'Brand Valuation & Real Options'

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Brand Valuation continues …

- For a stable firm
  - P_0/S_0 = (profit margin X payout ratio) / (k_e – g)
  - P/S for a high growth firm
  - Expected growth rate = Retention ratio X profit margin X (Sales/BV of equity)
  - Value of a brand name = (P/S_b – P/S_g) X Sales
  - We gave a try using data of three rice processing companies …
  - Chaman Lal Sethia Exports (Maharani Brand);
  - Satnam Overseas renamed as Kohinoor Foods (Kohinoor Brand);
  - K R B L (Lal Quila Brand)

Firm	Satnam Overseas	Chaman Lal Sethia Exports
Sales	558.00	83.87
Net Profit	17.40	1.76
Book Value of Equity	113.65	22.10
No of Shares	1.96	0.94
Dividend	4.91	
Beta	0.92	**0.92**
Price	69.50	31.10
Profit Margin	3.12%	2.10%
Divident Payout Ratio	28.22%	**28.22%**
Period of High Growth	7	**7**
Growth Rate Estimation	11%	6%
Cost of Equity	13.02%	13.02%
P/S Ratio	0.347645844	0.170974599
Satnam's Market Capitalization	136	
Value of the Brand (Computed)	99	72%
Assumptions		
** 7 years first phase, second phase growth of 6%*		
*** payout ratio and cos of equity of the branded product taken*		

Firm	K R B L	Chaman Lal Sethia Exports
Sales	731.00	83.87
Net Profit	32.03	1.76
Book Value of Equity	241.00	22.10
No of Shares	2.13	0.94
Dividend	5.53	
Beta	1.09	**0.92**
Price	141.45	31.10
Profit Margin	4.38%	2.10%
Divident Payout Ratio	17.27%	**28.22%**
Period of High Growth	7	**7**
Growth Rate Estimation	11%	6%
Cost of Equity	14.04%	13.02%
P/S Ratio	0.382198957	0.170974599
Satnam's Market Capitalization	301	
Value of the Brand (Computed)	154	51%
Assumptions		
** 7 years first phase, second phase growth of 6%*		
*** payout ratio and cos of equity of the branded product taken*		

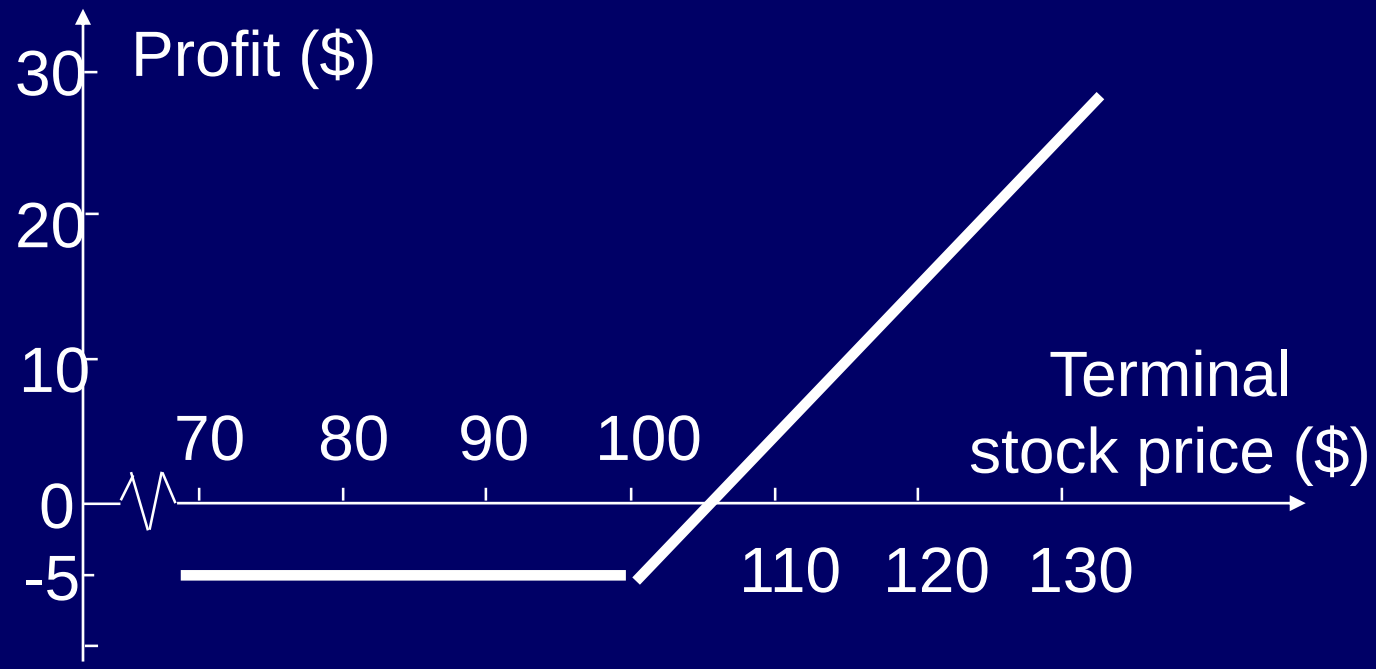
Firm	K R B L	Chaman Lal Sethia Exports
Sales	731.00	83.87
Net Profit	32.03	1.76
Book Value of Equity	241.00	22.10
No of Shares	2.13	0.94
Dividend	5.53	
Beta	1.09	**0.92**
Price	141.45	31.10
Profit Margin	4.38%	2.10%
Divident Payout Ratio	17.27%	**17.27%**
Period of High Growth	5	**5**
Growth Rate Estimation	11%	7%
Cost of Equity	14.04%	14.04%
P/S Ratio	0.388113222	0.153002801
Satnam's Market Capitalization	301	
Value of the Brand (Computed)	172	57%
Assumptions		
** 5 years first phase, second phase growth of 6%*		
*** payout ratio and cos of equity of the branded product taken*		

Terminology

- An option is defined as a right, but not an obligation, to buy or sell underlying assets at a fixed price during a specified time period.
- The fixed price is called the exercise price
- Call Option – Right to buy an asset at a specified exercise price on or before the exercise date.
- Put Option – Right to sell an asset at a specified price on or before the exercise date.

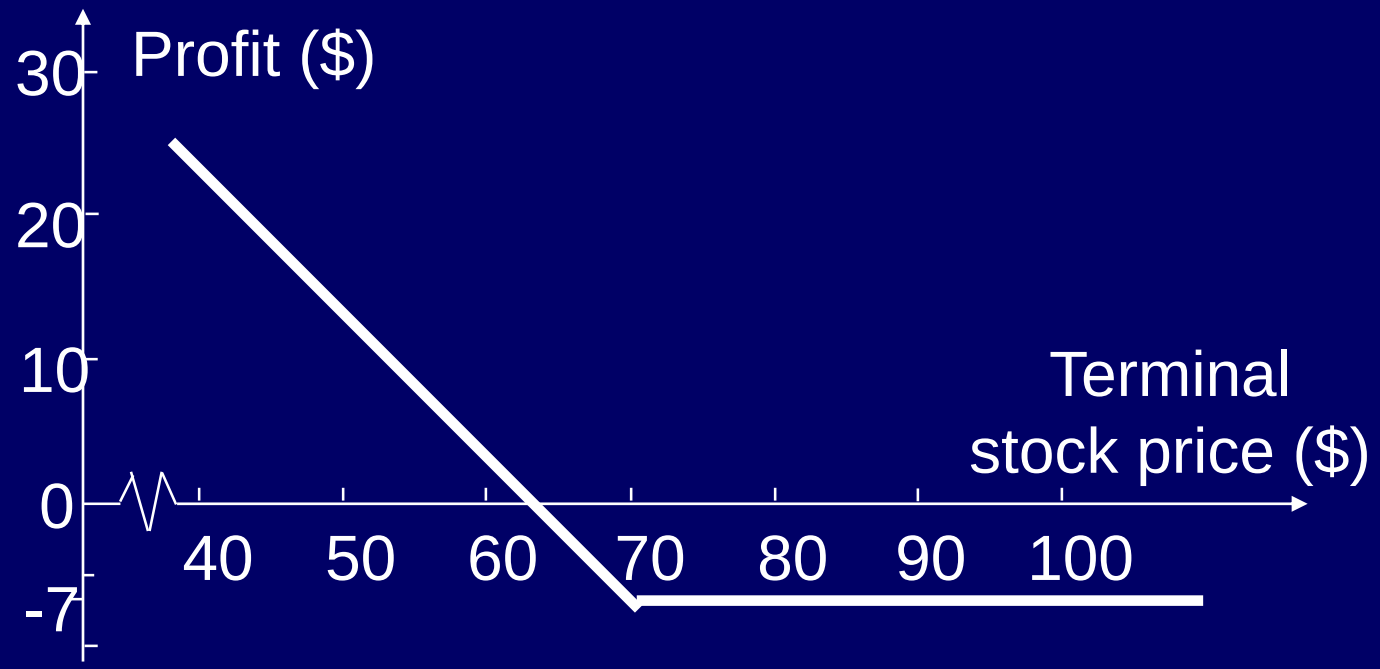
Long Call on IBM (Figure 1.2, Page 7, of 'Option, Futures, and other derivatives' 4th edition, John C. Hull, 1999)

Profit from buying an IBM European call option: option price = $5, strike price = $100, option life = 2 months



Long Put on Exxon (Figure 1.4, page 8, of 'Option, Futures, and other derivatives' 4th edition, John C. Hull, 1999)

Profit from buying an Exxon European put option: option price = $7, strike price = $70, option life = 3 mths



Long Call Option Value depends on …

Price of an underlying asset

- Positive

Exercise Price

- Negative

Variability of returns

- Positive

Time left for expiration

- Positive

Risk free interest rate

- Positive

Long Put Option Value depends on ...

Price of an underlying asset
- Negative

Exercise Price
- Positive

Variability of returns
- Positive

Time left for expiration
- Positive

Risk free interest rate
- Negative

Black and Scholes Model

- c : equilibrium Call option price today
- p : Put option price today
- S_0 : Stock price today
- X : Strike price
- T : Life of option
- σ^2: Standard deviation of continuously compounded annual rate of return on the stock
- $N(d)$: Value of the cumulative normal density function
- r : Risk-free rate for maturity T with continuous compounding
- e : Base of natural logarithm

Common Equity as an Example

- We know, S + B = V
- S = Max (0, V-B)
- In case of a insolvent firm, the equity holders will get zero.
- In case of a profitable firm, the equity holders will get (V-B).
- In other words, they will get all the remaining value of the firm after repaying the bond/debt holders.

Firms with Negative Networth

If, Assets = 1, Liabilities = 10

- We know, S + B = V
- In this case, usually we normally visualize, the equity holders will get zero.
- But, assets are volatile (say, around 27% volatility)
- S = Max (0, V-B)
- In other words, they will get something if the firm turns around
- Dividend Yield 3%, Interest Rate 10%, Maturity 5 years then value of share price … ?
- Please note that the maturity period is assumed to be the bond maturity period and the interest rate is taken as the risk-free interest of that period

New Organization (YFA) ➔IPO

- To raise IPO, they had three options: (a) form a new company; (b) convert the proprietorship into a company; (c) purchase a dormant company
- The first two routes have lot of issues and takes a lot of time, paper work and other resources
- Purchase of a dormant company can be done through the majority shareholders (under SEBI regulations) … the MOA and AOA of the company can be changed through passing a special resolution.
- The search resulted in two companies which fit into our definition of a dormant company: IQMS Software (BSE Listed) and Saarc Net (BSE Listed)

Case of a New Organization

- Checked the above information first hand.
- If we consider the above option as a real option (specially, a long call option) giving us the advantage of entering a sector at least three years before we can do using other strategies then we can use …
- A Black & Scholes Options Calculator.
- We find that the value of this option comes out to between Rs 3.40 crores to Rs 3.70 crores.
- In other words, if there is a right target company giving us a capacity to raise Rs 10 crores then the total acquisition price of the target company ...

Evaluating a Takeover Deal

- Suppose, a Co-operative Sugar Unit in Uttar Pradesh is up for sale/divestment … how do you value it?
- Always recalculate things using Net Present Value (NPV) or Discounted Cash Flow (DCF) Technique
- Also, look for any real options that exist
- Also, take a new expected rate of return (depending on the new risk profile of the new organization) and of course new cash flows (due to perceived synergies or otherwise)
- Take the deal costs also into account

Managerial Real Options

Management flexibility to make future decisions that affect a project's expected cash flows, life, or future acceptance.

Project Worth = NPV +

Option(s) Value

Managerial Real Options

Expand (or Contract)

- Allows the firm to expand (contract) production if conditions become favorable (unfavorable)
- Examples
- Expand – Many … Kirloskars, almost everyone
- Contract – Zee Online

Abandon

- Allows the project to be terminated early
- Examples
- Enron (Dabhol Power Corporation)

Managerial Real Options

Postpone (timing option)

- Allows the firm to delay undertaking a project (reduces uncertainty via new information)
- Example
- Private Power Producers (say, Cogentrix)

Flexible Production Facilities

- Purchasing flexible production facilities
- Examples
- Reliance Petrochemicals

Essential Take Homes …

- Make a clear distinction between investment alternatives and options embedded (in these alternatives)
- Convince management that some proposals contain flexibility that cannot be valued by DCF technique
- In practice, real world cases have to be simplified in order to keep the order tractable.