

## Value Estimation's Two Favorite Equations

### Capitalization Model

### Discounted Cash Flow Model

$$V = \frac{I}{R}$$

Where:

*V* = Value

*I* = Stabilized Income

*R* = Capitalization Rate

$R = r \pm (\% \text{Appr} / \% \text{Depr})$

*r* = risk adjusted rate of discount

Expanded:

$$V = \frac{I}{r \pm (\% \text{Appr} / \% \text{Depr})}$$

$$P_0 = P_t / (1 + r)^t$$

Where:

$P_0$  = Value at time 0

$P_t$  = Value at time *t*

*r* = risk adjusted rate of discount

Expanded:

$$V = \sum_{t=1}^n \frac{\text{Income}_t}{(1+r)^t} + \frac{\text{Reversion}_n}{(1+r)^n}$$

### For the Property Value (PV)

$$PV = \frac{NOI}{OCR}$$

Where:

*PV* = Property Value

*NOI* = Net Operating Income

*OCR* = Overall Cap. Rate

$OCR = D \pm (\% \text{Appr} / \% \text{Depr})$

*D* = Discount Rate

*D* = Weighted Average Cost of Capital

$$PV = \sum_{t=1}^n \frac{NOI_t}{(1+D)^t} + \frac{PR_n}{(1+D)^n}$$

Where:

*PV* = Property Value

*NOI* = Net Operating Income

*D* = Discount Rate

*n* = Holding Period

$PR_n$  = Property Residual in year *n*.

$PR_n = SP_n - SE_n$

Where:

$SP_n$  = Selling Price in year *n*

$SE_n$  = Selling Expenses in year *n*

## Equity Value (EV)

$$EV = \frac{CF}{Re}$$

Where:

*CF* = Cash Flow After Debt  
Payment

*DP* = Debt Payment

*CF* = *NOI* - *DP*

*Re* =  $y \pm (\%Depr / \%Appr)$

*y* = Equity Yield Rate, a risk  
adjusted rate of discount for equity

$$EV = \sum_{t=1}^n \frac{CF_t}{(1+y)^t} + \frac{ER_n}{(1+y)^n}$$

Where:

*y* = Equity Yield Rate, risk adjusted  
rate of discount

*ER* = Equity Reversion at the end of  
the holding period

$ER_n = SP_n - SE_n - UM_n$

*SP<sub>n</sub>* = Selling Price in year *n*

*SE<sub>n</sub>* = Selling Expenses in year *n*

*UM<sub>n</sub>* = Unpaid Mortgage Amount