

Present Value

$$FV = PV(1 + r)^t$$
$$t = \ln(FV / PV) / \ln(1 + r)$$

Annuities:

$$PV = C \left[\frac{1 - \frac{1}{(1+r)^t}}{r} \right]$$

$$FV = C \left[\frac{(1+r)^t - 1}{r} \right]$$

Perpetuity:

$$PV = C / r$$

Growing perpetuity:

$$PV = \frac{C_1}{r - g}$$

Growing annuity:

$$PV = \frac{C_1}{r - g} \left[1 - \left(\frac{1+g}{1+r} \right)^T \right]$$

EAR:

$$EAR = \left[1 + \frac{APR}{m} \right]^m - 1$$

Bond Pricing Formula:

$$\text{Bond Value} = C \left[\frac{1 - \frac{1}{(1+r)^t}}{r} \right] + \frac{F}{(1+r)^t}$$

Fischer Formula:

$$(1 + R) = (1 + r)(1 + h),$$

Stock Valuation:

Zero Growth:

$$P_0 = D / R$$

Dividend Growth Model:

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

Required Rate of Return:

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