

DESCRIPTION	FORMULA
Present value of a growing annuity	$PVA = \frac{C}{i - g} \times \left[1 - \frac{(1 + g)^N}{(1 + i)^N} \right]$
Present value of a growing perpetuity	$PVP = \frac{C}{i - g}$
Expected return and systematic risk (CAPM)	$E(R_i) = R_{rf} + \beta_i [E(R_m) - R_{rf}]$
Net Present Value	$NPV = NCF_0 + \frac{NCF_1}{1 + i} + \frac{NCF_2}{(1 + i)^2} + \dots + \frac{NCF_n}{(1 + i)^n} = \sum_{t=0}^n \frac{NCF_t}{(1 + i)^t}$
Cost of equity (Constant Dividend Growth model)	$R = \frac{D_1}{P_0} + g$
Asset Cost of Capital (or Unlevered Cost of Capital)	$R_A = \frac{D}{D + E} \times R_D + \frac{E}{D + E} \times R_E$
Asset Beta (or Unlevered Beta)	$\beta_A = \frac{D}{D + E} \times \beta_D + \frac{E}{D + E} \times \beta_E$
Weighted Average Cost of Capital (WACC)	$R_{WACC} = \frac{D}{D + E} \times R_D (1 - T) + \frac{E}{D + E} \times R_E$
WACC (alternate)	$R_{WACC} = R_A - \frac{D}{D + E} \times R_D \times T$
MM Prop 1	Value of Levered Firm = Value of Unlevered Firm
Expected return on equity (MM Prop 2)	$R_E = R_A + \frac{D}{E} \times (R_A - R_D)$
Trade-Off theory	Value of Levered Firm = Value of Unlevered Firm + PV of Tax Shield - PV of Financial Distress Costs
Value of an unlevered firm or project	$NPV (\text{unlevered}) = \sum_{t=0}^{\infty} \frac{FCF_t}{(1 + R_A)^t}$
Value of a levered firm or project	$NPV (\text{levered}) = \sum_{t=0}^{\infty} \frac{FCF_t}{(1 + R_{WACC})^t}$