Investition und Finanzierung

Tutorium Nr. 4

Bei Fragen, Anmerkungen oder Kritik:
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Aufgabe 27 (5A1)

Definition of a Bond:

What are the main characteristics of a bond? Provide examples of different types of bond in terms of coupons, maturity and face value.

Aufgabe 29 (5A10)

Valuing Bond:

In March 2009 the German freight company Deutsche Bahn issued a 10-year bond with face value of €1,000 and paying an annual coupon of 4.875 per cent. What is the price of the bond if the yield to maturity (YTM) is

a) 4 per cent?
b) 5 per cent?
c) 10 per cent?

Yield to maturity = Rückzahlungsrendite

Zu Aufgabe 29 (5A10)

If the yield to maturity for a bond is less than the bond's coupon rate, then the (clean) market value of the bond is greater than the par value (and vice versa).

If a bond's coupon rate is less than its YTM, then the bond is selling at a discount.

If a bond's coupon rate is more than its YTM, then the bond is selling at a premium.

If a bond's coupon rate is equal to its YTM, then the bond is selling at par.

Zu Aufgabe 29 (5A10)

Textmasterformate durch Klicken bearbeiten
- Zweite Ebene
- Dritte Ebene
  - Vierte Ebene
    - Fünfte Ebene

$$PV = C \cdot A_r^T + \frac{F}{(1+r)^T}$$

where A_r^T is the annuity factor for an annuity of €1 per period for T periods at an interest rate per period of r

$$A_r^T = C\left[\frac{1 - \frac{1}{(1+r)^T}}{r}\right]$$

Aufgabe 30 (5A12)

Share Values:

In 2009 DaimlerChrysler had just paid a dividend of €2 per share on its equity. The dividends are expected to grow at a constant rate of 5 per cent per year indefinitely.

If investors require a 11 per cent return on DaimlerChrysler´s equity, what is the current price?

What will the price be in three years? In 15 years?

Zu Aufgabe 30 (5A12)

Textmasterformate durch Klicken bearbeiten

- Zweite Ebene
  - Dritte Ebene
    - Vierte Ebene
      - Fünfte Ebene

Zero growth: $P_0 = \frac{D_1}{r}$

Constant growth: $P_0 = \frac{D_1}{r - g}$

Aufgabe 31 (5A13)

Share Values:

The next dividend payment from French health food firm Danone will be €1.12 per share. The dividends are anticipated to maintain a 5 per cent growth rate for ever. If Danone shares currently sell for €35.00, what is the required return?

Zu Aufgabe 31 (5A13)

Textmasterformate durch Klicken bearbeiten

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  - Dritte Ebene
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Zero growth: $P_0 = \frac{D_1}{r}$

Constant growth: $P_0 = \frac{D_1}{r - g}$

Aufgabe 33 (5A18)

Bond return: A six-year government bond makes annual coupon payments of 5 per cent and offers a yield of 3 per cent annually compounded. Suppose that one year later the bond still yields 3 per cent.

What return has the bondholder earned over the 12-month period?

Now suppose that the bond yields 2 per cent at the end of the year. What return would the bondholder earn in this case?

Zu Aufgabe 33 (5A18)

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$$PV = C \cdot A_r^T + \frac{F}{(1+r)^T}$$

where A_r^T is the annuity factor for an annuity of €1 per period for T periods at an interest rate per period of r

$$A_r^T = C\left[\frac{1 - \frac{1}{(1+r)^T}}{r}\right]$$

Lösung zu Aufgabe 33 (5A18)

The return on the bond is

$$[(P1 + C)/P0] - 1$$

Aufgabe 34 (5A19)

Non-Constant Growth:

Dylan Bearings is a young start-up company. No dividends will be paid on the shares over the next nine years because the firm needs to plough back its earnings to fuel growth. The company will pay an £8 per share dividend in 10 years and will increase the dividend by 6 per cent per year thereafter.

If the required return is 13 per cent, what is the current share price?