Investing in Inflation Linked Bonds (ILBs) – the whys and hows
May 2009

Why would we recommend that clients invest in ILBs?

- We recommend that clients invest in ILBs for two main reasons. First, for those clients with liabilities indexed to inflation, ILBs provide direct protection against future inflation and can be used to immunise portfolios against this risk. For these clients, the main objective is to try and purchase ILBs when they are cheap in a structural sense and thus purchase cheap insurance against the possibility of future inflation.
- The second reason we recommend ILBs is as a strategic or tactical allocation within a diversified portfolio. For strategic asset allocations, ILBs offer very low correlation with most other asset classes and are almost unique in offering consistent outperformance during periods of stagflation (low growth plus high inflation). In contrast, traditional long-term hedges against inflation, such as blue-chip stocks and property, tend to perform poorly during stagflation.
- For tactical asset allocations, the relative value of ILBs compared to other sectors can change dramatically (in part due to supply/demand but also other developments). This represents an opportunity for clients in moving into and out of ILBs. In some cases, clients prefer to make these tactical allocation decisions themselves by changing allocations at the manager level. In other cases, we have employed this allocation decision as a source of active performance for client mandates (e.g. by substituting a portion of an ILB mandate with an equivalent portfolio of nominal bonds and inflation swaps).

How do ILBs perform relative to nominal bonds in periods of inflation and deflation/stagflation?

- Assuming equal durations, an ILB will outperform an equivalent nominal bond when inflation is higher than expected over the life of the bond. Conversely, the same ILB will underperform a nominal bond when inflation is lower than expected.
- In practice, however, inflation is rarely higher or lower than expected without growth also being different to expectations. ILBs also typically have a longer duration than nominal bonds. Various combinations of growth and inflation can have differing effects on real and nominal yields and this creates a number of different possible outcomes in terms of performance. The general principles can be seen in the following table which assumes that ILBs have a much longer duration than nominal bonds (as is the case for example with the UBS Inflation and UBS Composite indices respectively):

	Inflation rises	Inflation falls
Growth rises	Real yields rise Nominal yields rise ILBs underperform: duration effect only (yield effect is ambiguous)	Real yields rise Nominal yields rise by less ILBs underperform: yield change and duration effect
Growth falls	Real yields fall Nominal yields fall by less ILBs outperform: yield change and duration effect	Real yields fall Nominal yields fall ILBs outperform: duration effect only (yield effect is ambiguous)

- It is therefore possible for ILBs to underperform nominal bonds during periods of rising inflation, counterintuitive though this may seem. However, this would only be the case where growth was rising more rapidly than inflation (a very optimistic outcome at the time of writing).
- Conversely, ILBs can outperform nominal bonds even during periods of falling inflation, which again may seem counterintuitive. If the global crisis deepened further, and both growth and inflation collapsed, then ILBs may still outperform if the fall in growth dominated.

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- Finally, ILBs outperform dramatically during periods of falling growth and rising inflation, i.e. stagflation. This is because real yields fall as growth declines whereas nominal yields fall by less or indeed can actually rise if the increase in inflation is substantial. Rising nominal yields would substantially damage nominal bonds whereas ILBs would gain in value as real yields fell.

How does the duration of ILBs affect performance?

- The ILB market as a sector tends to have a longer duration than the nominal market due to the greater prevalence of longer-maturity bonds and the larger inflation-adjusted principal at maturity. While this is attractive in terms of the ability to hedge long-term inflation risks, it also means that, for a given change in yields, the ILB universe experiences a greater change in value than the nominal universe.
- For specific mandates or investment strategies, the duration of an ILB portfolio can be adjusted to address the effects of this issue on performance and the outpeformance and underperformance scenarios outlined for ILB and nominal portfolios of equivalent adjusted duration remain valid. However, when considering performance at the sector level, the longer duration of the ILB market will act to magnify any outperformance (or underperformance) relative to the shorter duration nominal market.
- This is particularly relevant for scenarios where relative performance is ambiguous (the top left and bottom right quadrants in the table). In these scenarios, the performance of equal-duration ILB and nominal portfolios may be broadly similar, yet the longer duration ILB market may outperform or underperform the nominal market considerably. Again, adjustments can be made to address this effect.

Why don’t ILBs perform well in periods of inflation?

- As discussed above, the performance of ILBs during periods of rising inflation depends on what is happening to growth at the same time. If rising inflation is accompanied by a deterioration in growth, then ILBs will outperform very strongly as real yields are likely to decline.
- If instead both growth and inflation are rising together, then relative performance will depend on whether the increase in growth dominates the increase in inflation. If it does, then ILBs will underperform. Importantly however, even if the increase in growth and inflation are roughly balanced, the ILB market as a whole is still likely to underperform simply because of its longer duration.

What are the merits of active versus passive management in the ILB space?

- We encourage clients to undertake intelligent replication rather than passive strategies. This ensures that the range of risks embodied by the benchmark (or in the client’s liability structure) is matched accurately.
- Given the infrequent nature of ILB issuance, significant maturities can influence valuations in the market, as investment banks and brokers are well aware of which bonds are maturing and well aware that buy-and-hold and/or passive clients need to purchase large amounts at those times. This opens up a good potential alpha generating strategy for non-passive investment mandates.
- Depending on client preference, intelligent replication may be extended to include active strategies. Using active management not only ensures that the problems associated with passive management or buy-and-hold portfolios are avoided, which tends to generate some modest outperformance in itself, but also introduces the possibility of accessing other anomalies in the ILB market.
- For these reasons, we believe that intelligent replication is superior to a pure passive style in the ILB space. Whether intelligent replication is extended to permit some active management is largely a decision for the client, based on their risk tolerance and desired return outcomes. Our approach to portfolio management segregates active strategies completely from the intelligent replication process, such that they can be switched on or off without impacting on portfolio construction and liquidity. The same risk framework used for intelligent replication also applies to active management, so it is straightforward for us to demonstrate the impact of active strategies on portfolio risk.

Is the ILB market currently cheap?

- We currently view ILBs as still offering cheap protection against inflation in a structural sense. This reflects the wide range of possible outcomes for inflation going forward, and the currently high degree of uncertainty associated with these outcomes.
- Although we expect some new issuance in the sector over the coming year, we do not expect this to cheapen the market further. New supply is expected to help fill the gap left by the maturity of the 2010 Commonwealth issue, which is currently an important security in the market. Increased issuance is also likely to encourage new sources of demand from those investors who had previously excluded the market from their investment universe.

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ACN 132 902 722 AFSL 329 828