

Present Values	t ₁	t ₂	t ₃	t ₄	t ₅	t ₆	t ₇	t ₈	t ₉	t ₁₀
PVIF _{0.11,t}	0.901	0.812	0.731	0.659	0.593	0.535	0.482	0.434	0.391	0.352
PVIF _{0.13,t}	0.885	0.783	0.693	0.613	0.543	0.480	0.425	0.376	0.333	0.295

(RTP November – 2019)

Solution:

(1) Yield of Bond (YTM)

$$11\% = (\text{₹ } 100 \times 5.580) + (1,000 \times 0.352) = \text{₹ } 941$$

$$13\% = (\text{₹ } 100 \times 5.426) + (1,000 \times 0.295) = \text{₹ } 887.60$$

2%		₹ 103.40
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$$\text{YTM} = 11 + \left(\frac{2}{103.40} \times 91 \right)$$

$$\text{Spread of yield} = 12.76 - 11.80$$

$$= 0.96\%$$

(2) COLLABLE BOND OR BOND REFUNDING

Question – 27

M/s Trans India Ltd. is contemplating calling ₹ 3 crores of 30 years, ₹ 1,000 bond issued 5 years ago with a coupon interest rate of 14 per cent. The bonds have a call price of ₹ 1,140 and had initially collected proceeds of ₹ 2.91 crores due to a discount of ₹ 30 per bond. The initial floating cost was ₹ 3,60,000. The Company intends to sell ₹ 3 crores of 12 per cent coupon rate, 25 years bonds to raise funds for retiring the old bonds. It proposes to sell the new bonds at their par value of ₹ 1,000. The estimated floatation cost is ₹ 4,00,000. The company is paying 40% tax and its after tax cost of debt is 8 per cent. As the new bonds must first be sold and their proceeds, then used to retire old bonds, the company expects a two months period of overlapping interest during which interest must be paid on both the old and new bonds. What is the feasibility of refunding bonds?

Solution:

Incremental Cash Outflows

$$\text{Repayment of old bond (30,000 Bonds} \times 1,140) = \text{₹ } 3,42,00,000$$

Issue of new bonds	= (₹ 3,00,00,000)
Floataion cost of new bonds	= ₹ 4,00,000
Tax savings on call premium (42,00,000×40%)	= (16,80,000)
Tax saving on unamortized expenses of old bonds	
$\left[\frac{9,60,000 + 3,00,000}{30} \times 25 \right] = 10,50,000 \times 40\%$	= (4,20,000)
Interest on overlapping period [After Tax]	
$\left(3,00,00,000 \times 14\% \times \frac{2}{12} \right) (1 - 0.40)$	= 4,20,000
Incremented cash outflows	<u>= ₹ 29,20,000</u>

Incremented Cash Inflows

	Old (14%)	New (12%)
Interest on bonds [After Tax]	$(3,00,00,000 \times 14\%) (1-0.40)$ = 25,20,000	$(3,00,00,000 \times 12\%)$ $(1 - 0.40) = 21,60,000$
Tax savings on floataion cost	$\left(\frac{12,60,000}{30} \times 40\% \right) (16,800)$	$\left(\frac{4,00,000}{25} \right) \times 40\%$ (6,400)
	25,03,200	21,53,600

Incremented Cash Inflows (25,03,200 – 21,53,600) = 3,49,600 p.a.

PVCI	= 3,49,600 × PVAF, 8%, 25
	= 3,49,600 × 10.675 = ₹ 37,31,980
(-) PVCO	= ₹ 29,20,000
NPV	<u>= ₹ 8,11,980</u>

Since NPV is positive, hence bond should be refunded.

Question – 28

ABC Ltd. has ₹ 300 million, 12 per cent bonds outstanding with six years remaining to maturity. Since interest rates are falling, ABC Ltd. is contemplating of refunding these bonds with a ₹ 300 million issue of 6 year bonds carrying a coupon rate of 10 per cent. Issue cost of the new bond will be ₹ 6 million and the call premium is 4 per cent. ₹ 9 million being the

unamortized portion of issue cost of old bonds can be written off no sooner the old bonds are called off. Marginal tax rate of ABC Ltd. is 30 per cent. You are required to analyze the bond refunding decision.

(SM TYK – 25 & RTP May – 2020)

Solution:

Incremental Cash Outflows (Millions)

Repayment of old bond (₹ 300 million × 1.04)	= ₹ 312
Issue of new bonds	= (₹ 300)
Issue cost of new bonds	= ₹ 6
Tax savings on call premium (300 × 4% × 30%)	= (₹ 3.60)
Tax saving on unamortized expenses of old bonds (9 × 30%)	= (₹ 2.70)
Incremental cash outflows	<u>= 11.70 Million</u>

Incremented Cash Flows

	Old (12%)	New (10%)
Interest [After Tax]	(300 × 12%) (1 – 0.30) = 25.20	(300 × 10%) (1 – 0.30) = 21.00
Tax Savings on Amortization expenses	($\frac{9}{6} \times 30\%$) (0.45)	($\frac{6}{6} \times 30\%$) (0.30)
	24.75	20.70

Incremented cash Inflows 24.75 – 20.70 = 4.05 Million p.a.

$$K_d = I (1 - t)$$

$$= 10 (1 - 0.30)$$

$$= 7\%$$

$$PVC I = 4.05 \times PVA F, 6, 7\%$$

$$= 4.05 \times 4.767 = 19.31$$

$$(-) PVCO = 11.70$$

$$NPV = \underline{\underline{7.61}}$$

Since NPV is positive, hence bond should be refunded.

(4) EXTENDABLE BONDS

QUESTION – 29

Pet feed plc has outstanding, a high yield Bond with following features:

Face Value	£ 10,000
Coupon	10%
Maturity Period	6 Years
Special Feature	Company can extend the life of Bond to 12 years.

Presently the interest rate on equivalent Bond is 8%.

- (a) If an investor expects that interest will be 8%, six years from now then how much he should pay for this bond now.
- (b) Now suppose, on the basis of that expectation, he invests in the Bond, but interest rate turns out to be 12%, six years from now, then what will be his potential loss/ gain if the company extends the life of Bond for another 6 years.

Solution:

Investor expects that after 6 years, interest rate will be 8%. In this situation, company will not extend [Market में कम Rate पर company को पैसे मिल जाएगा]

$$\begin{aligned} \text{PVCI} &= (\text{£ } 1,000 \times \text{PVAF}, 8\%, 6) + (\text{£ } 1,000 \times \text{PVF}, 8\%, 6) \\ &= (\text{£ } 1,000 \times 4.623) + (\text{£ } 1,000 \times 0.630) \\ &= \text{£ } 10,923 \end{aligned}$$

Value of bond at the end of 6th year if yield (12%)

$$\begin{aligned} &= (\text{£ } 1,000 \times 4.111) + (\text{£ } 1,000 \times 0.507) \\ &= \text{£ } 9,181 \end{aligned}$$

$$\begin{aligned} \text{Expected loss} &= \text{£ } 10,923 - \text{£ } 9,181 \\ &= \text{£ } 1,742 \end{aligned}$$

(V) YIELD STRUCTURE OR TERM STRUCTURE OF INTEREST RATE

Question – 30

From the following data for Government securities, calculate the forward rates:

Face Value (₹)	Interest Rate	Maturity (Year)	Current Price (₹)
1,00,000	0%	1	91,500
1,00,000	10%	2	98,500
1,00,000	10.5%	3	99,000

Solution:

1 Year Rate

$$91,500 = \frac{1,00,000}{(1 + r)^1}$$

$$r = \left(\frac{1,00,000}{91,500} - 1 \right) \times 100 = 9.29\%$$

1 Year FR after 1 Year

$$98,500 = \frac{10,000}{(1.0929)} + \frac{1,10,000}{(1.0929)(1 + r)}$$

$$r = 12.65\%$$

1 Year FR after 2 Years

$$99,000 = \frac{10,500}{1.0929} + \frac{10,500}{(1.0929)(1.1265)} + \frac{1,10,500}{(1.0929)(1.1265)(1 + r)}$$

$$r = 11\% \text{ p.a.}$$

Question – 31

ABC Ltd. issued 9%, 5 year bonds of ₹ 1,000/- each having a maturity of 3 years. The present rate of interest is 12% for one year tenure. It is expected that Forward rate of interest for one year tenure is going to fall by 75 basis points and further by 50 basis points for every next year in further for the same tenure. This bond has a beta value of 1.02 and is more popular in the market due to less credit risk.

Calculate:

- (i) Intrinsic value of bond.

(ii) Expected price of bond in the market.

Solution:

(i) Forward Rate

$$\begin{aligned}
 1 \text{ year} &= 12\% \\
 2^{\text{nd}} \text{ Year} &= 12 - 0.75 = 11.25\% \\
 3^{\text{rd}} \text{ year} &= 11.25 - 0.5 = 10.75\%
 \end{aligned}$$

$$\begin{aligned}
 IV_0 &= \frac{\text{₹ } 90}{1.12} + \frac{\text{₹ } 90}{(1.12)(1.1125)} + \frac{\text{₹ } 1,090}{(1.12)(1.1125)(1.1075)} \\
 &= \text{₹ } 942.47
 \end{aligned}$$

(ii) Expected Price of Bond

$$\begin{aligned}
 &= \text{₹ } 942.47 \times 1.02 \\
 &= 961.32
 \end{aligned}$$

Question – 32

ABC Ltd. wants to issue 9% Bonds redeemable in 5 years at its face value of ₹ 1,000 each. The annual spot yield curve for similar risk class of Bond is as follows:

Year	Interest Rate
1	12%
2	11.62%
3	11.33%
4	11.06%
5	10.80%

- (i) Evaluate the expected market price of the Bond if it has a Beta value of 1.10 due to its popularity because of lesser risk.
- (ii) Interpret the nature of the above yield curve and reasons for the same.

Note: Use PV Factors upto 4 decimal points and value in ₹ upto 2 decimal points.

(MTP April – 2021)

Solution:

(i) Market price

$$= \frac{₹ 90}{(1.12)^1} + \frac{₹ 90}{(1.1162)^2} + \frac{₹ 90}{(1.1133)^3} + \frac{₹ 90}{(1.1106)^4} + \frac{₹ 1,090}{(1.1080)^5}$$

$$= ₹ 929.70$$

$$\text{Expected Price} = ₹ 929.70 \times 1.10$$

$$= ₹ 1,022.67$$

(ii) Inverted yield curve due to upcoming recession.

Question – 33

The following is the Yield structure of AAA rated debenture:

Period	Yield (%)
3 Months	8.5%
6 Months	9.25
1 Year	10.50
2 Years	11.25
3 Years and above	12.00

- (i) Based on the expectation theory calculate the implicit one-year forward rates in year 2 and year 3.
- (ii) If the interest rate increases by 50 basis points, what will be the percentage change in the price of the bond having a maturity of 5 years? Assume that the bond is fairly priced at the moment at ₹ 1,000.

Solution:

(i) Forward Rate

1 year FR in year 2

$$= \frac{(1.1125)^2}{1.1050} = 12\%$$

1 year FR in year 3

$$= \left[\frac{(1.12)^3}{(1.1125)^2} - 1 \right] \times 100 = 13.52\%$$

(ii) R.V. = $1,000 (1.12)^5 = 1,762.34$
 If yield (12 + 0.5) = 12.5%

$$= \frac{1762.34}{(1.125)^5} = ₹ 977.97$$

% Decrease in Bond Price

$$= \frac{1,000 - 977.97}{1,000} \times 100 = 2.20\%$$

Question – 34

Following are the yields on Zero Coupon Bonds (ZCB) having a face value of ₹ 1,000 :

Maturity (Years)	Yield to Maturity (YTM)
1	10%
2	11%
3	12%

Assume that the term structure of interest rate will remain the same.

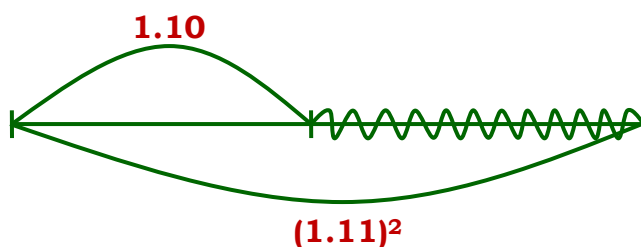
You are required to

- (i) Calculate the implied one year forward rates
- (ii) Expected Yield to Maturity and prices of one year and two year Zero Coupon bonds at the end of the first year.

(Exam January – 2021) (4 Marks)

Solution:

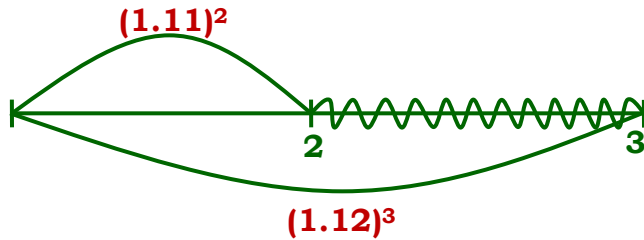
- (i) **1 year FR after 1 year**



$$= \left[\frac{(1.11)^2}{1.10} - 1 \right] \times 100$$

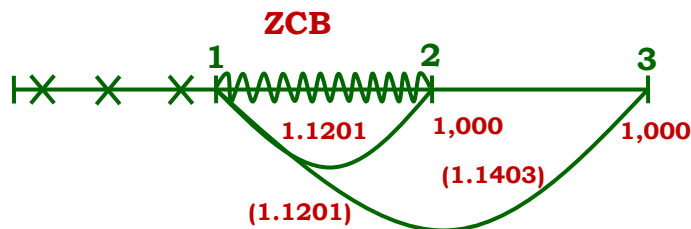
$$= 12.01\%$$

(ii) 1 year FR after 2 years



$$= \left[\frac{(1.12)^3}{(1.11)^2} - 1 \right] \times 100$$

$$= 14.03\%$$



1 year ZCB

Price at the end of year 1

$$= \frac{\text{₹ } 1,000}{1.1201}$$

$$= \text{₹ } 892.78$$

Expected yield = 12.01%

1 year ZCB

$$\text{Price} = \frac{\text{₹ } 1,000}{(1.1403)(1.1201)}$$

$$= 782.93$$

$$\begin{aligned}
 &= 782.93 (1 + r)^2 \\
 &= 1,000 \\
 &= \left(\frac{\text{₹ } 1,000}{782.93} \right)^{1/2} \\
 &= 13.02\%
 \end{aligned}$$

DIVIDEND GROWTH MODEL OR, DIVIDEND DISCOUNT MODEL OR, GORDEN'S MODEL

Question – 35

A company has a book value per share of ₹ 137.80. Its return on equity is 15% and it follows a policy of retaining 60% of its earnings. If the Opportunity Cost of Capital is 18%, compute is the price of the share today using both Dividend Growth Model and Walter's Model.

(SM TYK – 01)

Solution:

$$\begin{aligned}
 \text{BVPS} &= 137.80 \\
 \text{EPS} &= 137.80 \times 15\% \\
 &= 20.67 \text{ [Expected EPS]} \\
 D_1 &= 20.67 \times 40\% \\
 &= \text{₹ } 8.268 \\
 g &= b \times r \\
 &= 0.60 \times 0.15 = 0.09
 \end{aligned}$$

Gordon's Model

$$\begin{aligned}
 P_0 &= \frac{D_1}{K_e - g} \\
 &= \frac{8.268}{0.18 - 0.09} \\
 &= \text{₹ } 91.87
 \end{aligned}$$

Walter's Model

$$P/E = \frac{MPS}{EPS}$$

No Growth Model

$$K_e = \frac{EPS}{MPS}$$

$$K_e = \frac{EPS}{EPS \times P/E}$$

$$K_e = \frac{1}{P/E \text{ Ratio}}$$

$$P_0 = \frac{8.268 + (20.67 - 8.268) \frac{0.15}{0.18}}{0.18}$$

$$= ₹ 103.35$$

Question – 36

ABC Ltd. has been maintaining a growth rate of 10 percent in dividends. The company has paid dividend @ ₹3 per share. The rate of return on market portfolio is 12 percent and the risk free rate of return in the market has been observed as 8 percent. The Beta co-efficient of company's share is 1.5.

You are required to calculate the expected rate of return on company's shares as per CAPM model and equilibrium price per share by dividend growth model.

(SM TYK – 08)

Solution:

CAPM Equation

$$K_e = R_f + (R_m - R_f) \beta$$

$$= 8 + (12 - 8) 1.5$$

$$= 14\%$$

EQUILIBRIUM PRICE

$$\begin{aligned} P_0 &= \frac{D_1}{K_e - g} \\ &= \frac{3 (1.10)}{0.14 - 0.10} \\ &= ₹ 82.50 \end{aligned}$$

Question – 37

A Company pays a dividend of ₹ 2.00 per share with a growth rate of 7%. The risk-free rate is 9% and the market rate of return is 13%. The Company has a beta factor of 1.50. However, due to a decision of the Finance Manager, beta is likely to increase to 1.75. Find out the present as well as the likely value of the share after the decision.

(SM TYK – 09)

Solution:**Present Value**

$$\begin{aligned} K_e &= R_f + (R_m - R_f) \beta \\ &= 9 + (13 - 9) 1.5 \\ &= 15\% \end{aligned}$$

$$\begin{aligned} P_0 &= \frac{D_1}{K_e - g} \\ &= \frac{2 (1.07)}{0.15 - 0.07} \\ &= ₹ 26.75 \end{aligned}$$

Likely Value of Shares

$$\begin{aligned} K_e &= R_f + (R_m - R_f) \beta \\ &= 9 + (13 - 9) 1.75 \\ &= 16\% \end{aligned}$$

$$P_0 = \frac{D_1}{K_e - g}$$

$$= \frac{2 (1.07)}{0.16 - 0.07}$$

$$= ₹ 23.78$$

Question – 38

Shares of Voyage Ltd. are being quoted at a price-earning ratio of 8 times. The company retains 45% of its earnings which are ₹ 5 per share.

You are required to compute

- (1) The cost of equity to the company if the market expects a growth rate of 15% p.a.
- (2) If the anticipated growth rate is 16% per annum, calculate the indicative market price with the same cost of capital.
- (3) If the company's cost of capital is 20% p.a. & the anticipated growth rate is 19% p.a., calculate the market price per share.

(SM TYK – 11)

Solution:

(1) Cost of Equity

$$\begin{aligned} \text{Retention Ratio (b)} &= 45\% \\ \text{EPS} &= \frac{5}{45\%} = ₹ 11.11 \\ D_1 &= ₹ 11.11 - ₹ 5 = ₹ 6.11 \\ P_0 \text{ (MPS)} &= \text{EPS} \times P/E \\ &= 11.11 \times 8 = 88.88 \\ K_e &= \frac{D_1}{P_0} + g \\ &= \frac{6.11}{88.88} + 0.15 \\ &= 21.87\% \end{aligned}$$

(2) Market Price

$$P_0 = \frac{D_1}{K_e - g} + g$$

$$= \frac{6.11}{0.2187 - 0.16} = ₹ 104.09$$

(3) Market Price

$$P_0 = \frac{D_1}{K_e - g} + g$$

$$= \frac{6.11}{0.20 - 0.19} = ₹ 611$$

Question – 39

M/s X Ltd. has paid a dividend of ₹ 2.5 per share on a face value of ₹ 10 in the financial year ending on 31st March, 2009. The details are as follows:

Current market price of share	₹ 60
Growth rate of earnings and dividends	10%
Beta of share	0.75
Average market return	15%
Risk free rate of return	9%

Calculate the intrinsic value of the share.

(SM TYK – 13)

Solution:

$$K_e = R_f + (R_m - R_f) \beta$$

$$= 9 + (15 - 9) 0.75$$

$$= 13.5\%$$

$$P_0 = \frac{D_1}{K_e - g}$$

$$= \frac{2.5 (1.10)}{0.135 - 0.10}$$

$$= ₹ 78.57$$

Question – 40

A company has an EPS of ₹ 2.5 for the last year and the DPS of ₹ 1. The earnings is expected to grow at 2% a year in long run. Currently it is trading at 7 times its earnings. If the required rate of return is 14%, compute the following:

- (i) An estimate of the P/E ratio using Gordon growth model.
- (ii) The Long-term growth rate implied by the current P/E ratio.

(MTP March – 2021)

Solution:

(i) Implicit P/E Ratio

$$P_0 = \frac{D_1}{K_e - g}$$

$$= \frac{1 (1.02)}{0.14 - 0.02} = ₹ 8.50$$

$$P/E = \frac{MPS}{EPS} = \frac{8.50}{2.50} = 3.4 \text{ times}$$

(ii) Implicit Growth Rate

$$MPS (P_0) = EPS \times P/E$$

$$= 2.50 \times 7 = 17.50$$

$$17.50 = \frac{1 (1 + g)}{0.14 - g} = ₹ 8.50$$

$$2.45 - 17.50 g = 1 + 1g$$

$$g = 7.84\%$$

Question – 41

Following are the details of X Ltd. and Y Ltd.:

Particulars	X Ltd.	Y Ltd.
Dividend per Share	₹ 4	₹ 4
Growth Rate	10%	10%
Beta	0.9	1.2
Current Market Price per Share	₹ 150	₹ 70

Other Information:

Risk Free Rate of Return	7%
Market Rate of Return	14%

- (i) Calculate the price of shares of both the companies.
- (ii) Write the comment on the valuation on the basis of price calculated and current market price.
- (iii) As an investor what course of action should be followed?

(Exam December – 2021) (8 Marks)

Solution:

(i) Calculation of Prices of Shares of both Companies

	X Ltd.	Y Ltd.
Beta	0.9	1.20
Cost of Equity using CAPM	$7\% + 0.9[14\% - 7\%]$ = 13.30%	$7\% + 1.20 [14\% - 7\%]$ = 15.40%
Growth Rate	10%	10%
Price of Share	$\frac{4 \times 1.10}{0.133 - 0.10} = \frac{4.40}{0.033}$ = ₹ 133.33	$\frac{4 \times 1.10}{0.154 - 0.10} = \frac{4.40}{0.054}$ = ₹ 81.48

(ii) and (iii)

Name of Company	Current Market Price	Value of the Share	Valuation	Action of the Investor
X Ltd.	₹ 150.00	₹ 133.33	Overvalued/ overpriced	Not to Invest/to be sold
Y Ltd.	₹ 70.00	₹ 81.48	Undervalued/ underpriced	Invest/to be purchased

Question – 42

On the basis of the following information:

Current dividend (Do) = ₹ 2.50

Discount rate (k) = 10.5%

Growth rate (g) = 2%

- (i) Calculate the present value of stock of ABC Ltd.
- (ii) Is its stock overvalued if stock price is ₹ 35, ROE = 9% and EPS = ₹ 2.25? Show detailed calculation.

(SM TYK – 04 & MTP – 2022)

Solution:

(1) Present Value of Stock

$$\begin{aligned}
 P_0 &= \frac{D_1}{K_e - g} \\
 &= \frac{2.50 (1.02)}{0.105 - 0.02} \\
 &= ₹ 30
 \end{aligned}$$

(2) Present Value of Stock

(a) P/E Model

$$P/E = \frac{1}{K_e}$$

$$= \frac{1}{9\%} = 11.11$$

$$\begin{aligned} \text{MPS} &= \text{EPS} \times \text{P/E Ratio} \\ &= ₹ 2.25 \times 11.11 \\ &= ₹ 25 \end{aligned}$$

Actual price is more than intrinsic value, hence share is overpriced.

(b) Earning Growth Model

$$\begin{aligned} P_0 &= \frac{\text{EPS} (1 + g)}{K_e - g} \\ &= \frac{2.25 (1.02)}{0.09 - 0.02} = ₹ 32.79 \end{aligned}$$

Stock is overpriced

Question – 43

The risk free rate of return R_f is 9 percent. The expected rate of return on the market portfolio R_m is 13 percent. The expected rate of growth for the dividend of Platinum Ltd. is 7 percent. The last dividend paid on the equity stock of firm A was ₹ 2.00. The beta of Platinum Ltd. equity stock is 1.2.

- (i) What is the equilibrium price of the equity stock of Platinum Ltd.?
- (ii) How would the equilibrium price change when
 - The inflation premium increases by 2 percent?
 - The expected growth rate increases by 3 percent?
 - The beta of Platinum Ltd. equity rises to 1.3?

(SM TYK – 15)

Solution:

(1) Equilibrium Price

$$P_0 = \frac{D_1}{K_e - g}$$

$$\begin{aligned} K_e &= R_f + \beta (R_m - R_f) \\ &= 9 + 1.2 (13 - 9) \\ &= 13.8\% \end{aligned}$$

$$\begin{aligned} P_0 &= \frac{2 (1.07)}{0.138 - 0.07} \\ &= ₹ 31.47 \end{aligned}$$

(2) Assumption 1

Each factor independently

* Inflation premium ↑ 2%

$$K_e = 11 + 1.2 (15 - 11) = 15.8\%$$

$$P_0 = \frac{2 (1.07)}{0.158 - 0.07} = ₹ 24.32$$

* Growth Rate ↑ 3%

$$P_0 = \frac{2 (1.10)}{0.138 - 0.10} = ₹ 57.89$$

* Beta = 1.30

$$K_e = 9 + 1.30 (13 - 09) = 14.2\%$$

$$P_0 = \frac{2 (1.07)}{0.142 - 0.07} = ₹ 29.72$$

Assumption II [All Factors Change Simultaneously]

$$K_e = 11 + 1.30 (15 - 11) = 16.20\%$$

$$P_0 = \frac{2 (1.10)}{0.162 - 0.10} = ₹ 35.48$$

Question - 44

Mr. X has submitted the following data:

Particulars	(₹) in Lakhs
Total Assets	250

Total Liabilities	220
Net Income	12
Dividend Paid	4.5
Sales	100

Mr. X wants to know to what extent sales can be increased without going for additional borrowings by using Sustainable Growth Rate (SGR) Concept?

(Exam Nov – 2022) (4 Marks)

Solution:

SGR

$$\text{Equity} = 250 - 220 = ₹ 30 \text{ lacs}$$

$$\begin{aligned} \text{Retain Earning} &= 12 - 4.50 \\ &= 7.50 \text{ lacs} \end{aligned}$$

$$\text{Retention Ratio (b)} = \frac{7.50}{12} \times 100 = 62.5\%$$

$$\text{ROE (r)} = \frac{\text{NI}}{\text{Equity}} \times 100$$

$$= \frac{12}{30} \times 100 = 40\%$$

$$\text{SGR} = b \times r$$

$$= 0.625 \times 0.40 = 25\%$$

Sales will increment by 25% i.e. $100 \times 25\% = ₹ 25 \text{ lacs}$

MULTIPLE GROWTH MODEL

Question – 45

MNP Ltd. has declared and paid annual dividend of ₹ 4 per share. It is expected to grow @ 20% for the next two years and 10% thereafter. The required rate of return of equity investors is 15%. Compute the current price at which equity shares should sell.

Note: Present Value Interest Factor (PVIF) @ 15%:

For year 1 = 0.8696;