CALCULATION OF BUSINESS VALUATION BY USING PRICE/EARNING MULTIPLE METHOD

Dr. Avinash Hanmant Ghadage
NBN Sinhgad School of Management Studies, Ambegaon Bk. Pune.
Contact: 7385577945
Email: navinghadage@gmail.com
Domain Area: Finance

Abstract:
Business valuation is a powerful tool to find out intrinsic value of business. It guides to the managers for running the company in a competitive environment. Manager can learn about how to take decision by combining financial and non-financial factors, which will enhance business value. Now day's investors are paying more attention on business value and share price before their investment in the respective company. There is a need of more accurate and suitable models which will minimize risk in valuation by giving same value of business. Valuation estimates can vary widely among experts, these variations arise because, experts use different valuation models or make different assumptions because estimating parameters in the models are not clear.
Keywords: *Business valuation, cash flow, risk profile, market price, P/E multiple, P/B.*

1.1 Introduction:

Business valuation models are becoming more complex, because these require number of inputs to value a firm. The analysts are often facing a problem in valuations due to too much of collected information of that company, separating the information which matters and which does not matters in business valuation is crucial task. Business valuation of a large and mature company having a long financial history is usually more precise than the valuation of a young and new startup company. Analyst should find true value of the business which could be related to financial characteristics like its growth prospects, cash flows and risk profile. Any deviation from this true value is a sign that a stock is undervalued or overvalued. Therefore the best estimate of value is the market price.

1.2. Classification of Business Valuation Methods

A. Balance Sheet-Based Methods

i. Book Value Method
ii. Adjusted Book value Method
iii. Liquidation Value Method
iv. Substantial Value Method

B. Income Statement Based Approach (Relative Valuation)

I. Relative Valuation using Fundamentals

i. Price Earnings Multiples
ii. EV/EBITDA Multiples
iii. Price to Book Value Multiple (P/B)
iv.

II. Relative Valuation using Comparables
   i. Cross Sectional Comparison
   ii. Comparison Across time

C. Cash Flow Discounting Based Approach
   I. Free Cash flow to Equity Method
   II. Free Cash flow to Firm Method
   III. Dividend Discount Method
   IV. Gorden Discount Model
   V. Adjusted Price Value Method

D. Value Creation based Methods
   i. EVA
   ii. Economic Profit

E. Option Pricing Methods
   i. Black and Scholes Method
   ii. Investment Option Method

1.3 Review of Literature:

1. Damodaran (2006) [1] in his book ***"Damodaran*** on ***Valuation Security analysis for Investment and Corporate Finance"***,
The author focused on loose ends in valuation like liquidity, control, synergy, transparency, and distress which affect on value of business. According to his opinion, there are too many valuation models available for business valuation purpose, choosing the right model is as critical to arrive at a sensible value as knowing how to use the model. He gave a guidelines could be used to choose the right business valuation model

2. Berkman Henk et.al (2000)[2] in research article "***The Accuracy of Price-Earnings and Discounted Cash Flow Methods of IPO Equity Valuation"***,
They compared valuation resulting from conventional discounted cash flow and price earnings valuation methods to the market price. They took newly listed companies 45 on New Zealand Stock Exchange to compare valuation and they concluded that, the discounted cash flow method and price earnings comparable produce same result.

3. Richter Frank, Herrmann Volker (2003)[3] in research paper "***Pricing with performance controlled multiples"***,
The authors said that the multiples resulting from comparable companies are used as a point of reference in business valuation.
In their research while calculating valuation, they used specific control factors such growth and profitability to select "comparable assets". They also guided about varied methods of estimating multiples from comparable assets.

4. Adams, et. al(2011)[4] in research paper ***"Comparison of Alternative Approaches To Equity Valuation of Privately Held Entrepreurial Firms"***, they gave two alternative approaches to estimate the prospective value of private firms which are not traded in the public market place. The first approach shows an accounting point of view and focus on capitalizing the residual earnings of the firm. The second approach, Residual Income Model (RIM) states that the firm value is the sum of its invested capital and the discounted present value of the residual income from its future activities

1.4 Research Methodology:

- **Type of Research:**
  Type of research is Exploratory Research; here researcher has to go for post martum analysis of annual reports of the company to judge the performance of company. Researcher has to explore many things like, risk, market price of share, return on equity, cost of capital while understanding performance of business.
- **Population :**
  There are 27 Listed Automotive companies in Pune region, out of which researcher has selected Bajaj Auto Limited company and Mahindra & Mahindra Ltd(Mahindra Rise) as a sample, criteria for selection of sample is based upon the past performance of target company. The company which is suffering a loss could not be selected as a sample.
- **Sampling Technique:**
  Here researcher has used Non probability sampling technique of which convenience sampling technique is more suitable.
- **Sources of Data collection:**
  This research is totally depends upon secondary data which is collected from annual reports of Bajaj Auto Limited.

1.5 Research Gap:

Business analysts are still facing estimation challenges due to lack of clear guidelines about estimation practices. By referring the literature it is seen that valuation practitioners ignore the recommendations provided by the theory which creates ambiguity in final business valuation. The good thing is that most practitioners find valuation models useful because of standardization and comparison with peers, the fact is that two experts arrive at different estimates even though they use the same model, it shows the wide gap between the theoretical valuation framework and its implementation.

There is a need of more accurate and suitable models which will minimize risk in valuation by giving same value of business. Valuation estimates can vary widely among experts, these variations arise because, experts use different valuation models or make different assumptions because estimating parameters in the models are not clear.

1.6 Introduction of Price/Earnings Multiple (P/E):

The P/ E Multiple is one of the business valuation method under relative business method. This method is the indicator to judge the worth of a company’s share. Most of the investors generally watch the progress of stock indices like Sensex & Nifty to understand whether the market is falling or rising.

The multiple basically tells investors what is the price to be paid per share for one rupee of earning generated by Target Company. The high P/E ratio indicates that, investors are optimistic and they expect higher earnings growth in the future, and if P/E multiple is low, it means that the stock is undervalued and there is a scope for appreciation in future. Generally P/E ratio less than 10 is often treated as cheaper.

Formula:

$$\textbf{P/E Ratio} = \frac{\text{Market price per share}}{\text{Annual Earnings per share}}$$

P/E ratios alone cannot be used for decision making and an investor should also check the Quality of profits as well as its sustainability before taking a final call.

1.7 Applicability of this P/E Multiple:

i. If company is in profit then only this multiple can be considered, in case of loss making company it is not applicable.

ii. This multiple is used when investor wanted to know, by how much times he should pay with respect to earning of company when buying the shares of company.

iii. When investor or buyer wants to know the lowest minimum amount at which deal would be carried, in such circumstance this method is applied.

iv. High Price to earnings ratio indicates that investors expect high earning growth in future. In case of investing purpose, only P/E ratio should not be considered as a standalone parameter.

1.8.1 Model of Price/Earning Multiple Method

Table No 1.1 : Business valuation of Bajaj Auto Ltd. by Price /Earning Multiple Method

Amt. in Cr.

Particulars	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**
a. Market price per share	2083.60	2016.60	2,422.45	2,945.35	3,077.4
b. Earning per share	116.80	104.60	130.8	132.3	140.6
c. P/E Ratio	17.8	19.3	18.5	22.26	21.88
d. Net Profit Earned (In Crores)	3380.28	3025.63	3783.98	3,827.56	4,068.1
e. Value of Firm = (c*d) in Cr.	**60301.0**	**58331.6**	**70080.3**	**85201.48**	**89010.02**

(Source: Self generated through Annual Reports of Bajaj Auto Ltd.)

1.8.2 Model of Price/Earning Multiple Method

Table No 1.1: Business valuation of Mahindra & Mahindra Ltd. (Mahindra Rise) by Price /Earning Multiple Method

Amt. in Cr.

Particulars	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**
a. Market price per share	980.7	1187.8	1219.75	1295.00	746.00

b. Earning per share	79.06	53.12	54.25	30.69	36.64
c. P/E Ratio	12.4	22.4	22.5	42.20	20.36
d. Net Profit Earned (In Crores)	4666.93	3137.47	3,211.26	3,643.39	4,356.01
e. Value of Firm = (c*d) in Cr.	**57890.95**	**70156.0**	**72201.56**	**153751.05**	**88688.36**

(Source: Self generated through Annual Reports of Mahindra & Mahindra Ltd. (Mahindra Rise)

1.9 Limitations of P/E multiple method

i. P/E multiple represents a picture of where a firm is right now, but it fails to confine the active and ever-evolving nature of business.

ii. If a company manipulates it's earning, so earning per share and Price to earnings ratio can be vague.

iii. In case of irregular P/E ratio, at the time business valuation analyst considers the past earnings of a company. So, this ratio won't provide clear idea of future earning prospective of a company to the investor.

iv. Multiples are based on historic data hence valuations based on such multiples will fail to know the differences in estimated performance up to longer term, and it will produce complexity to value correctly cyclical industries unless somewhat subjective normalization adjustments are made.

1.10 Risk involved in this method

i. Price to earnings ratio is a superior and easy gauge of stock valuation, but investor should not consider this multiple alone, during investment decision.

ii. In conjunction with P.E ratio before investing, investor should verify all other fundamental parameters also.

iii. While considering Price to earnings ratio of a stock, investor should consider the average P/E ratio of other stocks in the same sector. If it is not available, then he could consider same company's multiple of past years.

iv. If Investor finds that the Earning per share is increasing with constant rate, but P/E ratio is not increasing due to bad market condition then he should consider it as a good opportunity to buy the stocks.

1.11 Findings:

1. Business valuation by Price Earning method is towards lower side because it is realistic calculation from past to present, which ignores company goodwill value.
2. P/E ratio method is widely used in practice, which relies on finding listed companies in similar businesses to the company being and looking at the relationship between share price and earnings.
3. Valuation of a young company is more difficult due to the lack of historical data and uncertainty about many elements that could influence its development.

4. In case if company is suffering a loss, this method is not applicable for such company.

1.12 Conclusion:

Value of business depends not only on company's historical financial results but also its ability to create value in the future. Before using a particular model for business valuation, investor/analyst should deeply study the company's financial performance then he could select a suitable model for valuation purpose.

References:

1. Damodharan Ashwath: *"Damodaran on Valuation-Security analysis for Investment and Corporate Finance"*, 2006, 2nd edition, John Wiley & Sons publication. ISBN: 9780471751212.

2. Berkman Henk, Bradbury Michael E., Ferguson Jason, (2000), "*The accuracy of price-earnings and discounted cash flow methods of IPO equity valuation"*, Journal of International Financial Management and Accounting, pp - 72-83.

3. Richter, Frank and Herrmann, Volker, (2003), Pricing with Performance-Controlled Multiples. Schmalenbach Business Review, Vol. 55. Pp-01-05.

4. Adams, Thornton Michael, Barrya (2011*) "Comparison of Alternative Approaches To Equity Valuation of Privately Held Entrepreurial Firms"* Journal of Finance and Accountancy.Vol-1, pp-02-15.

Websites:

1. www.Bajajauto.com
2. www. Mahindra.com