

Valuation Model Quick Sheet

Free Cash Flow Model

This model stems from the Dividend Yield Model (augmented for FCF and WACC) and reflects a valuation based on income variable (FCF), time, and discount factor (WACC)

$$\text{Value}_{\text{FCF}} = \sum \frac{\text{FCF}_t}{(1+WACC)^t} + \frac{\frac{\text{FCF}_1}{WACC-g}}{(1+WACC)^t}$$

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

$$\text{Value}_{\text{KVD/FCF}} = \sum \frac{\text{FCF}_t}{(1+WACC)^t} + \frac{\frac{\text{NOPLAT}_1(1-\frac{g}{\text{ROIC}})}{WACC-g}}{(1+WACC)^t}$$

$$\text{Value}_{\text{KVD/NOPLAT}} = \sum \frac{\text{NOPLAT}_t}{(1+WACC)^t} + \frac{\frac{\text{NOPLAT}_1(1-\frac{g}{\text{ROIC}})}{WACC-g}}{(1+WACC)^t}$$

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)

$$\text{Value}_{\text{FCF}} = \sum \frac{\text{FCF}_t}{(1+WACC)^t} + \frac{\text{EBIT}_1 \times \text{FMM}}{(1+WACC)^t}$$

Economic Profit Model

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

$$\text{Value}_{\text{Econ } \pi} = \text{IC}_0 + \sum \frac{\text{IC}_{t-1}(\text{ROIC}-WACC)}{(1+WACC)^t} + \frac{\frac{\text{IC}_0(\text{ROIC}_1-WACC_1)}{WACC_1-g}}{(1+WACC)^t}$$

Adjusted Present Value Model

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

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

$$\text{Value}_{\text{APV}} = V_{\text{FCF}} + V_{\text{TS}}$$

$$V_{\text{FCF}} = \sum \frac{\text{FCF}_i}{(1+k_u)^t} + \frac{\frac{\text{FCF}_1}{(k_u-g)}}{(1+k_u)^t}; V_{\text{TS}} = \sum \frac{\text{Tax Shield}_i}{(1+k_{\text{tax}})^t} + \frac{\frac{\text{Tax Shield}_1}{(k_{\text{tax}}-g)}}{(1+k_{\text{tax}})^t}$$

$$\text{Value}_{\text{APV}} = \sum \frac{\text{FCF}_i}{(1+k_u)^t} + \frac{\frac{\text{FCF}_1}{(k_u-g)}}{(1+k_u)^t} + \sum \frac{\text{Tax Shield}_i}{(1+k_{\text{tax}})^t} + \frac{\frac{\text{Tax Shield}_1}{(k_{\text{tax}}-g)}}{(1+k_{\text{tax}})^t}$$