



# Understanding Government Bonds

## A few basics

A government bond – a bond issued by the government of a country – is a loan the state takes out from investors. By buying a bond, you lend money to the country, who will pay interest to you on a regular basis (this payment is called the coupon) until they pay back the borrowed amount at the end (the maturity date).

### Ratings indicate the broad level of risk of the investment

Governments have ratings, which are similar to a person's credit rating. If you lend money to a government with a high rating, it means the chances of them being able to pay it all back are high, so it is a relatively safe way for you to get steady income through the coupons.

To get investors interested in buying their bonds, less well rated governments – those that have a higher risk of not being able to pay everything back - generally pay a higher coupon than those with a higher rating. With the help of a financial advisor, it is up to you as an investor to decide what kind of bond you want to buy, in a trade-off between how much risk you are willing to take and how much money you want the coupon to pay out.

Ratings go from AAA/Aaa<sup>1</sup> at the very top, down through to “junk” (CCC or lower). Bonds with a rating ranging from AAA/Aaa to BBB/Bbb are called “investment grade”, while bonds with any lower rating are called “high yield” (or sub-investment grade) since they pay higher coupons because of the bigger risk they carry.

### How do government bonds work?

For each of its bond issues, the government determines four key defining characteristics:

- The initial (nominal) price of the bond,
- Its lifespan (maturity), which sets the date at which the government will repay the loan,
- The amount and frequency of the coupon payments until then, and
- The total amount of money the state wants to borrow, which determines the number of bonds issued. Each individual bond represents a small proportion of the government's total debt.

If you buy a bond when it is first issued and hold it until it comes to maturity, the variations in its price will not impact you. Provided the country does not default, you will be paid the agreed coupon at the agreed dates until the country reimburses the capital.

However, once a bond has been issued, it can be traded on markets, so its price will go up or down depending on investors' perception of the credit-worthiness of the government, but also depending on interest rates at the time.

### A few definitions



#### Issuer

The government that creates the bonds, by borrowing money from investors against the regular payment of a coupon, until a given date at which it will pay back the full amount borrowed.



#### Coupon

The interest paid to bondholders. This is a set amount, paid out at regular, pre-set intervals. It is paid to investors in addition to the full reimbursement of the capital at the end.



#### Maturity date

The date at which the government will pay back the money (“capital” or “principal”) in to investors



#### Default

When a company or a government cannot pay back its loan or misses an interest (coupon) payment

<sup>1</sup>The three main credit rating agencies, Standard & Poor's (S&P), Fitch and Moody's have subtle differences in their rating designations. Here in the text they are given as “[S&P, Fitch] / [Moody's]”.



## Why interest rates?

Because the coupon is fixed, it means that when interest rates go up, newly issued bonds will pay higher coupons but the older, lower-paying bonds will only find a buyer if they are sold more cheaply. The opposite is true when interest rates go down.

## What is the yield of a bond?

In layman's terms, the yield shows how much additional money (interest) you receive on top of the price you paid. It is a straightforward way to compare the value for money of different bonds at a given date.

The yield is generally expressed as a percentage. At any point in time, it is equal to:  $(\text{coupon payment} / \text{bond price}) \times 100\%$

For example, a bond priced £1,000 and paying a £100 coupon yields  $(£100/£1,000) \times 100\% = 10\%$ .

However, if the interest rate goes up to 12.5%, then to be as competitive as new bonds, this particular bond will need to be sold at a cheaper price, namely £800 instead of £1,000. This is because the coupon amount on a given bond never changes, so it is the price that has to adjust:

$(£100/£800) \times 100\% = 12.5\%$ .

The other way around, if the interest rate goes down to 8.33%, then this bond can be sold at a more expensive price and still provide the same value for money. It can be sold at £1,200 and provide the same yield as newer government bonds:

$(£100/£1,200) \times 100\% = 8.33\%$ .

Therefore, the coupon payment would not be affected.

## The impact of the maturity date

As explained above, the maturity of a bond is its lifespan, i.e. the time between its issuance and its final reimbursement, when it ceases to exist because the government has paid back its loan in full.

As we have seen, bonds are impacted by changes in the interest rate. A bond's interest rates sensitivity is linked to its maturity: the longer the maturity of a bond is, the more sensitive it is to changes in the interest rate.

As always with investments, each investor must find the right balance for them between taking a certain level of risk and getting a certain level of return. Maturity, interest rate movements, and different countries' credit-worthiness will all impact the potential performance of the investment in a government bond.