INFLATION LINKED BONDS – GENERAL RESEARCH

25 February 2009

When to buy Inflation Linked Bonds (ILB's)?

Contrary to popular opinion, the time to buy inflation linked bonds may not be, as usually expected, when inflation actually occurs. That may well in fact be the time to consider selling. The time to buy is before inflation occurs and before that forward inflation is 'priced in'.

It is often said that a share market will predict changes in the economic fortunes of a country long before the dire statistics are released. The demise of share prices since mid 2007 is certainly evidence of that, with unemployment, fiscal pump priming, monetary policy easing and earnings downgrades all lagging the action on the ASX. Additionally, the time to buy bonds is often at before the commencement of a monetary policy easing, and certainly not towards the tail end of that cycle.

Inflation linked bonds are not dissimilar. Once the inflation genie is out of the bottle, it is very likely that the price of inflation linked bonds will have accelerated to a level that justifies the impending statistical release (s). That is because markets are very efficient at predicting inflation, and are assisted by the significant time delay between inflation actually occurring and it being acknowledged by the statistician.

That said; how do we determine when the time is right to buy ILB's?

Types of inflation-linked securities

The three major types of inflation-linked securities are:

- Capital Indexed Bonds (CIBs)
- Indexed Annuity-Style Bonds (CFBs)
- Interest Indexed Bonds (IIBs)

Major issuance in Australia is through the Government program and these follow the Capital Indexed model.

Capital Indexed Bonds (CIBs)

The indexing of this security occurs quarterly on the capital, or principal amount of the bond which is repaid at maturity. The indexation factor is usually based on the rate of consumer price inflation represented by the Australian Bureau of Statistics' CPI. Interest is payable, generally quarterly, on the then current indexed capital amount at a fixed coupon rate (usually 4.00% p.a.). As the inflation indexation increases the principle value of the security over time, the amount due at maturity becomes greater. This increases the credit risk to the holder over time.

The indexation of outstanding principal is based on lagged movements in the relevant price or wages series; for example, the indexation of the coupon in November, under the reserve Bank of Australia formula, is based on the average quarterly increase of the March and June quarters. This is significant in assessing the strength of the hedge against inflation and the potential return.

The indexation process results in part of the periodic return being effectively capitalised into the outstanding principal. The investor is accordingly raising his or her credit risk exposure to the issuer. This results in most issues of this type being Commonwealth and State Government securities.

As part of the income is not physically received but considered to be "capitalised" in the outstanding Principal, the division 16E tax provisions are considered to apply to a large majority of outstanding issues.

During negative periods of inflation the coupon will be paid on a decreasing principal. However, under the Australian system, the final payment can never be less than the original capital value at issue.

It should be noted that for CIB's a higher taxed investor may have a negative cash flow for some time as the assessed tax exceeds the coupon payment.

Credit Foncier Bonds (CFBs)

For Credit Foncier Bonds, the structure of the cashflows is essentially an indexed-linked form of credit foncier loan, with all coupon payments consisting of a principal payment and interest paid a t a fixed real interest rate. The principal repayment schedule is calculated in essentially the same way as a conventional mortgage; that is, in the

absence of inflation, each payment is equal, consisting of part principal and part interest. This amount is also referred to as the base payment or base annuity. The base payments are indexed by inflation over the life of the bond, resulting in a steady increase of payments over the term.

Indexed Annuity Bonds (IABs)

The issuance of Indexed Annuity Bonds began in 1990. Initially marketed as a tax-effective inflation linked bond, these securities were readily embraced by Semi-Government authorities over the ensuing four years as an alternative to Capital Indexed Bonds. Investors appreciated this structure not only of its liability matching capabilities but also for its tax benefits. However, the 1994 tax amendments, combined with an increaded desire on the part of various State Governments to reduce debt, have seen IABs fall out of favour with the Semi-Government authorities in recent years.

Break Even Inflation explained

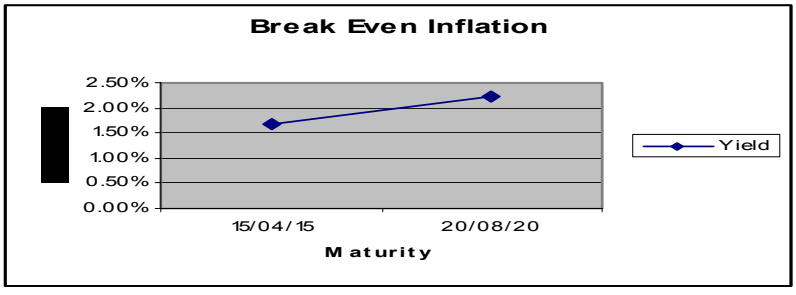
Many Inflation Linked Bond investors call ILB's "real" bonds, whilst referring to nominal bonds as "unreal" bonds. ILB's are "real" because they pay a return that compensates the owner for the vagaries of inflation eroding the purchasing power of their money. Nominal Bonds are "unreal" because they do not.

Therefore, by examining the yields at which ILB's and Nominal Bonds are trading at, potential investors will then know what the market is predicting inflation to be at in the future. This prediction is also known as 'break even inflation' or BEI. This is because it describes that level of actual inflation that would have to occur for investors to be indifferent between investing in either bond. For example:

ISSUE	COUPON	Maturity	Yield
CIB CGL	4.000	20/08/15	2.07%
CGL	6.250	15/04/15	3.76%
BEI			1.69%
CIB CGL	4.000	20/08/20	2.00%
CGL	5.250	15/03/19	4.15%
CGL	5.750	15/05/21	4.32%
BEI			2.24%

Source: Bloomberg, February 24, 2009

The BEI curve is positively shaped, with the market expecting lower inflation to 2015 of near 1.70%, rising to an average of 2.25% for the period to 2020.



But what does this tell us about WHEN to invest?

In isolation it doesn't. For, using the example, if inflation was to fall below 2.25% for the period to 2020, nominal bonds would prove the better investment over that period. Otherwise, if the reverse were true, then ILB's would prove to be the better investment.

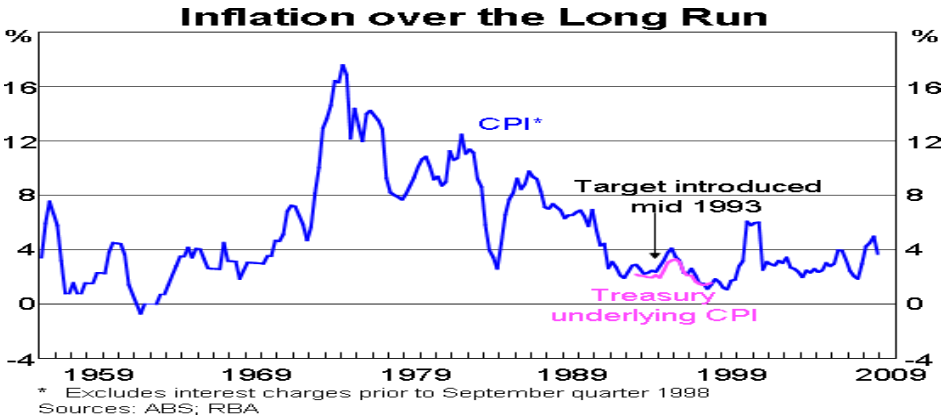
However, when BEI is considered in conjunction with other information available, it proves a valuable tool in the evaluation of when to invest. Other information includes most importantly the examination of monetary policy directives, fiscal policy initiatives that affect the federal budget and the appetite to issue nominal bonds and observations on gold – the traditional hedge against inflation.

Monetary Policy, the yield curve and gold.

The following is an extract from the Reserve Bank of Australia website:

Monetary policy's principal medium-term objective is to control inflation. In the Statement on the Conduct of Monetary Policy issued in 2007 the Governor and the Treasurer agreed that the *appropriate target for monetary policy is to achieve an inflation rate of 2-3 per cent on average*, over the cycle, which is a rate sufficiently low that it does not materially distort economic decisions in the community. The inflation target is thus the centrepiece of the monetary policy framework.

Since the policy implementation in 1993, actual inflation has been as graphed:

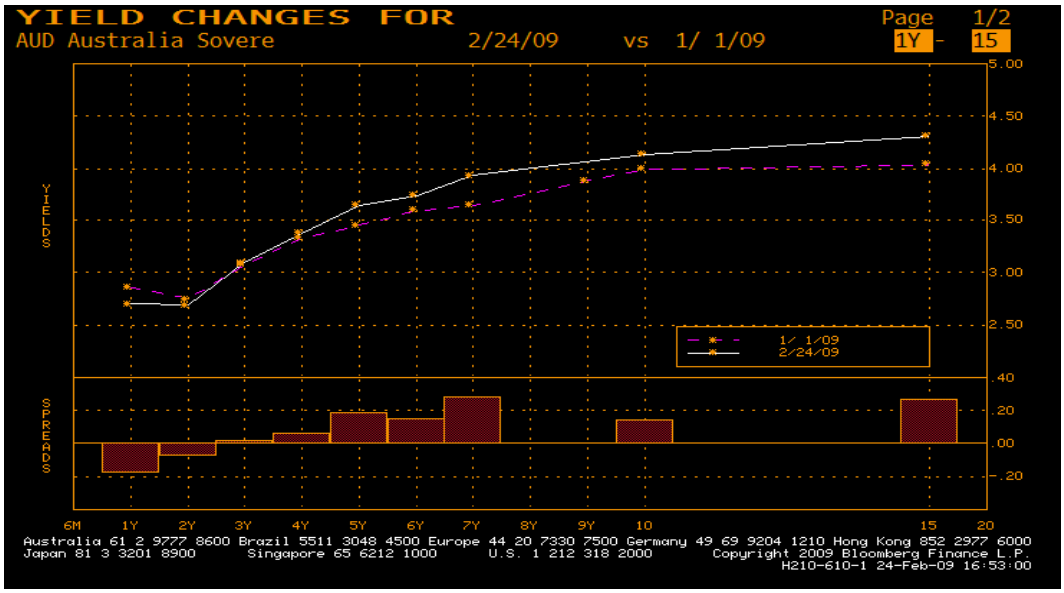


Source: Reserve Bank of Australia, 2009.

The Reserve Bank, with all other things being equal, will tolerate an inflation band of between 2% & 3% per annum and will conduct monetary policy accordingly. Given the nominal market has priced in the 'lower' end of the band, by buying nominal bonds to yields that sit just 2.25% above the ILB yields, it is fair to say that nominal bonds have priced in a forward inflationary outcome that is closer to the bottom than to the top.

It is also fair to say that nominal bonds are becoming expensive relative to inflation linked bonds, for in the long term they are not compensating the owner sufficiently for the possibility that inflation could move towards the top end of the inflation tolerance band that may occur as a function of the Reserve Bank easing monetary policy further.

Further, as evidenced by the following graph, the appetite to buy long (read 2020) nominal bonds at yields approaching or below 4.00%, has been waning since early January 2009. This is despite a monetary policy easing of 1.00% on February 4 and expectations of further easings as priced in by the short end of the yield curve.



This steepening of the yield curve can be justified by the BEI coincident with Fiscal policy announcements by the Federal Government to spend $42billion in 2009 on programs to stimulate economic activity, financed from the issuance of long dated nominal bonds.

It is worth noting that in early February, immediately prior to the last easing in monetary policy; the BEI was at 2.03%. Some of the 'expensiveness' of nominal bonds has been priced out.

Further evidence of forward inflationary expectations climbing is evident in the gold price, which in the last three months has rallied dramatically to climb higher than $US1000 and ounce. In Australian dollar terms this is even higher, given the devaluation of the currency. Gold is traditionally an inflationary hedge and has throughout history proven a resilient and reliable alternative to paper currencies under pressure as a function of fiscal distress. Refer to the following graph.

Summary

Buying ILB's is often a 'relative' decision – one that is taken relative to nominal bonds. In this regard, the relative consideration is:

Do I as an investor believe that inflation will remain lower than 2.25% over the next 10 years? Or do I believe that inflation will remain below 2.25% over the next 10 years, given the magnitude of aggressive monetary policy easings and fiscal pump priming.

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