Valuation Model Quick Sheet

Dividend Yield Model (NOPLAT augmented)

Reflects valuation based on income variable, time, and discount factor

Value$_{\mathbf{DG}} = \sum \frac{NOPLAT_t}{(1+WACC)^t} + \frac{\frac{NOPLAT_1}{WACC-g}}{(1+WACC)^t}$

Key Value Driver Model

Reflects valuation based on income Cash Flows, time and discount factors (WACC or r), FCF or NOPLAT in the explicit period and NOPLAT, ROIC, g, & discount factor in the continuation period

Value$_{\mathbf{KVD/FCF}} = \sum \frac{FCF_t}{(1+WACC)^t} + \frac{\frac{NOPLAT_1\left(1-\frac{g}{ROIC}\right)}{WACC-g}}{(1+WACC)^t}$

Value$_{\mathbf{KVD/NOPLAT}} = \sum \frac{NOPLAT_t}{(1+WACC)^t} + \frac{\frac{NOPLAT_1\left(1-\frac{g}{ROIC}\right)}{WACC-g}}{(1+WACC)^t}$

Free Cash Flow Model

Reflects valuation based on Free Cash Flow, time, and discount factor

Value$_{\mathbf{FCF}} = \sum \frac{\mathrm{FCF}_i}{(1+\mathrm{WACC})^t} + \frac{\frac{FCF_1}{(WACC-g)}}{(1+WACC)^t}$

Forward Multiple Model (Free Cash Flow)

Reflects valuation based on income variable (FCF shown) time, and discount factor with the continuation value being a function of a valuation multiple (FMM = EV/EBIT shown)

Value$_{\mathbf{FCF}} = \sum \frac{FCF_t}{(1+WACC)^t} + \frac{EBIT_1 \ x \ FMM}{(1+WACC)^t}$

Economic Profit Model

Reflects valuation based on Economic Profit, time, and discount factor

Value$_{\mathbf{Econ}\,\pi}$ **=** $\mathbf{IC_0} + \sum \frac{\boldsymbol{IC_{t-1}(ROIC-WACC)}}{\boldsymbol{(1+WACC)^t}} + \frac{\frac{\boldsymbol{IC_0\ (ROIC_1-WACC_1)}}{\boldsymbol{WACC_1-g}}}{\boldsymbol{(1+WACC)^t}}$

Adjusted Present Value Model

Reflects valuation based on Free Cash Flow & the Tax Shield, time, and discount factor

Allows for changes in value as a function of changing capital structures

Value$_{\mathbf{APV}} = V_{FCF} + V_{TAX}$ in which $V_{FCF} = PV_{DCF(FCF)} + PV_{CV(FCF)}$, $\mathrm{PV}_{\mathrm{DCF(FCF)}} = \sum \frac{\mathrm{FCF}_i}{(1+\mathrm{k_u})^t}$, $\mathrm{PV}_{\mathrm{CV(FCF)}} = \frac{\frac{FCF_1}{(k_u-g)}}{(1+k_u)^t}$ and

$V_{TAX} = PV_{DCF(TAX)} + PV_{CV(TAX)}$ in which

$\mathrm{PV}_{\mathrm{DCF(TAX)}} = \sum \frac{\text{Tax Shield}_i}{(1+\mathrm{k_{tax}})^t}$ and $\mathrm{PV}_{\mathrm{CV(TAX)}} = \frac{\frac{Tax\ Shield_1}{(k_{tax}-g)}}{(1+k_{tax})^t}$, resulting in

Value$_{\mathbf{APV}} = \sum \frac{\mathrm{FCF}_i}{(1+\mathrm{k_u})^t} + \frac{\frac{FCF_1}{(k_u-g)}}{(1+k_u)^t} + \sum \frac{\text{Tax Shield}_i}{(1+\mathrm{k_{tax}})^t} + \frac{\frac{Tax\ Shield_1}{(k_{tax}-g)}}{(1+k_{tax})^t}$