Chapter 2

Pricing of Bonds

Time Value of Money
   Future Value of Single Amount
   Present Value of Single Amount
   More Frequent Compounding
   Future Value of an Annuity
   Present Value of an Annuity

Pricing a Bond
   Coupon Payments
   Face/Maturity Value

Pricing Zero-Coupon Bonds

Bond Price/Yield Relationship
   Time Path of Bond Price as it Approaches Maturity

Assumptions in Bond Pricing
   Next Coupon is exactly six months away
   Cash flows are known
   Appropriate required yield can be determined
   One rate is used to discount all cash flows

Next Coupon Less than Six Month Away

\[ P = \sum_{t=1}^{n} \left( \frac{C}{(1 + r)^v(1 + r)^{t-1}} + \frac{M}{(1 + r)^v(1 + r)^{n-1}} \right) \]

where: \( v = \frac{\text{days between settlement and next coupon}}{\text{days in six - month period}} \)
Cash Flows Not Known
Callable

Determining Appropriate Required Yield
Decomposing required yield

One Discount Rate Applicable to All Cash Flows
Bond’s cash flows can be viewed as a series of zero-coupon bonds

Pricing a Floating-Rate and Inverse-Floating-Rate Bond
Reference rate
Spread
Cap
Floor

Price Quotes
Percent of Face Value

Accrued Interest
Full Price or Dirty Price - agreed price plus accrued interest
Clean Price - without accrued interest