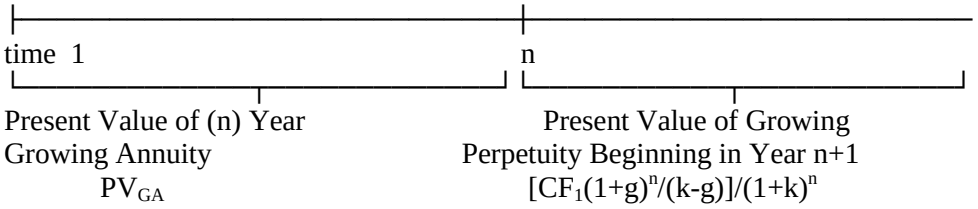
Lecture Whiteboard Corrections



$$PV = \frac{100}{(1+.12)^1} + \frac{100(1+.05)}{(1+.12)^2} + \frac{100(1+.05)^2}{(1+.12)^3} + \frac{100(1+.05)^3 + 1200}{(1+.05)^4}$$

Corrections in Coursepack:

(3.10) $$CF = PV_A k \div \left[1 - \frac{1}{(1+k)^n} \right]$$

(4.3) $$ROI_A = \frac{\sum_{t=1}^{n} DIV_t}{n \cdot P_0} + \frac{P_n - P_0}{n \cdot P_0}$$

Homework

Tuesday

Derive PVGAF

$$PV_{GA} = CF_1 \cdot \left[\frac{(1+g)^{1-1}}{(1+k)^1} + \ldots + \frac{(1+g)^{n-1}}{(1+k)^n} \right]$$

$$PV_{GA} \frac{(1+g)}{(1+k)} = CF_1 \cdot \left[\frac{(1+g)^1}{(1+k)^2} + \ldots + \frac{(1+g)^n}{(1+k)^{n+1}} \right]$$

$$PV_{GA} \left[\frac{(1+g)}{(1+k)} - 1 \right] = CF_1 \cdot \left[-\frac{(1+g)^{1-1}}{(1+k)^1} + \frac{(1+g)^n}{(1+k)^{n+1}} \right]$$

$$PV_{GA} \left[\frac{(1+g)-(1+k)}{(1+k)} \right] = CF_1 \cdot \left[-\frac{1}{(1+k)^1} + \frac{(1+g)^n}{(1+k)^{n+1}} \right]$$

$$PV_{GA} [k-g] = CF_1 \cdot \left[1 - \frac{(1+g)^n}{(1+k)^n} \right]$$

$$PV_{GA} = \frac{CF_1}{k-g} \cdot \left[1 - \frac{(1+g)^n}{(1+k)^n} \right]$$

Derive FVGAF

$$FV_{GA} = X_0 \cdot \left[(1+g)^{1-1}(1+i)^{n-1} + \ldots + (1+g)^{n-1}(1+i)^0 \right]$$

$$FV_{GA} \frac{(1+g)}{(1+i)} = X_0 \cdot \left[(1+g)^1(1+i)^{n-2} + \ldots + (1+g)^n(1+i)^{-1} \right]$$

$$FV_{GA} \left[\frac{(1+g)}{(1+i)} - 1 \right] = X_0 \cdot \left[-(1+g)^{1-1}(1+i)^{n-1} + (1+g)^n(1+i)^{-1} \right]$$

$$FV_{GA} \left[\frac{(1+g)-(1+i)}{(1+i)} \right] = X_0 \cdot \left[-(1+i)^{n-1} + (1+g)^n(1+i)^{-1} \right]$$

$$FV_{GA} \left[\frac{g-i}{(1+i)} \right] = X_0 \cdot \left[-(1+i)^{n-1} + (1+g)^n(1+i)^{-1} \right]$$

$$FV_{GA} = \frac{X_0}{(i-g)} \cdot \left[(1+i)^n - (1+g)^n \right]$$