

Intrinsic Value Estimation Through Fundamental Analysis : A Case Study Of Dr. Reddy's Laboratories Ltd., Hyderabad

** Dr. C. Viswanatha Reddy*

*** J. Viswa Pavani*

INTRODUCTION

To determine the intrinsic value of an equity stock, the security analyst must forecast the earnings and dividends expected from the stock and choose a discount rate which reflects the riskiness of the stock. This is what is involved in a fundamental analysis, perhaps the most popular method used by the investment professionals. The earnings potential and riskiness of a firm are linked to the prospects of the industry to which it belongs. The prospects of various industries, in turn, are largely influenced by the developments in the macro economy. Researchers have found that stock price changes can be attributed to the various factors, viz., Economy - wide factors: 30 - 35%; Industry factors: 15 - 20%; Company factors: 30 - 35%; Other factors: 15 - 25%. Based on the above evidence, a commonly advocated procedure of fundamental analysis, which is a three-step examination, calls for: **(a)** Understanding the macro-economic environment and developments; **(b)** Analyzing the prospects of the industry to which the firm belongs; **(c)** Assessing the projected performance of the company. But the researchers, in this study, have confined to the third phase of fundamental company analysis only at Dr. Reddy's Laboratories Ltd., Hyderabad. Therefore, the researchers in the present work have focused mainly on the assessing the projected performance of the company.

FUNDAMENTAL ANALYSIS DEFINITION

Fundamental analysis is a stock valuation method that uses financial and economic analysis to predict the movement of stock prices. The fundamental information that is analyzed can include a company's financial reports, and non-financial information such as estimates of the growth of demand for products sold by the company, industry comparisons, and economy-wide changes, changes in government policies, etc.

GENERAL STRATEGY

To a fundamentalist, the market price of a stock tends to move towards its “*real value*” or “*intrinsic value*”. If the “*intrinsic/real value*” of a stock is above the current market price, the investor would purchase the stock because he knows that the stock price would rise and move towards its “*intrinsic or real value*”. If the intrinsic value of a stock was below the market price, the investor would sell the stock because he knows that the stock price is going to fall and come closer to its intrinsic value. All this seems simple. Now, the next obvious question is how to find out what the intrinsic value of a company is? Once we know this, we will be able to compare this price to the market price of the company and decide whether we want to buy the stock (or sell it if we already own that stock). To start finding out the intrinsic value, the fundamentalist analyzer makes an examination of the current and future overall health of the economy as a whole.

STATEMENT OF THE PROBLEM

Company analysis is the last leg in the economy - industry - company analysis sequence. It may be organized into two parts **(a)** A study of financials, and **(b)** A study of other factors. However, the researchers have restricted to the study of financials only, and have not focused on other factors.

There are two principal methods of equity valuation, viz., the dividend discount model and the earnings multiplier

* Associate Professor, Department of Management Studies, Sree Vidyanikethan Institute of Management, A. Rangampet, Tirupati- 517 102, Andhra Pradesh. E-mail: vsrits@yahoo.com

** MBA IV Semester Student, Department of Management Studies, Sree Vidyanikethan Institute of Management, A. Rangampet, Tirupati - 517 102, Andhra Pradesh. E-mail: viswapavani@gmail.com

model. In practice, the earnings' multiplier method is the most popular method. The key questions to be addressed in applying the earnings multiplier approach are: What is the expected EPS for the forthcoming year? What is a reasonable P/E ratio given the growth prospects, risk exposure, and other characteristics of the firm?

To answer these questions, investment analysts start with a historical analysis of earnings (and dividends), growth, risk, and valuation and use this as a foundation for developing the forecasts required for estimating the intrinsic value. While earnings are important, by themselves, they don't tell us anything about how the market values the stock. To begin building a picture of how the stock is valued, one need to use some fundamental analysis tools.

The present study entitled "*Intrinsic Value Estimation Through Fundamental Analysis : A Case Study of Dr. Reddy's Laboratories Ltd., Hyderabad*" is a modest attempt in this direction, which focuses on various aspects, viz., Earnings Per Share, Price to Earnings Ratio, Projected Earnings Growth, Price to Sales, Price to Book Value Ratio, Dividend Payout Ratio, Dividend Yield, Book Value, Return on Equity, Intrinsic Value Of The Share, Value Anchor, etc.

OBJECTIVES OF THE STUDY

1. To calculate the return on equity of Dr. Reddy's Laboratories Ltd., Hyderabad.
2. To find out the book value per share, Earnings per share, dividend pay-out ratio, dividend per share of Dr. Reddy's Laboratories Ltd., Hyderabad.
3. To estimate the compound growth performance in sales, earnings and dividends of Dr. Reddy's Laboratories Ltd., Hyderabad.
4. To determine Price-earnings ratio of Dr. Reddy's Laboratories Ltd., Hyderabad.
5. To estimate the intrinsic value of the shares of Dr. Reddy's Laboratories Ltd., Hyderabad.
6. To determine the value anchor and value range of Dr. Reddy's Laboratories Ltd., Hyderabad.

RESEARCH METHODOLOGY

✿ **Research Design:** In view of the objectives of the study listed above, exploratory research design has been adopted. Exploratory research is one, which largely interprets the already available information, and it lays particular emphasis on analysis and interpretation of the existing and available information, and it makes use of secondary data.

✿ **Sources Of Data:** The study is based on secondary data, discussions with personnel concerned. The secondary data consists of the annual reports of Dr. Reddy's Laboratories Ltd., Hyderabad ranging for the last six years. Various other reports like company's magazines, published books and websites were also referred to for the present study.

✿ **Tools of Analysis:** The data collected for the study was analyzed logically and meaningfully to arrive at meaningful conclusions. The following are the tools applied for data analysis in the present study.

✿ **Financial Tools:** Earnings per Share - EPS, Price to Earnings Ratio - P/E, Projected Earnings Growth - PEG, Price to Sales - P/S, Price to Book - P/B, Dividend Payout Ratio, Dividend Yield, Book Value, Return on Equity.

✿ **Statistical Tools:** Compound Annual Growth Rate (CAGR), Geometric Mean Analysis, Trend Analysis.

✿ **Scope And Period Of The Study:** The scope of the study is defined in terms of concepts adopted and period under focus: Firstly, the binary concepts of Return on equity, Book value per share, intrinsic value of the share were used for measuring profitability and market price of the share and also to arrive at various objectives of the study. Secondly, the study is based on the annual reports of the company for a period of 7 years from 2004-05 to 2010-11. The reason for restricting the study to this small period is the time constraint. Thus, on the whole, the purpose of the research is to analyze the past and present performance of Dr. Reddy's Laboratories Ltd. on various financial areas like return on equity, book value of the share, growth rate in various business factors, and the intrinsic value of the share, etc.

✿ **Limitations Of The Study:** The information used is primarily from historical annual reports available to the public, and the same doesn't indicate the current situation of the firm. Detailed analysis could not be carried for the research work because of the limited time span. Since financial matters are sensitive in nature, the same could not be acquired easily.

SECTION I: EARNINGS AND DIVIDEND LEVEL

To assess the earnings and dividend level, investment analysts look at metrics like the return on equity, the book value

per share, the Earnings per share, the dividend pay-out ratio, and the dividend per share. The data relating to such factors is provided in The Table 1.

✿ **Return On Equity:** Return on equity is derived by taking net income (Profit after interest and taxes) and dividing it by the shareholders' equity. This indicates the returns which the management is realizing from the shareholders' equity and shows how effectively ordinary shareholder funds are being utilized by the management. As long as it is above the current interest rates, a company is doing fairly well. Perhaps, the most important indicator of financial performance, the return on equity is defined as:

$$\text{Return on Equity} = (\text{PAIT} / \text{Ordinary Shareholders Funds}) \times 100$$

✿ **Book Value (BV) Per Share:** Book value per share means the amount net worth is available to each share outstanding in the company. It is derived by dividing the total shareholders' funds by the total number of shares outstanding. The book value per share is calculated as:

$$\text{BVPS} = \frac{\text{Total Equity Funds}}{\text{Number of Shares Outstanding}}$$

✿ **Earnings Per Share (EPS):** Earnings per Share are derived by dividing the profit of a company by the total number of shares outstanding. Earnings here mean the net profit (i.e., Profit after Interest and Taxes). This is the amount by which the total revenues exceed the total expenses for the year.

$$\text{EPS} = \frac{\text{PAIT} - \text{Preference Dividing}}{\text{Number of Shares Outstanding}}$$

The net earnings figure is the amount which is completely free from any obligations, and the company can plough it back into the company, pay to the ordinary shareholders as dividends or a combination of both.

✿ **Dividend Payout Ratio:** The dividend payout ratio represents the proportion of equity earnings which is paid out as dividends. It is defined as:

$$\text{Dividend Payout Ratio} = (\text{Equity Dividends} / \text{Equity Earnings} \times 100)$$

✿ **Dividend Per Share:** The dividend per share is simply the dividend declared per share. In India, the dividend is stated as a percentage of the paid up value per share. For example, a firm may declare a dividend of 50 per cent. If the paid up value of its share is ₹ 10, it means that the dividend per share is ₹ 5.00 (50 per cent x ₹ 10).

SECTION II: GROWTH PERFORMANCE

To measure the historical growth, the compound annual growth rate (CAGR) in variables like sales, net profit, earnings per share and dividend per share is calculated. To get a handle over the kind of growth that can be maintained, the sustainable growth rate is calculated.

Table 1 : Return On Equity, Book Value Per Share, Earnings Per Share, Dividend Pay-Out Ratio, and Dividend Per Share					
Year	Return on Equity (%)	Book-Value per Share (₹)	Earnings per Share (₹)	Dividend Pay-Out Ratio (%)	Dividend per Share (₹)
2003-04	13.83	267.51	37.01	13.50	5.00
2004-05	3.15	136.90	8.55	58.47	5.00
2005-06	9.33	145.20	27.58	18.12	5.00
2006-07	26.90	247.60	74.23	5.05	3.75
2007-08	9.87	279.90	28.27	13.26	3.75
2008-09	10.66	249.60	33.32	18.75	6.25
2009-10	14.30	254.20	50.15	22.43	11.25
2010-11	14.84	272.00	52.82	21.30	11.25
Source: Compiled and calculated from the Annual Reports of Dr. Reddy's Laboratories Ltd., Hyderabad.					

❖ **Compound Annual Growth Rate:** The compound annual growth rate (CAGR) of sales, earnings per share, and dividend per share for the period of the study for Dr. Reddy's Laboratories Ltd. is calculated below:

$$\text{CAGR of Sales} = \left[\frac{\text{Sales for 2010 - 11}}{\text{Sales for 2004 - 05}} \right]^{\frac{1}{7}} - 1 = \left[\frac{\text{₹ 52,182 millions}}{\text{₹ 15,576 millions}} \right]^{\frac{1}{7}} - 1 = 0.194 \text{ or } 19.4 \text{ per cent.}$$

$$\text{CAGR of EPS} = \left[\frac{\text{EPS for 2010 - 11}}{\text{EPS for 2004 - 05}} \right]^{\frac{1}{7}} - 1 = \left[\frac{\text{₹ 52.82}}{\text{₹ 8.55}} \right]^{\frac{1}{7}} - 1 = 0.297 \text{ or } 29.7 \text{ per cent.}$$

$$\text{CAGR of DPS} = \left[\frac{\text{DPS for 2010 - 11}}{\text{DPS for 2004 - 05}} \right]^{\frac{1}{7}} - 1 = \left[\frac{\text{₹ 11.25}}{\text{₹ 5.00}} \right]^{\frac{1}{7}} - 1 = 0.1229 \text{ or } 12.3 \text{ per cent.}$$

$$\text{CAGR of BV per Share} = \left[\frac{\text{BV for 2010 - 11}}{\text{BV for 2004 - 05}} \right]^{\frac{1}{7}} - 1 = \left[\frac{\text{₹ 272.00}}{\text{₹ 136.90}} \right]^{\frac{1}{7}} - 1 = 0.103 \text{ or } 10.3 \text{ per cent.}$$

$$\text{CAGR of Net Worth} = \left[\frac{\text{Net Worth for 2010 - 11}}{\text{Net Worth for 2004 - 05}} \right]^{\frac{1}{7}} - 1 = \left[\frac{\text{₹ 60,202 millions}}{\text{₹ 20,740 millions}} \right]^{\frac{1}{7}} - 1 = 0.1646 \text{ or } 16.5 \text{ per cent.}$$

Table 2 : CAGR Of Various Factors	
Factor	CAGR
1. CAGR in Sales	19.4 per cent
2. CAGR in EPS	29.7 per cent
3. CAGR in Dividend per share	12.3 per cent
4. CAGR of Book Value	10.3 per cent
5. CAGR on Net Worth	16.5 per cent

❖ **Interpretation (Table 2) :**

1. The compound annual growth rate in sales was recorded at 19.4 per cent.
2. The CAGR in EPS was recorded at 29.7 per cent over the study period.
3. The CAGR in dividend per share was 12.3 per cent, because the company has a policy of stable dividend per share. But the dividend increased after every three years.
4. Book Value per Share grew at the CAGR of 10.3 per cent over the study period.
5. The net worth of the company grew at the CAGR of 16.5 per cent over the study period.

❖ **Sustainable Growth Rate:** The sustainable growth rate is defined as:

$$\text{Sustainable Growth Rate} = \text{Retention Ratio} \times \text{Return On Equity}$$

Based on average retention ratio and the average return on equity for the study period, the sustainable growth rate of Dr. Reddy's Laboratories Ltd. is provided in the Table 3.

$$\text{Sustainable Growth Rate} = \text{Average Retention Ratio} \times \text{Average Return on Equity} = 0.6424 \times 12.72 = 8.17\%$$

❖ **Interpretation :** From the data analysis provided in the Table 3, the following inferences may be drawn:

1. The average retention ratio of the company was at 0.6424 (64.24 per cent) over the study period.
2. The average return on equity of Dr. Reddy's Laboratories Ltd. was at 12.72 per cent over the study period.
3. The sustainable growth rate of the company over the study period was 8.17 per cent.

SECTION III: RISK EXPOSURE

Risk is a multifaceted phenomenon. We may find the following measures quite useful in getting a handle over risk.

❖ Beta;

❖ Volatility of return on Equity.

Table 3 : Calculation of Average Retention Ratio & Average Return on Equity		
Year	Retention Ratio	Return on Equity
2004-05	0.4153	3.15
2005-06	0.8188	9.33
2006-07	0.0505	26.90
2007-08	0.8674	9.87
2008-09	0.8125	10.66
2009-10	0.7757	14.30
2010-11	0.7570	14.84
Average	0.6424	12.72
Source: Compiled from the Annual Reports of Dr. Reddy's Laboratories Ltd., Hyderabad.		

✿ **Beta:** The Capital Asset Pricing Model (CAPM) is currently the most popular risk-return model. According to the CAPM, the risk of a stock is denoted by its beta, which measures how sensitive are the returns on the stock to variations in the market return. The beta is defined as:

$$\text{Beta} = \frac{\text{Co - Variance } (R_i - R_m)}{\sigma_m^2}$$

According to the CAPM, the required return on an equity stock is calculated as follows:

$$\text{Required Return} = \text{Risk - free return} + \text{Beta [Market Risk Premium]}$$

✿ **Volatility of Return on Equity:** The volatility of return on equity may be defined as:

$$\text{Volatility} = \frac{\text{Range of return on Equity over the study period}}{\text{Average return on equity over the study period}}$$

The volatility of return on equity of Dr. Reddy's Laboratories Ltd. is calculated as follows:

$$\text{Volatility} = \frac{23.75 \text{ per cent}}{12.72 \text{ per cent}} = 1.867$$

SECTION IV: VALUATION MULTIPLES

The most commonly used valuation multiples are:

✿ Price to earnings ratio;

✿ Price to Book value ratio.

✿ **Price to Earnings Ratio:** As a popular financial statistic, the price to earnings ratio (PE ratio) reflects the price the investors are willing to pay for every rupee of earnings per share. The PE ratio may be calculated in a retrospective or prospective manner. The *retrospective* PE ratio is defined as:

$$\text{PE Ratio} = \frac{\text{Price per share at the end of year } n}{\text{Earnings Per Share for year } n}$$

The *prospective* PE ratio is defined as:

$$\text{PE Ratio} = \frac{\text{Price per share at beginning of year } n}{\text{Earnings Per Share for year } n}$$

In investment analysis, prospective PE ratio is more widely used. This ratio for Dr. Reddy's Laboratories Ltd., for the study period is given in the Table 4.

Table 4 : Price to Earnings Ratio (Prospective)			
Year	Price per Share at the beginning of the year	Earnings per share (₹)	PE Ratio (Multiples)
2003-04	891.88	37.01	24.09
2004-05	930.95	8.55	108.88
2005-06	696.90	27.58	25.30
2006-07	1,426.75	74.23	19.22
2007-08	723.50	28.27	25.60
2008-09	609.50	33.32	18.30
2009-10	525.00	50.15	10.46
2010-11	1,227.42	52.82	23.27
Source: Compiled from the Annual Reports of Dr. Reddy's Laboratories Ltd., Hyderabad.			

✿**Interpretation:** The data provided in the Table 4 relating to the price-earnings ratio shows that the Price-Earnings Multiple of the company rose from 24.09 times in 2003-04, to 108.88 times in 2004-05. Further, it declined to 10.46 times in 2009-10. Finally, it was recorded at 23.27 times in 2010-11. So, it can be concluded that the investment required for every one rupee of earnings declined over the study period.

✿**Price To Book Value Ratio:** The price to the book value ratio reflects the price the investors are willing to pay for every rupee of book value per share. The price to the book value ratio may also be defined in prospective or retrospective manner. The *retrospective* Price to Book value ratio is defined as:

$$\text{Price to Book value Ratio} = \frac{\text{Book value per share at the end of year } n}{\text{Earnings Per Share for year } n}$$

The *prospective* Price to Book value ratio is defined as:

$$\text{Price to Book value Ratio} = \frac{\text{Book value per share at beginning of year } n}{\text{Earnings Per Share for year } n}$$

In investment analysis, the retrospective PE ratio is more commonly used. The price to book value ratio for Dr. Reddy's Laboratories Ltd., Hyderabad is provided in the Table 5.

Table 5 : Price To Book Value Ratio (Retrospective)			
Year	Price per Share at the end of the year (₹)	Book Value per share (₹)	Price to Book value Ratio (Multiples)
2003-04	1,052.75	267.51	3.93
2004-05	747.45	136.90	5.46
2005-06	1,401.50	145.20	9.65
2006-07	671.50	247.60	2.71
2007-08	555.50	279.90	1.98
2008-09	426.00	249.60	1.70
2009-10	1,224.45	254.20	4.82
2010-11	1,583.50	272.00	5.82
Source: Compiled from the Annual Reports of Dr. Reddy's Laboratories Ltd., Hyderabad.			

✿**Interpretation:** The data provided in the Table 5 relating to the price to the book value ratio is saying that the Price-to-Book Value Multiple of the company rose from 3.93 times in 2003-04, to 9.65 times in 2005-06. Further, it declined to 1.70 times in 2008-09. Finally, it was recorded at 5.82 times in 2010-11. So, it can be concluded that the investment required for every one rupee of book-value of a share has shown the fluctuating trend over the study period.

SECTION V: ESTIMATION OF INTRINSIC VALUE

The procedure commonly employed by investment analysts to estimate the intrinsic value of a share consists of the following steps:

- ✿ Estimate the expected earnings per share;
- ✿ Establish a PE ratio;
- ✿ Develop a value anchor and a value range.

✿ **Estimation of the Expected Earnings per Share (EPS):** In this section, the researchers have made an attempt to estimate the expected earnings per share by projecting the sales, and other business parameters. Based on how the company has done in the past, how it is faring currently, and how it is likely to do in the future, the investment analyst estimates the future (expected) EPS. An estimate of EPS is an educated guess about the future profitability of the company. A good estimate is based on a careful projection of revenues and costs. The data relating to the expected EPS for Dr. Reddy's Laboratories Ltd., Hyderabad is provided in the Table 6.

Table 6 : EPS Forecast For The Year 2011-12			(₹ in millions)
Particulars	2010-11	Assumption	2011-12 (Projected)
Net Sales	54,241	Increase by 30%	70,513.30
Less. Operating Expenses	43,722	Increase by 20%	52,466.40
Profit Before Taxation	10,519		18,046.90
Less. Taxes	1,585	Increase by 10%	1,743.50
Profit after Taxes	8,934		16,303.40
No. of Equity Shares	169.25		169.25
Earnings per Share	₹ 52.82		₹ 96.33
Source: Compiled from the Annual Reports of Dr. Reddy's Laboratories Ltd., Hyderabad.			

✿ **Interpretation:** The data analysis provided in the Table 6 shows that the projected EPS for 2011-12 was ₹ 96.33. It was calculated on the basis of certain assumptions, viz., net sales were expected to increase by 30 per cent, operating expenses were expected to increase by 20 per cent and taxes were expected to increase by 10 per cent in the current financial year.

✿ **Establishment Of A PE Ratio:** The other half of the valuation exercise is concerned with the price-earnings ratio, which reflects the price investors are willing to pay per rupee of EPS. The PE ratio may be derived from the constant growth dividend model, or cross section analysis, or historical analysis. In this work, the researchers have calculated the PE ratio by using the constant growth dividend discount model, and the historical analysis.

✿ **Constant Growth Dividend Model:** The PE ratio for a constant growth firm from the constant growth dividend discount model is defined as:

$$\text{PE Ratio} = \frac{\text{Dividend Payout Ratio}}{\text{Required Return on Equity} - \text{Expected Growth Rate In Dividends}}$$

✿ **Dividend Payout Ratio:** Most companies treat their dividend commitment seriously. Consequently, once dividends are set at a certain level, they are not reduced unless there is no alternative. If the dividend payout ratio increases the numerator of the above, the ratio increases the denominator, which has a favorable effect on the price-earnings multiple. However, an increase in the dividend payout ratio has the effect of lowering the expected growth rate of dividends in the denominator of the above ratio, which leads to a decrease in the price-earnings multiple. On the whole, in most cases, these two effects are likely to balance out. The dividend payout ratio of Dr. Reddy's Laboratories Ltd., Hyderabad is set equal to the average dividend payout ratio for the study period, which is given as follows:

$$\text{Average Dividend Payout Ratio} = \frac{13.5 + 58.47 + 18.12 + 5.05 + 13.26 + 18.75 + 22.43 + 21.30}{8} = \frac{170.88}{8}$$

$$= 21.36\% = 0.2136$$

✿ **Required Return On Equity:** The required return on equity is a function of the risk-free rate of return and a risk premium. According to CAPM, a popularly used risk-return model, the required return on equity is:

$$\text{Risk-free return} + (\text{Beta of Equity}) \times (\text{Expected Market Risk Premium})$$

To get the required rate of return, the following assumptions have been made:

- ✿ The risk-free rate of return is 9 per cent;
- ✿ The beta of Dr. Reddy Lab's stock is 1.4 ; and
- ✿ The expected market risk premium is 15 per cent.

Given these assumptions, the required return on equity stock of Dr. Reddy's Laboratories Ltd., is:

$$9 + 1.4 (15) = 30 \text{ per cent.}$$

✿ **Expected Growth Rate In Dividends:** The third variable influencing the PE ratio is the expected growth rate in dividends. The expected growth rate in dividends is equal to:

$$\text{Retention ratio} \times \text{Return on Equity}$$

The expected growth rate in dividends may be set equal to the product of the average retention ratio and the average return on equity for the study period works out to be $= 0.7864 \times 30 = 23.60$

Using the above inputs, the PE ratio for the stock of Dr. Reddy's Laboratories Ltd., works out to:

$$\frac{0.2136}{0.30 - 0.2360} = 3.3375$$

✿ **Historical Analysis:** We may look at the historical PE ratio of the company and take a view on what is a reasonable PE ratio, taking into account the changes in the capital market and the evolving competition. The average PE ratio for Dr. Reddy's Laboratories Ltd., over the study period is as follows:

$$\text{Average PE ratio} = \frac{24.09 + 108.88 + 25.3 + 19.22 + 25.6 + 18.3 + 10.46 + 23.27}{8} = 31.89$$

Considering the changing conditions in the capital market and the evolving competition for Dr. Reddy's Laboratories Ltd., we may say that the average PE ratio for the study period is applicable in the immediate future as well.

✿ **The Weighted PE Ratio:**

PE ratio based on the constant growth dividend discount model : 3.33

PE ratio based on historical analysis : 31.89

We can combine these two estimates by taking a simple arithmetic average of them- this means that both the estimates are accorded equal weight. Doing so, we get the weighted PE ratio of:

$$\text{The weighted average PE ratio} = (3.33 + 31.89) / 2 = 17.61$$

✿ **Determination of a Value Anchor and a Value Range:** The value anchor is obtained as follows:

$$\text{Value anchor} = \text{Projected EPS} \times \text{Appropriate PE ratio}$$

$$₹ 96.33 \times 17.61 = ₹ 1,696.37$$

However, as valuation is inherently an uncertain and imprecise exercise, it would be naïve to put great faith in a single point intrinsic value estimate. Practical wisdom calls for defining an intrinsic value range around the single point estimate. In the present study, the intrinsic value estimate of ₹1,696.37 was arrived at, it may be more sensible to talk of an intrinsic value range say ₹ 1,526.73 to ₹1,866.00.

FINDINGS

1. The CAGR in sales was 19.4 per cent over the study period. Similarly, the CAGR in EPS, DPS, Book value per share, Net Worth were 29.7 per cent, 12.3 per cent, 10.3 per cent, and 16.5 per cent respectively.
2. The sustainable growth rate of Dr. Reddy's Laboratories Ltd., was 8.17 per cent over the study period.
3. The volatility of return on equity of Dr. Reddy's Laboratories Ltd., was 1.867 per cent over study period.
4. The Price-Earnings Multiple of the company rose from 24.09 times in 2003-04, to 108.88 times in 2004-05. Further,

it declined to 10.46 times in 2009-10. Finally, it was recorded at 23.27 times in 2010-11. So, it can be concluded that the investment required for every one rupee of earnings declined over the study period.

5. The projected EPS for 2011-12 was ₹ 96.33. It is calculated on the basis of certain assumptions, viz., net sales were expected to increase by 30 per cent, operating expenses were expected to increase by 20 per cent, and taxes were expected to increase by 10 per cent in the present financial year.

6. The risk-free rate of return was 9 per cent; the beta co-efficient of Dr. Reddy's Lab's stock was 1.4; and the expected market risk premium was 15 per cent. Given these assumptions, the required return on equity stock of Dr. Reddy's Laboratories Ltd., was 30 per cent.

7. The expected growth rate in dividends equal to the product of the average retention ratio, and the average return on equity for the study period was 23.60 per cent.

8. PE ratio based on the constant growth dividend discount model was 3.375, and PE ratio based on historical analysis: 31.89. Thus, the weighted average PE ratio = 17.61.

9. The intrinsic value estimate of ₹ 1,696.37 was arrived at, it may be more sensible to talk of an intrinsic value range say ₹ 1,526.73 to ₹ 1,866.00.

SUGGESTION

From the above value anchor and value range, the researchers have suggested that the investing community follows the following decision rule: If Share price is less than ₹1,526.73- Buy the Stocks of this company, if the share price is between ₹1,526.73 and ₹ 1,866.00 - Hold the stocks, and if the share price is more than ₹ 1,866.00-Sell the stocks.

REFERENCES

1. Bhalla V.K. (2007), *Financial Management and Policy (Text and Cases)* (6th rev. ed.), Anmol Publications Pvt. Ltd., New Delhi, pp.728-773.
2. Bhalla. V.K. (2008), *Investment Management: Security Analysis and Portfolio Management* (14th ed.), S. Chand and Company Ltd., New Delhi, pp.491-524.
3. Chandrabose D. (2006), *Fundamentals of Financial Management*, Prentice Hall of India Pvt. Ltd., New Delhi, pp.254-277.
4. Donald E. Fischer and Ronald J. Jordan (2006), *Security Analysis and Portfolio Management* (6th ed.), Prentice Hall of India Pvt. Ltd., New Delhi, pp.257-275.
5. Dr. Selvam M., Dr. Babu M., Indumathi G., Kogila N. (2010), "Impact of Dividend Announcement on Share Price : An Evaluation Study", *Indian Journal of Finance*, Vol.4, No.4, pp.3-16.
6. Eugene F. Brigham, Michael C. Ehrhardt (2007), *Financial Management (Theory & Practice)* (6th ed.), Thomson India Edition, United States, pp.261-263.
7. James C. Van Horne. (2002), *Financial Management and Policy* (12th ed.), Pearson Education Asia, Delhi, pp.85-89.
8. Khan. M.Y., and Jain. P.K. (2011), *Financial Management*, Tata McGraw-Hill Publishing Company, New Delhi, pp. 4.7 - 4.10.
9. Pandey I.M. (2010), *Financial Management* (10th ed.), Vikas Publishing House Pvt. Ltd., New Delhi, pp.441-442.
10. Prasanna Chandra (2008), *Investment Analysis and Portfolio Management*, Tata McGraw Hill Publishing House, New Delhi, pp.446-462.
11. Ranganatham M., Madhumathi R. (2005), *Investment Analysis and Portfolio Management*, Pearson Education, Delhi, pp.273-296.
12. Sam Luther C.T. (2010), "Sustainable Growth Rate - A Case Study on Wipro and Infosys", *Indian Journal of Finance*, Vol. IV, No.1, pp.46-53.
13. Sudarsan Reddy G. (2010), *Financial Management Principles and Practices* (2nd rev. ed.), Himalaya Publishing House, pp.176-180.
14. Vyaptakesh Sharan (2005), *Fundamentals of Financial Management*, Pearson Education, Delhi, pp.33-36.