

Constant Dividend (Zero Growth; Perpetuity)

$$P_0 = \frac{D}{R}$$

P_0 = Current Stock Price
 D = Constant Dividend Forever (PS)
 R = Required Return (Discount Rate)

1

Calculate FV Of Current Dividend With Constant Growth Rate

$$D_t = D_0(1 + g)^t$$

D_0 = Current Dividend
 D_t = Dividend at period t
 t = Periods
 g = Constant Growth Rate

2

Calculate Current Value Of Stock With Constant Growth Rate (Dividend Growth Model)

$$P_0 = \frac{D_0(1+g)}{R-g} = \frac{D_1}{R-g}$$

P_0 = Current Stock Price
 D_0 = Current Dividend
 D_1 = Next Dividend
 g = Constant Growth Rate
 R = Required Return (Discount Rate)
 As log as $\implies g > R$ (otherwise stock price infinite)

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Growing Perpetuity (An Asset With Cash Flows That Grow At A Constant Rate Forever)

$$P_0 = \frac{C_0(1+g)}{R-g} = \frac{C_1}{R-g}$$

P_0 = Current Asset Price
 C_0 = Current Cash Flow
 D_1 = Next Cash Flow
 g = Constant Growth Rate
 R = Required Return (Discount Rate)
 As log as $\implies g > R$ (otherwise stock price infinite)

4

Calculate FV Of P_0 (Price Of Stock At Time t)

$$P_t = \frac{D_t(1+g)}{R-g} = \frac{D_{(t+1)}}{R-g}$$

$$P_t = P_0(1+g)^t$$

t = Periods
 P_0 = Current Stock Price
 P_t = Price At Time t
 D_t = Dividend At Time t
 $D_{(t+1)}$ = Dividend At Time t + 1
 g = Constant Growth Rate
 R = Required Return (Discount Rate)

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Rates

- Dividend Yield $\text{Dividend Yield} = \frac{D_1}{P_0}$
- Capital Gains Yield (Constant Growth Rate) $\text{Capital Gains Yield} = g$
- Required Rate Of Return $R = \frac{D_1}{P_0} + g$

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