Instituto Superior de Economia e Gestão
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FORMULAE

(following Berk and Demarzo's "Corporate Finance" sequence)

GESTÃO FINANCEIRA II UNDERGRADUATE PROGRAMS **1st SEMESTER 2012-2013**

$$PV(\text{growing perpetuity}) = \frac{C}{r-g} \qquad (4.10)$$

$$PV(\text{annuity of C for n periods with interest rate r growing at rate g}) = C \times \frac{1}{r-g}\left(1-\left(\frac{1+g}{1+r}\right)^N\right) \qquad (4.11)$$

$$\text{Equivalent n-period Discount rate} = (1+r)^n - 1 \qquad (5.1)$$

$$1+EAR = \left(1+\frac{APR}{k}\right)^k \qquad (5.3)$$

$$\text{Free Cash Flow} = EBIT(1-\tau_C) + \text{Depreciation} - \text{CapEx} - \Delta NWC \qquad (7.5)$$

$$YTM_n = \left(\frac{FV}{P}\right)^{\frac{1}{n}} - 1 \qquad (8.3)$$

$$P = CPN \times \frac{1}{y}\left(1-\frac{1}{(1+y)^N}\right) + \frac{FV}{(1+y)^N} \qquad (8.5)$$

$$P = PV(\text{Bond Cash Flows}) = \frac{CPN}{1+YTM_1} + \frac{CPN}{(1+YTM_2)^2} + \cdots + \frac{CPN+FV}{(1+YTM_n)^n} \qquad (8.6)$$

$$f_n = \frac{(1+YTM_n)^n}{(1+YTM_{n-1})^{n-1}} - 1 \qquad (8A.2)$$

$$(1+f_1)\times(1+f_2)\times\cdots\times(1+f_n) = (1+YTM_n)^n \qquad (8A.3)$$

$$r_E = \frac{Div_1}{P_0} + \frac{P_1 - P_0}{P_0} \qquad (9.2)$$

$$P_0 = \frac{Div_1}{1+r_E} + \frac{Div_2}{(1+r_E)^2} + \cdots + \frac{Div_N}{(1+r_E)^N} + \frac{P_N}{(1+r_E)^N} \qquad (9.4)$$

$$P_0 = \frac{Div_1}{r_E - g} \qquad (9.6)$$

$$Div_t = EPS_t \times \text{Dividend Payout Rate}_t \qquad (9.8)$$

$$g = \text{Retention Rate} \times \text{Return on New Investment} \qquad (9.12)$$

$$P_0 = \frac{PV(\text{Future Total Dividends and Repurchases})}{\text{Shares Outstanding}_0} \qquad (9.16)$$

$$\text{Expected Return} = E[R] = \sum_R p_R \times R \qquad (10.1)$$

$$Var(R) = E\left[(R - E[R])^2\right] = \sum_R p_R \times (R - E[R])^2 \quad ; \quad SD(R) = \sqrt{Var(R)} \qquad (10.2)$$

$$\overline{R} = \frac{1}{T}(R_1 + R_2 + \cdots + R_T) = \frac{1}{T}\sum_{t=1}^{T} R_t \qquad (10.6)$$

$$Var(R) = \frac{1}{T - 1}\sum_{t=1}^{T}(R_t - \overline{R})^2 \qquad (10.7)$$