Basic Features of Bond Structures

Repayment / Pre-payment Provisions

Basics of Floating Rate Bonds

Indenture: Agreement containing the terms under which money is borrowed.

Term to maturity: Length of time until loan contract or agreement expires.

Par value: Amount borrower promises to pay on or before maturity date of the issue.

Coupon rate: When multiplied by par value, gives amount of interest to be paid each period.

Zero-coupon bonds: No interest; bonds are sold at a deep discount to their par values.

To derive a bond’s value using spot rates, discount the individual cash flows by benchmark rate for each flow’s time horizon. Sum of the PV of the cash flow is bond’s current value. This value is the arbitrage free value.

Q. Given the following spot rates calculate the value of 3 year, 6% treasury bond?

1 year – 5%  
2 year – 5.5%  
3 year – 6%

Ans. 
\[
\text{Value} = \frac{6}{(1+5\%)^3} + \frac{6}{(1+5.5\%)^2} + \frac{106}{(1+6\%)^3} = 100.1046
\]
**Basic Features of Bond Structures**

- **Bullet bonds**: Lump sum at maturity, pays entire principal.
- **Serial bonds**: Pay-off principal through series of payments over time.
- **Amortizing securities**: Periodic principal & interest payments.
- **Sinking fund provisions**: Bond retirement through pre-defined principal payments over life of the issue.
- **Call provisions**: Issuer has right (but not obligation) to retire all or part of issue prior to maturity. Issuer owns option to call the bonds away from investor.
- **Non-refundable bonds**: Prohibit premature retirement of an issue from proceeds of a lower coupon bond. Bonds that carry these provisions can be freely callable but nonrefundable.
These securities pay variable rate of interest. Common procedure for setting coupon rates on floating rate bonds starts with reference rate; then adds/subtracts a stated spread.