

An introduction to government bonds

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The UK's political uncertainty, the turbulent economic situation across southern Europe and wider questions over nationalities' ability to service their debts have all brought government bonds back into the investment spotlight. Here, we go back to basics on government bonds to examine what they are, how they work and how pension schemes can use them to help meet their investment liabilities.

So what are government bonds?

The basic premise is simple. All governments need money to fund the regular and ad hoc costs associated with running the country. After all, teachers' salaries need to be paid each month and hospitals will always need to be built or upgraded. A lot of this money is raised through taxation but a significant proportion also comes from borrowing from institutions, other governments and private individuals. The Government will write an IOU to its lenders guaranteeing to repay the amount it borrows from them at a fixed point in future while making regular payments to them in the meantime. So essentially a Government bond is an income stream (a series of "coupons") followed by a repayment of money lent (the "principal") at a future date (the "maturity"). These income streams can be fixed, linked to inflation or "float" in line with interest rates.

Safety first?

Lending to governments is normally considered quite a safe bet. Most developed countries have a strong record in repaying their debts (the UK, for example has never defaulted on a loan) as they have the power to raise taxes to ensure lenders' money is repaid. In this way, they are often seen as less risky than the bonds offered by other entities, such as corporations, whose repayments rely on the corporation's profitability and future prospects. In each case, the less likely the chance of repayment, the higher the coupon the government or company will have to offer to entice lenders in.

How are government bonds priced, and what are yield and duration?

Most of the bond market focus is on fixed income bonds, which change price as investment opportunities move. Market participants buy and sell these bonds based on their yield. Yield is the percentage return per year that an investor will achieve by purchasing the bond and holding it until maturity.

When a new bond is issued the coupon is set to match the market yield at the time and the initial price (and hence redemption payment) is usually set at £100. The coupon and principal don't move during the life of the bond, hence the term 'fixed' income.

Over time, however, the price investors would be prepared to pay for this fixed income stream and principal repayment will move considerably as investment opportunities change. Bonds paying a high coupon will trade at a higher price than those with a low coupon. The high coupons are offset by the decline in price as investors are repaid £100 regardless of the price they paid in the secondary market. In this way, the yield, or total return, is very similar for bonds of a similar maturity.

Overall market yields move depending on investment opportunities. In particular, government bonds move up in yield (and down in price) as Bank of England base rate rises or inflation increases. The prices of longer maturity bonds are more volatile as investors have made a longer term commitment to a given yield. The

longer this commitment, or maturity, the larger the price moves today to reflect the associated risk. Bond markets use a measure called duration to reflect this volatility. This measure, given in years, is the key measure of risk for a government bond, telling investors the degree of sensitivity to a change in yield associated with a bond or portfolio. The higher the duration, the higher the sensitivity of the bond to a change in interest rates.

The key rules with government bonds are prices fall as yields rise and prices are more volatile as duration increases.

Who invests in government bonds? What use are they for pension funds?

Government bonds are very useful investments. They provide a known yield (or return) for investors willing to hold until maturity and they generally rise in price when other asset classes are declining. They are also useful for investors with known future liabilities, such as pension funds and insurance companies. These investors know the future payments they will have to make and, by investing in bonds, can ensure these will be met. This strategy is called liability matching. If the liabilities are dependent on inflation then inflation linked bonds, whose coupon and principal payments are linked to inflation, can be held.

There are risks associated with government bonds. Rising inflation, base rate increases and higher global growth will push the yields upwards as investors demand a higher return. Investors who purchased at lower yields could face a loss on their investment if they sell before redemption. If the bonds are held against liabilities, however, the overall portfolio effect should be limited as liabilities will simultaneously decrease in size (higher returns mean it is easier to fulfil future promises, so less money needs to be put aside today).

Active or passive?

With all these moving parts there are plenty of opportunities for active managers to add value. Views can be expressed on subjects ranging from the global economic outlook to small yield differences between individual bonds. Within a particular country there are also opportunities between different types of bonds. For example, an index linked bond can be sold and a fixed income bond purchased when the manager sees falling inflation prospects.

Over the last few years the large amount of government bond supply and ever changing economic conditions have created significant opportunities for active managers; a feature reflected in strong out-performance numbers. As this volatile environment looks likely to continue, a dynamic approach to government bond investment offers pensions schemes the chance to exploit the many opportunities that will be presented.

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