

Value of a Bond Summary

I. Finding the value of a bond

$$\text{Bond value} = C \times [1 - 1/(1 + r)^t]/r + F/(1 + r)^t$$

where

C = Coupon paid each period

r = Rate per period

t = Number of periods

F = Bond's face value

II. Finding the yield on a bond

Given a bond value, coupon, time to maturity, and face value, it is possible to find the implicit discount rate, or yield to maturity, by trial and error only. To do this, try different discount rates in the formula above until the calculated bond value equals the given bond value. Remember that increasing the rate *decreases* the bond value.