Agenda

Valuation: questions to trigger thinking

Valuation methods

The process of valuation

In summary

About us
Questions... questions...

What do you think of when you hear the word valuation for a business? Do you think it is related to

• Sales
• Cost
• Profit
• Cash flow
• Combination of above
• Other factor?
Questions... questions...

• Why do values of companies change from time to time?

• What drives the price of shares? Of company value?

• What is price, what is value? Is there a difference?

• A business worth a significant amount at a certain point in time may suddenly lose much of its value a very short while later.

• When the Facebook IPO hit the market, many persons expected that the value would go up. However the prices fell.
Questions... questions...

• Does value depend on whether one wants to sell a company, to buy a minority stake or to buy the entire company?

• Will a strategic investor value a company differently from a financial investor?

• How can a company which is continually losing money have any value?
Some different ways to value

• Cost vs. Market Value

• Historical vs. Replacement

• Differs depending on need of person doing valuation – buyer, seller, employee, banker, insurance company
Value to buyer

• Valued because of expected return on investment over some period of time; i.e. valued because of the future expectation

• Return may be in cash or in kind, tangible or intangible, or a combination of these
Complex nature of valuation

Value A + Value B can be

*greater*

*or*

*less than*

Value (A+B)
Why Value

When do you think a company is to be valued?
Why Value

To
• Purchase
• Sell
• Transact
• Take decisions
• Report
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These can be broadly classified into:

• Cost based
• Income based
• Market based
Valuation methods

• Different experts have different classifications of the various methods of valuation
• Within these methods, there are sub-methods
• Sometimes the methods overlap
Cost Based Methods
Cost based methods

There are different ways of arriving at cost:

• Book value

• Replacement value

• Liquidation value

NOTE
These methods could become relevant when one is considering the accounting, legal and tax impacts of valuation; in deals related to M&As, JVs and partnerships etc..
COST: Book value method

Historical cost valuation

• All assets are taken at historical book value

• Value of goodwill* is added to this above figure to arrive at the valuation

*Goodwill valuation is at Appendix I
COST: Book value method

Current cost valuation

• All assets are taken at current value and summed to arrive at value
• This includes tangible assets, intangible assets, investments, stock, receivables

VALUE = ASSETS - LIABILITIES
COST: Book value method

Current cost valuation: *Difficulties*

- Technology valuation – whether off or on balance sheet
- Tangible assets – valuation of fixed assets in use may not be a straightforward or easy exercise
- Intangible assets – all costs are not easily or readily measurable
- Could be subject to measurement error
COST: Book value method

Current cost valuation: More difficulties

• The company is not a simple sum of stand alone elements in the balance sheet

• Organisation capital is difficult to capture in a number, this includes
  – Employees
  – Customer relationships
  – Industry standing/reputation
  – Strength of connections/network capital
  – Etc…
COST: Replacement value method

- Cost of replacing existing business is taken as the value of the business
COST: Liquidation value method

- Value if company is not a going concern
- Based on net assets or piecemeal value of net assets
Income Based Methods
Income Based methods

- Earnings capitalisation method or profit earning capacity value method
- Discounted cash flow method (DCF)
INCOME: Earnings capitalisation method

• Also known as Profit earnings capacity value (PECV)
• Value determined by capitalising earnings at a rate considered suitable
• Assumed that the underlying value driver of the company is its future earnings potential
• Suitable for fairly established business having predictable revenue and cost models
• For example
  – assume that Company Profittee Limited is earning post tax profit of Rs. 5 crores and we would like to capitalize this at 10%.
  – The value of the Profittee Limited under this method is equal to Rs. (5/10%) crores, ie Rs. 50 crores.
• Creame Corner wants to acquire Samosa Specials for Rs. 10 million. The net cash flows are in the table below. Creame Corner wants to apply a discount rate of 15%. Should it buy Samosa Specials?

<table>
<thead>
<tr>
<th>Year</th>
<th>Net CF (Rs. ‘000)</th>
<th>15% disc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-10,000</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>0.8696</td>
</tr>
<tr>
<td>3</td>
<td>3,000</td>
<td>0.7561</td>
</tr>
<tr>
<td>4</td>
<td>5,000</td>
<td>0.6575</td>
</tr>
<tr>
<td>5</td>
<td>6,500</td>
<td>0.5718</td>
</tr>
</tbody>
</table>
INCOME: Discounted cash flow

- NPV is positive hence based on this method, the answer is YES, the acquisition should be made!
- Can you think of any deficiencies in this valuation method?

<table>
<thead>
<tr>
<th>Year</th>
<th>Net CF (Rs. ‘000)</th>
<th>15% disc.</th>
<th>NPV (Rs. ‘000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-10,000</td>
<td>1</td>
<td>-10,000</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>0.8696</td>
<td>870</td>
</tr>
<tr>
<td>3</td>
<td>3,000</td>
<td>0.7561</td>
<td>2,268</td>
</tr>
<tr>
<td>4</td>
<td>5,000</td>
<td>0.6575</td>
<td>3,288</td>
</tr>
<tr>
<td>5</td>
<td>6,500</td>
<td>0.5718</td>
<td>3,717</td>
</tr>
<tr>
<td></td>
<td>5,500</td>
<td></td>
<td>142</td>
</tr>
</tbody>
</table>
INCOME: Discounted cash flow

\[ \text{Value} = \sum_{t=1}^{t=n} \frac{CF_t}{(1 + r)^t} \]

- CF = cash flow
- t = the year
- r = discount rate

i.e. the cash flow for each year from year 1 to year n (which is the time period under consideration) is discounted to arrive at the present value of future cash flows from year 1 to n
INCOME: Discounted cash flow

- Discounted cash flow is based on expected cash flow and discount rates
- Sometimes it is difficult to get a reliable estimate for the future and the valuation model may need modification, for example in the illustration below:

![Discounted Cash Flow Diagram](image_url)

**Figure: Net present value**
INCOME: Discounted cash flow

Limitation: Companies in difficulty

- Negative earnings
- May expect to lose money for some time in future
- Possibility of bankruptcy
- May have to consider cash flows after they turn positive or use alternate means
INCOME: Discounted cash flow

**Limitation:** Companies with cyclic business

- May move with economy: Rise during growth times and fall in recession
- Cash flow may get smoothed over time
- Analyst has to carefully study company with a view on the general economic trends. The bias of the analyst regarding the economic scenario may find its way into the valuation model
**INCOME: Discounted cash flow**

**Limitation: Unutilised assets in business**

- Cash flow reflects assets utilised by company
- Unutilised and underutilised assets may not get reflected in the valuation model
- This may be overcome by adding value of unutilised assets to cash flow
  - The value may be on assumption of asset utilisation or market value or a combination of these.
  - For example, land can be taken at market value or cash flow linked to rent, if this is not reflected in operational cash flow that is used in the valuation.
INCOME: Discounted cash flow

Limitation: Companies that are restructuring

- May be selling or acquiring assets
- May be restructuring capital or changing ownership structure
- Difficult to understand impact on cash flow
- Firm will be more risky, how can this be captured?
- Historical data will not be of much help
- Analysis should carefully try to consider impact of such change
INCOME: Discounted cash flow

**Limitation: Mergers/Acquisitions/JVs . . .**

- Estimation of synergy benefit in terms of cash flow may be difficult
- Additional capex may be calculated based on inadequate information or limited data
- Difficult to capture effect of change in management directly in cash flow

- *Many M&As have not done as well as expected. To minimise this risk of over valuation, a proper due diligence review (DDR) exercise is to be done, with one of the mandates for this being careful review of the value drivers and the business proposition and whether the value will be retained post the deal*
Limitation: Unlisted companies

- Historical information may not be indicative of future, particularly in early stage, growth phases
- Tangible value may be limited
- Future expected value is dependent on many factors, yet to be realized
- Difficult to estimate risk
- Market information on similar companies is difficult to obtain
Market Based Methods
Market based method

- Also known as relative method
- Assumption is that other firms in industry are comparable to firm being valued
- Standard parameters used like multiples of revenue, EBITDA, PAT, book value
- Adjustments made for variances from standard firms, these can be negative or positive; i.e. premiums and discounts are assigned
Exercise in Valuation - I

How would you value Meadows Co. based on the market/industry information provided?

<table>
<thead>
<tr>
<th></th>
<th>Plantation Co.</th>
<th>Garden Co.</th>
<th>Park Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise market value/sales</td>
<td>1.4</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Enterprise market value/EBITDA</td>
<td>17.0</td>
<td>15.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Enterprise market value/free cash flows</td>
<td>20</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

**Meadows Co.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>Rs. 200 crores</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Rs. 14 crores</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>Rs. 10 crores</td>
</tr>
</tbody>
</table>
## Exercise in Valuation – I: Possible Solution

<table>
<thead>
<tr>
<th></th>
<th>Plantation Co.</th>
<th>Garden Co.</th>
<th>Park Co.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise market value/sales</td>
<td>1.4</td>
<td>1.1</td>
<td>1.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Enterprise market value/EBITDA</td>
<td>17.0</td>
<td>15.0</td>
<td>19.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Enterprise market value/free cash flows</td>
<td>20.0</td>
<td>26.0</td>
<td>26.0</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**Application to Meadows Co.**

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1.2</td>
<td>Rs. 240 crores</td>
</tr>
<tr>
<td>EBIDTA</td>
<td>17.0</td>
<td>Rs. 238 crores</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>24.0</td>
<td>Rs. 240 crores</td>
</tr>
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</table>
Exercise in Valuation - II

How would you value PenPencil Co. based on the market/industry information provided?

<table>
<thead>
<tr>
<th></th>
<th>Papers Co</th>
<th>Docs Co.</th>
<th>Prints Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise market value/sales</td>
<td>2.6</td>
<td>1.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Enterprise market value/EBITDA</td>
<td>10.0</td>
<td>21.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Enterprise market value/free cash flows</td>
<td>21.0</td>
<td>30.0</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**Application to PenPencil Co.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>Rs. 300 crores</td>
</tr>
<tr>
<td>EBIDTA</td>
<td>Rs. 15 crores</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>Rs. 7.5 crores</td>
</tr>
</tbody>
</table>
## Exercise in Valuation – II: Possible Solution

<table>
<thead>
<tr>
<th></th>
<th>Papers Co</th>
<th>Docs Co.</th>
<th>Prints Co.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise market value/sales</td>
<td>2.6</td>
<td>1.9</td>
<td>0.9</td>
<td>1.8</td>
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<tr>
<td>Enterprise market value/EBITDA</td>
<td>10.0</td>
<td>21.0</td>
<td>4.0</td>
<td>11.7</td>
</tr>
<tr>
<td>Enterprise market value/free cash flows</td>
<td>21.0</td>
<td>30.0</td>
<td>24.0</td>
<td>25.0</td>
</tr>
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</table>

### Application to PenPencil Co.

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1.8</td>
<td>Rs. 540 crores</td>
</tr>
<tr>
<td>EBITDA</td>
<td>11.7</td>
<td>Rs. 175.5 crores</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>25.0</td>
<td>Rs. 187.5 crores</td>
</tr>
</tbody>
</table>

As there is a wide value range, the application of the relative multiples does not look appropriate in this case. What are your thoughts on this?
Market based method

- Simple and easy to use
- Useful when data of comparable firms and assets are available

Limitations
- Easy to misuse
- Selection of comparable can be subjective
- Errors in comparable firms get factored into valuation model
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Valuation: questions to trigger thinking

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Valuation: Points to be factored

Valuation is calculated based on a financial model. The following are also to be considered and factored while preparing the business model and funding plan:

- Nature of transaction i.e. investment, divestment, M&A, JV or partnership etc.
- Whether 1st round or later round of investment
- Whether angel investor or VC or strategic investor
- Whether family and friends or other
- Amount of money required
- Stage of company - early stage, mezzanine stage (pre-IPO), later stage (IPO)
Valuation: Points to be factored

Valuation is calculated based on a financial model. The following are also to be considered and factored while preparing the business model and funding plan:

- Key management: Performance, expertise, team diversity and capability etc.
- Project, product, USP
- Industry scenario, global and local
- Country scenario
- Market, Total addressable market, opportunity, growth expected
- Competitive landscape, barriers to competition
Valuation: Points to be factored

Valuation is calculated based on a financial model. The following are to be considered and factored while preparing the business model and funding plan:

• Historical performance
• Future projections, pipeline
• Quality of revenue; historical, and pipeline
• Assets, tangible and intangible
• Liabilities in financial statements, potential liabilities and off Balance Sheet items
• Cash flows expected and tracked alongside revenues expected
Valuation: Points to be factored

- Strategic requirements and need for transaction
- Demand / supply position
- Flavor of the season

Initial ballpark valuation can also be a deal issue

- In M&A deals, the value of the combined business is expected to be more than value of the individual companies

Value (A+B)

Value A + Value B
Process of valuation

- Use more than one model
- Have a rationale for the models used
- Plan long term not short haul
- Look at alternate scenarios
- Discount for risks, assign probabilities
- Arrive at range

A valuation range is preferable to a single number
Process of valuation

Finally. .. after arriving at the value range. .. Ask yourself some fundamental questions

- Does the value reflect the strategic rationale for the transaction, factoring the past performance and the expected future?
- Does the value reflect the USP as compared to competition?
- Does the value reflect the quality of the management?

Most Importantly
- Will the value be retained/realised and not lost post the deal?
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In summary .. and more

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In Summary

• Build a Financial Model that is consistent, capturing elements of the business model and addressing the deal rationale
• Look at different valuation model; arrive at a value range
• Keep an eye on the law and statutory regulations; these also impact valuation and deal negotiation.
• Plan for advisors/accountants/lawyers, due diligence costs and other deal related costs which will add to the price you pay or reduce the price you get for any transaction
• Prepare for negotiation, identifying deal issues and possible negotiation strategies
• Plan for long term impact of decisions on valuation

Additional information/articles/resources at:
• www.slideshare.net/anjanavivek
• http://www.linkedin.com/company/venturebean-consulting-private-limited
APPENDIX: Goodwill calculation

• Linked to
  – Capital employed
  – Typical profits in industry
  – Actual profits

• Goodwill is calculated by comparing performance with that of other similar companies in industry
APPENDIX: Goodwill calculation

• Normal **capitalisation** method
  – Normal capital required to get actual return less actual capital employed

• Super **profit** method
  – Excess of actual profit over normal profit multiplied by number of years super profits are expected to continue

• Annuity method
  – Discounted super profit at a suitable rate, to factor time value of money
APPENDIX: Goodwill calculation

COMPANY A

• Capital employed: Rs. 45 cr
• Normal rate of return: 12 %
• Future maintainable profit: Rs. 5.5 cr

• What would be the goodwill under the normal capitalization method?
COMPANY A

- Capital employed: Rs. 45 cr
- Normal rate of return: 12%
- Future maintainable profit: Rs. 5.5 cr

**What would be the goodwill under the normal capitalization method?**

**SOLUTION**

\[
= (5.5/.12) - 45 = Rs. 0.83 \text{ cr}
\]
APPENDIX: Goodwill calculation

COMPANY B

- Capital employed: Rs. 50 cr
- Normal rate of return: 15 %
- Future maintainable profit: Rs. 8 cr
- Super profit can be maintained for 3 years

- What would be the goodwill under the super profit method?
APPENDIX: Goodwill calculation

COMPANY B

- Capital employed: Rs. 50 cr
- Normal rate of return: 15 %
- Future maintainable profit: Rs. 8 cr
- Super profit can be maintained for 3 years

What would be the goodwill under the super profit method?

SOLUTION

\[ \text{SOLUTION} = [8 - (50 \times 0.15)] \times 3 = \text{Rs.1.50 cr} \]
APPENDIX: Intangible Asset (IA) Valuation

The value of the IA is from

- Economic benefit provided
- Specific to business or usage
- Has different aspects
  - Accounting value
  - Economic value
  - Technical value

- Can you think of examples of these different values?
APPENDIX: Valuation of IA

Depends on objective and can vary widely depending on purpose

• For accounting purposes – to show in financial statements
• For acquisition/merger/investment
• For management to understand value of company for decision making
APPENDIX: IA value in transactions

Often value paid in M&A deals is more than market value/book value. This could be:

• Partly due to over bidding due to strategic reason (existing or perceived) and
• Partly due to IA of company, not captured in balance sheet
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About us
Introduction

• VBC is a boutique consultancy focused on improving the capability index of management teams, systems and processes across the business sectors of the future.
• Our mission is to inspire people and organizations, in creating possibilities for life generate ideas & provide practical approaches that make positive change a real part of day-to-day business.
• Our result-oriented value ethos focuses on achievement of goals.
• We provide assistance in defining the vision and business strategy and in aligning the senior management to the corporate vision.
• We partner in transition and growth to the next level, in business restructuring and business model transformation
• Our clients range from startups and VCs to large listed corporates and MNCs
• VBC has been founded by alumni of IIM’s and a former faculty member of IIM who continues to teach there as visiting faculty
Our expertise within various areas.....

Cross functional expertise

Planning, Change Management, Integration
- Strategies for business growth
- Governance
- Change Management
- Project and Program Management
- Business and operational Due Diligence

Sales and marketing effectiveness
- Channel strategies
- Product portfolio Management, and Product Extension
- Value Chain Mapping
- Customer analysis, segmentation and loyalty programs

Operation
- Lean process engineering methods
- Gap-analysis
- Customer focused processes

Organizational Development / Leadership / HR
- Performance Management
- Key talent & change management
- Leadership development based on the Leadership Diamond™
- Organization Structure for Excellence & Growth

IT
- Strategy, Governance & organization
- Sourcing
- Architecture
- Project Management

Finance
- Cost / Overheads Reduction
- Cash-flow Management & Capital Structure Advisory
- Project Evaluation & Risk Management
- Syndication-Debt & Equity

Functional expertise
Thank You!