

Topic 3: Calculating your return

An essential part of evaluating an interest rate security is looking at the return you will make on your investment.

The returns include:

- defined income payments, and
- repayment of face value at maturity.

Some securities convert into ordinary shares instead of repaying face value, but for this discussion about rates of return, we will assume that at maturity you receive the face value in cash.

There are three different rates of return commonly used to evaluate interest rate securities:

- coupon rate
- running yield, and
- yield to maturity.

The first two measures take into account only the income you receive from your interest rate security. Yield to maturity takes into account both income payments and repayment of the security's face value at maturity.

Let's look at these terms in more detail.

Coupon rate

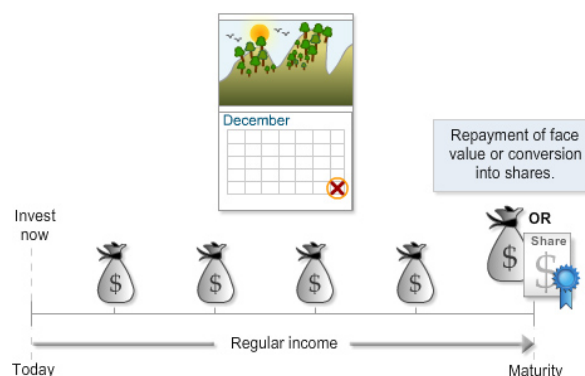
The coupon rate is the income paid annually, expressed as a percentage of the face value of the security. It is set by the issuer, and specified in the prospectus.



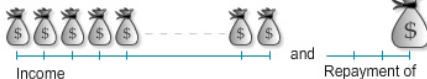
For example, a fixed rate security with a coupon of 8% and a face value of \$100 pays coupons (income) totalling \$8 each year ($\$8/\$100 \times 100\% = 8\%$).

The coupon rate of a fixed rate security is fixed for the life of the security.

The coupon rate of a floating rate security changes as the reference interest rate varies. The coupon at each payment date may be a different amount.

You can find a security's coupon rate on www.asx.com.au or on the issuer's website.



Rate of return	Reflects
Coupon rate	 Income as a percentage of face value
Running yield	 Income as a percentage of market price
Yield to maturity	 Income and Repayment of face value

	Face value	Coupon payments per year	Coupon rate
Security A	\$100	\$9	9%
Security B	\$200	\$16	8%
Security C	\$100	\$7.50	7.5%

Running yield

The running yield is the income paid annually, expressed as a percentage of the market price. As the market price changes, running yield changes.

Assume an interest rate security with a coupon of 8% and a face value of \$100 is trading at \$98:

Running yield = $\$8/\$98 \times 100\% = 8.16\%$.

Once the interest rate security starts trading on ASX, the running yield is a more useful measure of income than the coupon rate, as it is based on the market price, rather than the security's face value.

	Face value	Coupon payments per year	Coupon rate	Current price	Running yield
Security A	\$100	\$9	9%	\$103	8.74%
Security B	\$200	\$16	8%	\$195	8.21%
Security C	\$100	\$7.50	7.5%	\$96	7.81%

Yield to maturity

Yield to maturity is generally regarded as the most important rate of return.

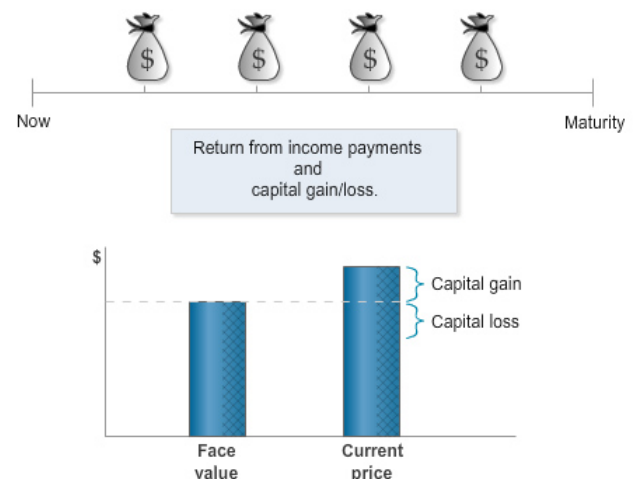
It gives your overall return if you hold the security until maturity, and incorporates:

- your regular income payments, and
- your capital gain/loss - any difference between the price you pay for the security and the face value you will be repaid at maturity.

For a floating rate security, the yield assumes the current income rate applies to maturity.

Yield to maturity is especially relevant if you buy on market, as it takes into account the price you pay. For example, if you purchase a security for less than face value, you will make a capital gain at maturity when you are repaid face value.

Yield to maturity incorporates:



Yield to maturity (continued)

Yield to maturity is the most complete measure of returns if you plan to hold the securities until maturity.

Comparing securities on the basis of coupon rate or running yield does not take into account the return of face value at maturity.

Yield to maturity captures both income payments and capital gain/loss, enabling you

Description	Rate of return
Income as a percentage of market price	Running yield
Income as a percentage of face value	Coupon rate
Return incorporating both income and capital gain/loss	Yield to maturity

to compare securities with different coupons and different prices.

The calculation of yield to maturity is not as simple as the calculation of coupon rate or running yield. You can get the yield to maturity from your broker.

Frequency of payments

Your return is affected by how often you receive your income.

Income is usually paid in arrears, either quarterly or semi-annually (twice a year). 'In arrears' means you receive your payment at the end of the period over which the income is earned.

Fixed rate securities typically pay interest twice a year, floating rate securities pay four times.

All else being equal, the more often you receive income the better. Receiving your income earlier means you can reinvest it sooner to produce more income.

