Assessing Index-Linked Bonds

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Recent increases in interest rates for fixed rate bonds reflect market expectation of prolonged inflation and higher central bank rates to help combat inflation. The rate of inflation has continued to outpace forecasts throughout 2022 and inflation linked instruments are increasingly being sought by investors and considered by issuers.

Index-linked bonds (or "linkers") are designed to help protect investors from inflation. These bonds also provide an alternative form of debt for borrowers that can have certain pricing advantages. The bonds are linked to a specific price index with interest (or coupon) payments made on the outstanding principal amount.

The interest rate of an index-linked bond is set at the start of the repayment schedule. This rate reflects the associated gilt price at the time and the assessed risk of the investment. This rate is then applied to the outstanding principal. The principal is adjusted each year for inflation, as identified in a price index. Repayment amounts therefore change in response to movements in inflation.

Who Issues and Invests in Index-Linked Debt?

Index-linked bonds are mainly issued by sovereign governments but can also be issued by companies and non-commercial organisations. For example local authorities, utility companies, housing associations, and infrastructure companies may consider issuing index-linked debt. These entities typically have a regulated or government related income streams that are linked to inflation in some way.

Index-linked bonds can have various features, such as deflation floors that protect the investor and inflation caps that protect the borrower. With high levels of uncertainty around future levels of inflation, index-linked bonds can help with the diversification of investment portfolios for investors and with the diversification of debt for borrowers.

Many investors do not seek to actively trade index-linked bonds. Instead an investor will typically hold an index-linked bond for its full term in order match the inflation linked income from the bonds to the investor's inflation linked liabilities, such as pension payments. There may be additional pricing benefits for issuers if the bond term and repayment schedule is specifically tailored to meet the needs of a particular investor.

Characteristics and Measures of Inflation

If inflation becomes entrenched then index-linked debt will be increasingly attractive

Once high inflation sets in it can be difficult to reverse. Inflation can become entrenched, particularly if patterns of behaviour from economic agents change. For example, if companies continue take action to defend profit margins and employees continue to take action to defend wages. Investment decisions can also become more short-term because of the expectation of future price volatility

Indexation is linked to a nationally recognised measure of inflation. In the UK this has been the Retail Price Index (RPI). However, from 2030 the measure of inflation will be aligned to the Consumer Price Index including housing costs (CPIH). CPIH is typically a lower measure of inflation compared with RPI.

Recent index linked bonds have been issued on a CPIH basis. Some investors have adjusted the inflation rate used or the interest rate charged in order to compensate for the move to CPIH. The relationship between RPI and CPIH can be volatile and this can add a layer of complexity to analysing index-linked bonds.

Pricing Considerations

In a period of prolonged high inflation, the price of conventional fixed rate bonds is expected to increase. This is because the return from fixed income assets loses value when money loses its purchasing power. On the other hand the return from inflation linked assets maintains its purchasing power. With higher inflation, index-linked bonds should become more attractive compared to fixed rate bonds.

Repayments on index-linked debt during the early years of the term of an index-linked bond can be much lower than for a fixed rate bond. However, repayments for index-linked bonds increase over time because of inflation and therefore repayments towards the back end of the term of an index-linked bond can be much higher than for a fixed rate bond.

In order to compare the relative attractiveness of index-linked debt compared to fixed rate debt, borrowers can assess different repayment schedules based of different inflation assumptions. A net present value (NPV) analysis of the repayment schedules will provide the borrower with a fair degree of transparency between borrowing options.

Bond pricing reflects the pricing of gilts, which are UK government debt instruments. Index-linked bond prices reflect the index-linked gilt price and fixed rate bond prices reflect the fixed gilt price. Differences in prices between these two types of gilts impacts the relative attractiveness of index-linked debt compared to fixed rate debt.

Comparisons can be made between index-linked and fixed rate debt options

The difference in the return (or yield) between index-linked bonds and fixed rate bonds is known as the "breakeven rate". Broadly speaking this rate reflects market expectation of future inflation. The gap between the yields on index-linked and fixed rate bonds is what inflation will have to average over the term of the bond for index-linked bonds to return the same as fixed rate bonds. The pricing of fixed rate bonds reflects an inflation "premium". The pricing of both index-linked and fixed rate bonds also includes a margin for the perceived credit risk of the issuer and any illiquidity risk.

There can be an indexation "lag", which is the time between the point at which inflation is measured and the point at which the inflation adjusted coupon payment is made. This can be a period of several months and means that inflation in the period prior to the coupon payment is not reflected in the bond's returns. This can in part be addressed by more regular coupon payments, for example quarterly rather than semi-annually.

International Comparisons

The UK pioneered the development of index-linked bonds in the 1980s. The UK government is one of the biggest issuers of indexed-linked debt and has one of the most liquid index-linked markets. The market for non-government indexed-linked debt is, however, less liquid.

The design of index-linked debt instruments id different around the world and this can make pricing comparisons difficult. For example, inflation calculations can be based on different pricing indices constructed in different ways in each country.

Conclusions

Index-linked debt can seem to be more complicated than fixed rate debt, but often it is unnecessarily over-complicated when in fact assessing an index-linked debt option can be quite straightforward.

The inflation-linked bond market is small relative to the conventional bond market, and prices can be distorted by a few investors who buy index-linked assets. Pricing comparisons can therefore be quite difficult given the "lumpiness' of the index-linked market.

Inflation forecasts of the past year or so have been proved to be wildly inaccurate. Longer term forecasts can be even more problematic. Investors and borrowers are therefore faced with high levels of uncertainty as to whether an investment will beat inflation. Over recent decades inflation has been extremely low and stable. Conventional fixed rate debt has thrived in this environment.

Inflation forecasts are highly uncertain and index-linked debt can help reduce this uncertainty

Following the Covid pandemic and the associated lockdown policies, inflation has set in across the global economy and has been exacerbated by the war in Ukraine. It still remains highly uncertain as to how high inflation could go to and how long it could last. Index-linked bonds are intended to solve periods of high inflation for investors by linking the principal amount owed to inflation.

Increasing demand from investors for inflation linked products should improve pricing for issuers of index-linked debt. As the market for index-linked debt grows then there should be some smoothing out of the lumpiness of activity in the index-linked market, which will allow for more transparent pricing.