

# Spring Semester 2011

## **“Financial Analysis & Portfolio Management (Fin 630)”**

Assignment No. 02

Total Marks: 20

### **Question #01**

Regional textile issued a 10-year Rs. 500 par value bond at 12% coupon rate (assuming semiannual interest payments). Required rate of return for such investment is 10%.

Pesco textile issued a 15-year Rs. 500 par value bond at 16% coupon rate (assuming semiannual interest payments). Required rate of return for such investment is 12%.

**You are required to calculate:**

- Coupon payment in each case
- No. of coupon payments in each case
- Value of each bond

### **Question #02**

Suppose you have following stocks in your portfolio:

1. Stock A which was purchased 11 months ago for Rs. 750, currently selling for Rs. 790 and has paid Rs.20 dividend.
2. Stock B which was purchased 5 months ago for Rs. 900, currently selling for Rs. 910 and has paid Rs.15 dividend.

**You are required to calculate:**

1. Holding period return of stock A
2. Holding period return of stock B
3. Annual return for both stocks

### **Note:**

**Show complete working (formula and calculations) for each part of questions.**

## Solution:

### Question #01

#### **Regional Textiles**

$$\text{Coupon payment } C_t = (0.12 \times 500) / 2 = 30$$

$$\text{No. of coupon payments } n = 10 \times 2 = 20$$

$$r = 10 / 2 = 5\%$$

$$\begin{aligned} P_0 &= \sum C_t / (1+r/2)^t + \text{Par} / (1+r/2)^n \\ &= \text{Rs. } 30 \times \text{Annuity factor } (5\%, 20) + \text{Rs. } 500 \times \text{PV factor } (5\%, 20) \\ &= \text{Rs. } 30 \{ 1 - 1 / (1+0.05)^{20} / 0.05 \} + \text{Rs. } 500 / (1+0.05)^{20} \\ &= \text{Rs. } 373.86 + \text{Rs. } 188.44 \\ &= \text{Rs. } 562.30 \end{aligned}$$

#### **Pesco textile**

$$C_t = .16 \times 500 / 2 = 40$$

$$n = 15 \times 2 = 30$$

$$r = 12 / 2 = 6\%$$

$$\begin{aligned} P_0 &= \sum C_t / (1+r/2)^t + \text{Par} / (1+r/2)^n \\ &= \text{Rs. } 40 \times \text{Annuity factor } (6\%, 30) + \text{Rs. } 500 \times \text{PV factor } (6\%, 30) \\ &= \text{Rs. } 40 \{ 1 - 1 / (1+0.06)^{30} / 0.06 \} + \text{Rs. } 500 / (1+0.06)^{30} \\ &= \text{Rs. } 550.59 + \text{Rs. } 87.055 \\ &= \text{Rs. } 637.64 \end{aligned}$$

### Question #02

$$\text{Holding period return for Stock A} = \text{Dividend} + (\text{PE} - \text{PB}) / \text{PB}$$

$$= 20 + (790 - 750) / 750$$

$$= 0.08 \times 100 = 8\%$$

$$\text{Holding period return for Stock B} = \text{Dividend} + (\text{PE} - \text{PB}) / \text{PB}$$

$$= 15 + (910 - 900) / 900$$

$$= 0.0277 \times 100 = 2.77\%$$

$$\text{Annual return for Stock A} = 8 \times 12 / 11 = 8.72\%$$

$$\text{Annual return for Stock B} = 2.77 \times 12 / 5 = 6.65\%$$