Valuation Approaches

National Conference on Scientific Art of Valuation

August 27, 2011
Agenda

• Fair Value - Approaches & Suitability
  • Asset based
  • Market based
  • Income based
Asset Approaches

• Arrives at valuation in terms of Tangible Net Worth of the entity as at valuation date

• Approaches
  • Historical cost/ book value
    – Adjustments for realisability
  • Replacement cost
    – Gross Replacement Cost (GRC)
    – Estimation of useful life
    – Estimation of depreciation/ obsolescence
    – Depreciation Replacement cost
Asset Approaches

Positives

- Easy to compute
- Relatively Stable

Limitations

- Fail to factor the value of intangible assets like brands, technical know-how, distribution network etc.
- Impacted by accounting
- Assumes assets always have ‘profit generating’ value
- Ignores Returns vs. Cost of capital

Generally Not Suitable for Fair Valuation of “Going Concerns”
NAV - Suitability

- Asset Heavy Cyclicals
  - Steel
  - Hotels
  - Power (PPA)

- Finance companies
  - Banks

- Companies in temporary losses

- Sectors in which returns are linked to investment

NAV method is a good benchmark to other methods
Examples – Steel Industry

• JSW acquisition of Ispat
  • Market price of Rs. 20 per share
  • Ispat was making net losses; book value was eroded
  • Enterprise value of $3.2 billion; EV/EBITDA multiple of >10x
  • EV/ Tonne of $800 of HRC capacity
  • Typical benchmark replacement cost for a similar plant likely to be in $1.1-1.3 billion/ milliontonne.
  • Besides there were substantial strategic reasons.
**Market Approaches**

- Arrives at valuation in terms of valuation of a similar asset in the market

**Approaches**
- Market price method
- Price of Recent Investment method
- Comparable Listed Multiples
  - Stock market comparables
  - Minority value – adjustment need for control value
- Comparable transaction multiple
  - Typically inclusive of control premium
  - Information availability is a challenge
- Option valuations
Methodology

- Methodology involves the following elements:
  - Choice of companies
  - Choice of multiples
  - Companies specific adjustments – discounts/premiums

- Comparable Companies
  - Global vs. Indian comparisons
  - Identifying Directly Comparables: Research on Companies is the key
  - Accounting for size differentials
  - Accounting for differing operating conditions

- Choice of multiples
  - Transaction vs. Stock Market Multiples
  - Sales vs. Profitability Multiples Vs. Capacity Multiples
  - Historical vs. Forward Multiples

Valuer’s judgment required for appropriate choice
Realistic method in a number of situations

**Positives**

- Realistic valuations as benchmarked to current valuations.
- Relatively simpler compared to DCF
- Flexible – can use different valuation multiples in different cases
- Less impacted by valuer bias

**Limitations**

- Very volatile
- Markets may not necessarily value companies fairly at all points of time
- Adequate and reliable details for transaction multiples not available in most of the cases
**Market Methods - suitability**

- Any sector with significant intangible value, but with challenges in making medium term forecasts
- Software sector
- Auto and auto ancillaries
- Banks – Price/ book
- Hotels – EV/ room, EV/EBITDA
- Cement – EV/ capacity value in transactions
Income Methods

• Arrives at valuation in terms of underlying income/cash generation capabilities of the business

• Approaches
  • Discounted cash flow
  • Multi-period excess earnings
  • Residual method

• Useful for valuing entire businesses or components
Discounted Cash Flow (DCF) Method

- Determines the net present value of underlying cash flows of the business.
- Not impacted by accounting principles, as based on cash flows and not book profits.
- Is forward looking.
- Incorporates all factors relevant to business e.g.
  - Tangible and intangible assets
  - Current & future competitive position
  - Financial and business risks

Business Value = NPV (FCFs) = NPV (NOPLAT – Incremental WC – Incremental Capex)

Considered to be the most logical method of valuation.
DCF Method - Key Steps

Understand business/business model
- Linkages with economic variables
- Key source of competitive advantage
- Key tangibles/intangibles
- SWOT
- Business cycle

Analyse historical performance
- Growth
- Profitability
- Investment/capital employed

Understand future growth plans – Management interviews, investor presentations, public domain information

Construct Free Cash Flow Model
DCF Method – Cash flow model

Cash Inflows
• EBITDA
• less adjusted taxes

Cash Outflows

• Capital Expenditure
  • Incremental – for Growth. Check reasonability
  • Don’t underestimate maintenance capex

• Incremental working capital – aligned with sales growth
  • Working capital improvements are possible, but difficult
  • Extremely important matter for high working capital companies
    – Sugar – seasonal variations. Does EV include working capital?
    – Liquor – perenially high working capital (advance payment of taxes). Value shows up only when operations stabilise.
**DCF Method – WACC**

- **Discounting rate – WACC**

  “The Rate of Return that an Investor would require to be induced to invest in the stream of future cash flows being discounted”.

- **Weighted Average Cost of Capital**

  \[ WACC = \frac{Re \times E}{D+E} + \frac{Rd \times (1-t) \times D}{D+E} \]

- **Cost of Debt** – Marginal cost/ not weighted average.

- **The Debt- Equity weights are market based and not book based.**
Cost of Equity – CAPM

The Capital Asset Pricing Model (CAPM) calculates the cost of equity from an Investor’s risk view-point.

\[ R_e = R_f + (R_m - R_f) \beta + \alpha \]

Where:

- **Rf** is the Risk Free Rate
  - Return on any financial instrument with no financial risk whatsoever
  - Usually the long term Govt. bond rate (Currently at around 7% in India)

- **Rm – Rf** is the Market Risk Premium
  - Extra return that investors demand for investing in diversified portfolio of equities vis-à-vis risk free rate
  - Factor or riskiness of the economy, state of development of capital markets and size of companies
Beta and alpha

\( \beta \) – A measure of riskiness of the company vis-à-vis the overall markets
  - a measure of the variance of the company’s return in relation to the market
  - calculated by regressing stock returns against market returns

Beta is a measure of the systematic risk of the asset. The beta of the market portfolio is 1. Thus assets with a beta > 1 are more risky than the overall market, whereas those with a beta < 1 are less risky than the overall market.

Drivers of Beta:
  - Industry riskiness – Real estate vs. FMCG Industries
  - Size of the company- Infosys vs. Nucleus Software
  - Leverage Levels- Lever/ unlever betas

\( \alpha \) – Specific risks attached to the cash flows
  - New Projects
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<th>Now</th>
<th>3 yrs ago</th>
<th>6 Yrs ago</th>
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“Perpetuity value” is the projected value of the business at the end of the outlook period.

It represents a means of obtaining a proxy for the value of the future cash flows of the business after the end of the outlook period.

It assumes a hypothetical sale of the business at the end of the outlook period based on its forecast performance at that time.
Common Approaches to Perpetuity Value

Cash Flow approach
• Take forecast net cash flow for the last year of the outlook period
• Divide above amount by “r-g”
• r = Discount rate to be utilised
• g = Long term forecast average annual rate of growth after outlook period

Capitalisation of earnings approach
• Estimate future maintainable annual EBITDA after the outlook period
• Select an appropriate EBITDA multiple (inclusive of a control premium) to apply to those earnings
DCF Method – Some key points

• Valuation is at a particular date
  • Preferably the last balance sheet date

• DCF to Entity or DCF to Equity
  • Broadly should yield similar results

• Pretax/ post tax
  • Match cash flows and WACC
  • However, post tax preferable
  • Value of tax losses

• Nominal/ real
  • Match cash flows and WACC
  • However, inflation may have differential impact on different industries

• Non operating Cash flows
  • ‘Non operating’ cash flows are best valued as surplus asset (discussed later)
  • Examples – Interest on surplus funds, dividends, profit on sale of fixed assets investments, liability write offs
Do not forget surplus assets and contingent liabilities

Surplus assets – Key characteristics
- Not used for generation of profitability
- Purchased out of past cash flows
- Usually land/ properties/ investments
- Be careful to separate surplus cash from operating cash
- When an asset is surplus, any return generated by it should not be included in operating cash flows

Contingent liabilities
- Usually tax cases
- Good idea to take expert advice
**DCF: Strengths and Limitations**

### Positives
- Theoretically correct
- Forward looking
- Incorporates risk and time value of money
- Focuses on cash returns

### Limitations
- Limited applicability in service industries/new companies
- Volume and complexity of assumptions
- Adequacy of data
- Extremely sensitive to small changes in assumptions.

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Developing an understanding of the business is the key to a good DCF.
**DCF Method - suitability**

- Remains a primary method for all valuations
- Very suitable for defensives like consumer goods
- Useful for valuing certain specific assets
  - Mines/ Oil blocks
  - Brands/ trademarks
  - Commercial real estate
  - Hotels
To sum up

Various approaches to valuation

Choice of approach depends upon industry, purpose, situation

Always try multiple approaches to value/ benchmark

Subjectivity in valuations
Thank You