1. Equity value using single period model
2. Constant Growth Model
3. Multiple Dividend Model
4. Earnings Model

Single period model

D1= Expected Dividend

P1= Price at end

Ke= Cost of Equity

1. If D1=3.5 and P1=421 with cost of equity is 20% Calculate the Price of Share

Sol:-

1. An Investor holds shares of TVS the price at the end of the yr is 350/- and expected dividend is Rs.7 with cost of capital is 15% calculate the price of the share.

Sol:-

II. Constant Growth Model

D1=Dividend at End

Ke= Cost of Capital

G=Growth

1. The company ABC’s Next year dividend per share is expected to be Rs.3.5 the dividends will have growth rate of 10% if Required rate of Return is 15% what is price of share.

D1=D0(1+g)

D1= 3.5

G=0.10

Ke=0.15

1. Anil estimates that from investment in Stock A he will get 15% dividends next year It would continue to grow at 10%. The selling price of the share is 40 RS. Required rate of return in 20%. Calculate share price

Sol=

D1=40\*15%=6

G=0.10

Ke=0.20

1. Antique Arts Company would pay rs 2.50 Dividends Per share Next yr and Expected Growth is 12% what would be the equity value if the Ke=20%

D1=2.50

G=0.12

Ke=0.20

1. Do=3

G=5%

Ke=20%

D1= Do(1+g)

= 3(1+0.05)=3.15

III. Multiple Dividend Model

Step1: Calculation of PV of Dividends

Step2: Calculate the Market Price using Constant Growth Model

Step 3: Calculation of PV of MP

Step 4: Value of Share= Step 1+Step 3

1. The Visual computer corp has been experiencing an above normal growth rate of 25% for the past 5 yrs. The above normal growth rate is expected to continue for another 5 yrs before it levels off at a rate of 7% forever. The last dividend paid by the company is Re.1. Determine the current value of the stock if its rate of Return is 20%.

Sol: -

Growth

1-5 Yrs=25%

6 yrs- forever =7%

D0=1

Ke=20%

D1=D0(1+g)

I yr = 1(1+0.25)=1.25

II yr=1.25(1+0.25)=1.56

III yr= 1.56(1+0.25)=1.95

IV Yr=1.95(1+0.25)=2.44

V yrs=2.44(1+0.25)=3.05

Step 1

Calculation of PV of Dividend

|  |  |  |  |
| --- | --- | --- | --- |
| Yrs | D1 | PV@20% | Present Value |
| 1 | 1.25 | 0.8333 | 1.04 |
| 2 | 1.56 | 0.6944 | 1.08 |
| 3 | 1.95 | 0.5787 | 1.12 |
| 4 | 2.44 | 0.4822 | 1.17 |
| 5 | 3.05 | 0.4018 | 1.22 |
|  |  |  |  |
|  |  |  |  |

PV Dividend=5.63

Step 2:- Calculation of MP using Constant Growth Model

6 Yr

D1=3.05(1+0.07)=3.26

Step 3: Calculation of PV of MP

25.07\*0.4018=10.07

Step 4: Share Value= 5.63+10.07=15.70

1. For the first four yrs XYZ firm is assumed to grow at a rate of 10%. After 4 yrs the growth rate is expected to be 8 %. From 7th yr onwards the firm’s growth is 6 % pa forever. The dividend paid by the company is Rs 2 last yr and Required Rate of return is 14 %. Calculate price of the Share.

Sol: 1-4 Yrs Growth 10%

5-6 growth 8%

7 yrs- 6% forever

Step 1

Calculation of PV of Dividend

|  |  |  |  |
| --- | --- | --- | --- |
| Yrs | D1 | PV@14% | Present Value |
| 1 | 2.2 | 0.8771 | 1.92 |
| 2 | 2.42 | 0.769 | 1.86 |
| 3 | 2.66 | 0.675 | 1.79 |
| 4 | 2.92 | 0.592 | 1.73 |
| 5 | 3.16 | 0.519 | 1.64 |
| 6 | 3.41 | 0.456 | 1.55 |
|  |  | **PV of D1** | **10.48** |

D1= Do(1+G)

I yr- 2(1+0.10)=2.2

II yr-2.2(1+0.10)=2.42

III Yr-2.42(1+0.10)=2.66

IV Yrs- 2.66(1+0.10)=2.92

Vyrs-2.92(1+0.08)=3.16

VI yr- 3.16(1+0.08)=3.41

Step 2:- Calculation of MP using Constant Growth Model 7th Yr

D1=Do(1+G)

3.41(1+0.06) =3.62

Step 3: Calculation of PV of MP

45.25\*0.456=20.63

Step 4

Value of share= Step 1+Step3= 10.48+20.63=31.11

IV.Earnings Model

1. The Eps of the X Co ltd is RS 150 and D/p ratio is 50% if Cost of Capital is 15% Calculate the Value of share.

Sol:- EPS=150

D/P= 50%

D= EPS \* D/P= 150 \* 50%=75