

Assignment No 1

Fin 722 Corporate Finance solved assignment enjoy

Solved BY VCHOWK friends

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But your retyping will save you from plagiarism check

Case A

(a)

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Answer:

Present values of both bonds are same, as it show in working if PV of principal increase then PV of Annuity will decrease with the same percentage but the there is no change in bond's value.

Market interest rate and coupon rate are same so that bond will be sold at Par value.

Working 1.

Blue Beverages

$$PV = FV / (1+r)^t$$

PV of principal =

$$1000 / (1.045)^{10}$$

$$= 643.9277$$

$$PV \text{ of ordinary Annuity} = C * [1 - (1+i)^{-n} / i]$$

$$PV = 45x[1 - (1.045)^{-10} / 0.045]$$

$$= 356.0723$$

Total PV of Bond

$$= 1000$$

Green Beverages

$$PV = FV / (1+r)^t$$

$$PV \text{ of Principal} = 1000 / (1.045)^{30}$$

$$= 267$$

$$PV \text{ of ordinary Annuity} = Cx[1-(1+i)^{-n}/i]$$

$$= 733$$

$$\text{Total PV of bond} = 267 + 733$$

$$= 1000$$

Case A (b)

Determine the bond price for each beverage's bonds at the market's new required rate of return. Which bond's price increased the most and by how much?

Solution:

So, the result is the price of Green beverages shows increase the most in price Rs. 1086.46 while blue beverages shows less which is 1040.51.

Blue Beverages:

Interest paid semi annually

$$\text{Coupon rate} = 9\%, 9\%/2 = 4.5 \%$$

$$\text{Coupon payment} = 1000 * 0.045 = 45$$

Yield to maturity = 8 %,

$$= 4 \%$$

Bond price of blue beverage can be finding by putting the values in the given formula

$$\text{Bond price} = C * [1 - 1/(1+i)^n] / i + M / (1+i)^n$$

Bond price of blue beverage =

$$= 45 * 8.11 + 675.56$$

Bond price of blue beverage = 1040.51

Green Beverage

As interest is paid semi annually

Par value = 1000

Time to maturity = $15 * 2 = 30$ years

Coupon rate = $9 \% / 2 = 4.5 \%$

Coupon payment = $1000 * 0.045 = 45$

Yield = $8 \% / 2 = 4 \%$

Bond price of green beverage can also be find by putting the values in the same formula

$$\text{Bond price} = C * [1 - 1/(1+i)^n] / I + M / (1 + I)^n$$

Bond price of green beverage =

$$= 45 * 17.29 + 308.3$$

Bond price of green beverage = 1086.46

Case B

What value should you place on a share of this stock if your nominal annual required rate of return is 16%?

Solution:

Dividend paid = Rs.1.60

Required Return = 16 %

Growth rate till 4 years = 20%

Growth rate after 4 years = 13 %

Value of stock after 4 years =?

$$P_9 = D_9 \times (1+g) / (r - g)$$

$$= 5.78 \times (1.07) / (0.16 - 0.07)$$

$$= 5.78 / 0.09 = 68.71778$$

$$\text{Value of Stock} = [D_1 / (1+r)] + [D_2 / (1+r)^2] + [D_3 / (1+r)^3] + [D_4 / (1+r)^4] + [D_5 / (1+r)^5] + [D_6 / (1+r)^6] + [D_7 / (1+r)^7] + [D_8 / (1+r)^8] + [D_9 / (1+r)^9 + P_9 / (1+r)^9]$$

$$= 33.44441$$

Dividend Working

$$\text{Div 1} = 1.6 \times (1.20) = 1.92$$

$$\text{Div 2} = 1.92 \times (1.20) = 2.30$$

So on so forth

$$\text{Div 9} = 5.40 \times (1.20) = 5.78$$

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