a performance standpoint. Investors must understand that returns are likely to be modestly below index, even before fees are applied.

Stratified Sampling:

- At the other extreme, large and diversified benchmark universes (such as the Bloomberg Barclays Global Aggregate Index, which currently has in excess of 23,000 lines) make full replication highly inefficient. In such circumstances, quantitative strategies to minimise risks against the benchmark represent the best way of delivering index-like returns.
- Risks considered include duration, curve, credit distribution, running yield and convexity. These will be considered at an aggregate, regional, sectoral and ratings-based level, with a subset of exposures chosen that best reflect these risks and which minimise the tracking error of the portfolio against the benchmark, using a more modest number of holdings. At times, this does imply taking a degree of single name risk versus benchmark allocations.
- This can be considered more a factor investing approach to risk management, but would still be expected to deliver a modest underperformance drag against the benchmark due to rebalancing costs. This may be partially offset by deliberately targeting a modestly enhanced running yield.

Pragmatic Replication:

- Between these two extremes lies the process we prefer in the Australian and New Zealand composite or credit market context, where liquidity across instruments is variable (with many highly illiquid) but where the universes are reasonable in terms of total numbers of constituents (less than 500 and often concentrated in a much smaller number of lines). The limited liquidity makes full replication impractical, but we are able to fully replicate most of the larger and more liquid holdings.
- The investment process therefore actively focuses on balancing the trade-off between tracking error and transaction costs. At one extreme, Government bond holdings will typically be subject to full replication, while corporate exposures will need to be more pragmatic; some names will be held as surrogates for others to mitigate risks.
- Processes around new issues best highlight the style of decision making necessary. In all cases, new issues will only enter the benchmark sometime after settlement (implying all holdings are sourced from the secondary market).
  - For Government bond issues we are generally confident of being able to source the necessary exposures at a reasonable price, so will favour transacting in line with index processes.
  - For corporates, however, we must weigh up the risks of sourcing the paper from the market if we follow a replication process (both volumes – including the ability to source at all – and price are considerations) versus the tracking error of sourcing the exposure in the primary market and holding it as a risk position until it enters the benchmark (length of time until benchmark inclusion, expected spread volatility, new issue pricing benefits and the funding asset performance are key considerations).

From the above analysis we can see that managing a passive fund requires a range of active decisions in order to be able to deliver index like returns. The range of strategies used will depend on the underlying nature of the benchmark constituents, but in all cases some degree of discretion is required; the application of this discretion reflects elements of art as well as science. The performance drag implied by transaction costs in passive funds does open the door for passive enhanced strategies that seek to deliver index plus returns after fees in a risk controlled manner. That is a subject for a subsequent paper.

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