

Introduction to Valuations



What will be covered?

- Importance of Valuations
- Valuation components
- Valuation methods
- Summary



Importance of Valuations

- **Most assignments – “Value” is a start point – determines amount available to a company’s shareholders (typically we are concerned with shareholder or equity value)**
- **Maximising shareholder value is the primary goal of the majority of organisations**
- **Value provides a basis to determine “price”**
- **Valuations take into account both macro and micro considerations**
 - **Market place & environment**
 - **Value drivers & business risk**

Valuation Components



Every valuation has a

- **Subject – 100% vs minority**
- **Standard of value – typically fair market value**
- **Date – Current or historic (31 December 2007)**
- **Purpose – transactional (M&A), IPO pricing, litigation**
- **User / audience – current shareholders vs. prospective shareholders**
- **Reporting format – no formal standards like accounting/auditing**

Valuation Methods: How do you value a business?



Valuation methodologies

- **Earnings based methods:**
 - Discounted cash flows (DCF)
 - Relative valuation (market multiples or “comparables”)
 - Capitalisation of dividends
- **Asset based methods:**
 - Notional realisation of assets
 - Net tangible assets (NTA) value
- **Different methods will yield different results**
- **Use a primary method and a secondary method to cross check results**

When do I use each method?

- **Projected CFs; abnormal growth, may be 'lumpy' CFs** —————→ **Discounted Cash Flows**
- **Asset based businesses (bank /property)** —————→ **Net Tangible Assets**
- **Constant growth, positive earnings businesses** —————→ **Comparables**
- **Loss making business, going concern is doubtful** —————→ **Notional Realisation of Assets**
- **Steady dividend paying business** —————→ **Capitalisation of Dividends**

Valuation – Discounted Cash Flows

What are the steps involved in preparing a DCF valuation?

Step One: Understand businesses & industry – determine value drivers

Step Two: Build financial model & determine “free cash flows to the firm” (FCFF)

Step Three: Determine the appropriate discount rate (use the weighted average cost of capital “WACC”)

Step Four: Calculate present value of projected cash flows and terminal cash flows to derive the Enterprise or Firm value

Step Five: Subtract Net Debt from Enterprise Value to derive Equity Value

Valuation – Discounted Cash Flows

Use projections (generally minimum of 5 years) to build an integrated model with P&L, Balance Sheet then Cash flow statement. Then derive FCF.

FCFF

Net income (NI)

+ Non-cash charges (Depreciation &
Provision for end-of-terminal benefits)

- Working Capital Investments

Cash flow from operations (CFO)

+ Interest expense (1 – tax rate)

- Capital expenditure

Free Cash Flow to Firm (FCFF)

Discounted at Weighted Average Cost of
Capital (WACC)

FCFE

Net income (NI)

+ Non-cash charges (Depreciation &
Provision for end-of-terminal benefits)

- Working Capital Investments

Cash flow from operations (CFO)

- Capital expenditure

+ Net borrowing (Debt drawdown & repayment)

Free Cash Flow to Equity (FCFE)

Discounted at Cost of Equity (Ke)

Discount rates for DCF: WACC when using FCFF

$$K_e = \{ [(1+R_f) \times (1+CRP)] - 1 \} + \beta (R_m) + SSP$$

Where:

- R_f = risk free rate of return
- β = levered beta (risk) coefficient
- R_m = equity risk premium
- CRP = country risk premium
- SSP = small stock premium

$$WACC = (K_d (1-T) \times W_d) + (K_e \times W_e)$$

Where:

- K_d = Cost of debt (pre-tax)
- K_e = Cost of equity
- W_d = Target weight of debt
- W_e = Target weight of equity
- T = Corporate tax rate

Cost of Equity Inputs

- **Rf = Risk free rate**

- base return available in the market for a risk-less asset

- Methodology: yield of a 10 year US Government bond on the valuation date*

- *Methodology: Adjust for 0.9% country risk premium (CRP) between US and UAE*

- **Rm = Equity or market risk premium**

- premium for investors for investing in equities (can vary between 2%-8%)

- *Methodology: 4.91% developed markets + 1.5% uplift for emerging markets = 6.41%*

- **β = Beta**

- beta is a measure of the firm specific risk. Measures stock returns relative to overall market chgs.

- *Methodology: Bloomberg for comparable company 5 year monthly raw equity betas (Be), de-lever the equity beta using: $B_a = B_e / (1 + (1 - \text{Eff. Tax rate}) * D/E)$*

- *Methodology: re-lever asset beta w/ target debt/equity: $B_e = B_a \times (1 + (1 - \text{Eff. Tax rate}) * \text{Target } D/E)$*

- **SSP = Small stock premium**

- *3.91% premium for investing in smaller, riskier companies with mkt cap less than circa \$260m*

WACC Inputs

- **K_e = Cost of Equity**
 - As calculated in our CAPM formula
- **E/V = Weighting of equity relative to equity plus debt**
- **D/V = Weighting of debt relative to equity plus debt**
 - Use market values or book values if market values are not available
- **$K_d (1 - t)$ = Post Tax Cost of Debt**
 - Use company's actual borrowing interest rate or use the risk free rate plus a debt margin (note cost of debt will rise as leverage increases)
 - Use post tax cost of debt due to the tax deductibility of interest expense

WACC recognises that debt is a cheaper source of funding than equity

Core finance concept: Minimum WACC results in maximum shareholder value

Time horizon/terminal value

- **Projection period:** Time horizon of forecast is not fixed but depends on nature of the business/cash flows (usually when cash flow growth stabilises) – generally 5 years minimum
- **Terminal Value**

– Terminal value =
$$\frac{\text{Terminal year free cash flow} * (1+g)}{\text{Terminal year discount rate} - g}$$

Note: g = long run stable growth rate; usually long run inflation/GDP as proxy

Methodology: Currently using 4% for UAE

Note: In terminal year, usually assume depreciation equals capex

Summary



Summary of DCF approach

- **Intuition:**

- Based on the fundamental finance concept that a business is worth the present value of its future cash flows

- **Advantages of DCF:**

- theoretically preferred valuation method
- uses cash flows which are less susceptible to manipulation than accounting earnings

- **Limitations of DCF:**

- highly sensitive to underlying assumptions (therefore always run sensitivities/scenarios)
- more complicated than comparables approach

Just when you think you know it all ...
...Watch out for Intermediate Valuations!

- **Less common valuation methods:**
 - Capitalisation of dividends
 - Notional realisation of assets
 - Net tangible asset approaches
- **Small company stock premiums, country risk premiums**
- **Minority interest discounts and control premiums**
- **Discounts for lack of marketability / liquidity**
- **Valuing synergies**

Four final thoughts

