

Formula Sheet

Constant Growth Model

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

Two-Stage Growth Model

$$P_0 = \frac{D_0(1 + g_1)}{k - g_1} \left[1 - \left(\frac{1 + g_1}{1 + k} \right)^T \right] + \left(\frac{1 + g_1}{1 + k} \right)^T \left[\frac{D_0(1 + g_2)}{k - g_2} \right]$$

Capital Asset Pricing Model (CAPM)

$$k = r_f + \beta * MRP = r_f + \beta * (\overline{R_m} - r_f)$$

Sustainable Growth Rate

$$g = ROE * Retention Ratio = ROE(1 - Payout Ratio)$$

Residual Income Model (RIM)

$$P_0 = B_0 + \frac{EPS_0(1 + g) - B_0k}{k - g} = \frac{EPS_1 - B_0g}{k - g}$$

Weighted Average Cost of Capital (WACC)

$$WACC = Re \frac{E}{E + D} + Rd \frac{D}{E + D} (1 - Tc)$$

Free Cash Flow Model

$$V_{Firm} = \frac{FCF_1}{k - g} = \frac{FCF_0(1 + g)}{k - g}$$

Hamada Equation:

$$\beta_E = \beta_A \left[1 + \frac{D}{E} (1 - Tc) \right]$$