

Formula Sheet: Final

Econ 4673

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M1 = currency + traveler's checks + demand deposits + other checkable deposits

M2 = M1 + small time deposits + savings deposits + retail money market mutual funds

MZM = M1 + savings deposits + retail money market mutual funds + institutional money market mutual funds

$$PV = \frac{CP}{(1+i)^n}$$

Coupon rate = coupon payment/face value

$$LV = \frac{FP}{(1+i)} + \frac{FP}{(1+i)^2} + \dots + \frac{FP}{(1+i)^n}$$

$$P = \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \dots + \frac{C}{(1+i)^n} + \frac{F}{(1+i)^n}$$

$$P = \frac{F}{(1+i)^n}$$

$$P = \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \frac{C}{(1+i)^3} + \dots$$

$$R = \frac{C}{P_t} + \frac{P_{t+1} - P_t}{P_t}$$

$$R = r + \pi^e$$

$$R_{n,t} = \frac{R_{1,t} + R_{1,t+1} + R_{1,t+2} + \dots + R_{1,t+n-1}}{n}$$

$$R_{n,t} = \frac{R_{1,t} + R_{1,t+1} + R_{1,t+2} + \dots + R_{1,t+n-1}}{n} + l_{n,t}$$

$$P_t = \frac{D_{t+1}}{(1+k)} + \frac{D_{t+2}}{(1+k)^2} + \dots + \frac{D_{t+n}}{(1+k)^n} + \frac{P_{t+n}}{(1+k)^n}$$

$$P_t = \sum_{n=1}^{\infty} \frac{D_{t+n}}{(1+k)^n}$$

$$P_t = \frac{D_t \times (1+g)^*}{(k-g)}$$

$$R_t^{\text{of}} = \frac{P_{t+1}^{\text{of}} - P_t + C}{P_t}$$

Total assets = total liabilities + bank capital

ROA = net profit after taxes/assets

EM = assets/equity capital

ROE = net profit after taxes/equity capital

$\Delta\text{Profits} = [\text{Assets}(\text{st}) - \text{Liabilities}(\text{st})] \times \Delta R$

$\Delta\text{Market value} = [(\text{Assets} \times D_A) - (\text{Liabilities} \times D_L)] \times [-\Delta R]$

LR = equity capital/assets

$\text{RWA} = 0.0 \times \text{R\&GS} + 0.2 \times \text{B} + 0.5 \times \text{MB\&RM} + 1.0 \times \text{L}$

$R = \text{RR} + \text{ER}$

Total reserves = nonborrowed reserves + borrowed reserves

$M^B = C + R$

$\text{RR} = \text{rr} \times \text{ChD}$

$M^S = m \times M^B$

$M^S = C + \text{ChD}$

$C = c \times \text{ChD}$

$\text{ER} = e \times \text{ChD}$

$M^S = [(1 + c)/(c + \text{rr} + e)] \times M^B$

$R = r + \pi + 0.5 \times (\pi - \pi^*) + 0.5 \times [(Y - Y^*)/Y^*]$

$M^S \times V = P \times Y$

$\% \Delta M^S + \% \Delta \bar{V} = \% \Delta P + \% \Delta Y$

$\text{BD} = G - T$

$\text{BD} = \Delta B + \Delta \text{MB}$

$M^D/P = L(Y, R)$

$Y = C + I + G + \text{NX}$

$Y^D = Y - T$

$C = \bar{C} + \text{MPC} \times (Y - T)$

$I = \bar{I} - d \times (r + \bar{f})$

$G = \bar{G}$

$T = \bar{T}$

$\text{NX} = \bar{\text{NX}} - x \times r$

$R = \bar{r} + \pi + \theta \times (\pi - \pi^*)$

$\pi = \pi^e + \gamma \times (Y - Y^P)/Y^P + \rho$

$\pi = \pi^e - \omega \times (U - U^N) + \rho$

$(Y - Y^P)/Y^P = -2 \times (U - U^N)$