

An Empirical Study on Forecasting Share Value of Indian Pharmaceutical Companies Using Equity Valuation Models

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Abstract

The Indian Stock Market is considered to be Semi-Strong in nature and envisaged as the most respected Stock Market of Asian Continent. The information in this market is comprehensive and widely disseminated, thereby allowing each stock's price to adjust rapidly in a manner which is unbiased. Market sentiments play a major role in predicting share price movements in India. Majority of the events affects economy as a whole, while some events are sector specific and affects a particular sector only.

This article has made an attempt to estimate the share value of three major **Pharmacy** Companies of India by using Equity Valuation Models. The price of any security represents consensus between two parties, that is, the seller and the buyer. It is the price at which one person agrees to buy and another person agrees to sell. The price at which an investor is willing to buy or sell depends primarily on his expectations. If he expects that the price of a particular share is going to go up then he will buy it, vice-versa is true for sale. These simple statements are the root cause of a major challenge, that is, forecasting the share prices, because they refer to human expectations and anticipations, which leads to speculation.

In this work of research the value of equity is predicted based on the data collected from a highly reliable source CRISIL. The study has attempted to compare the values of top three Pharmacy companies of 2026, **Sun Pharma, Dr.Reddy Labs and Cipla**. The study has extensively used different Equity Valuation models with emphasis on Dividend Discount Model. Based on the current study various recommendations are made to the investors to buy/sell or hold the respective shares.

Key Terms: Share Valuation, Dividend Discount Model, Fundamental Analysis, Technical Analysis, Dividend, Cash Dividend, Script Dividend, Bonus Shares.

Introduction

The mobility and usage of assets determine the Economic Development of a Nation. Conducive economic environment attracts investments, which in turn influences the development of the Economy. One of the essential criteria for the assessment of the economic development is the quality and quantity of assets in a nation at a specific time. For the purpose of convenience assets in any economy can be categorized as Real, Physical, Financial and Intangible assets. Again, Physical Assets can be classified as Fixed Assets and Current Assets. Fixed Assets benefit an organization in the long run by creating wealth to the owners. Current Assets are those which are in the form of cash and can be converted into cash within a short period of time.

Real Assets comprise the Physical and Intangible items available to a society. In continuation, Physical Assets are used to generate activity and result in positive or negative contribution to the owner of the asset. Intangible assets also result in a positive or negative contribution to the owner, but are different in that they do not have a physical shape or form. In fact, intangible assets help physical assets in generating activity. Intangible assets can be said to be behind the scene with respect to productive activities.

Besides Real Assets, the Economy is supported by another group of assets called Financial Assets. The major component of the Financial Assets is cash; also some other examples of financial assets are Deposits, Debt Instruments, Shares and Foreign Currency Reserves.

The important component of such financial asset is shares, which worldwide is accepted as a major financial asset to speculate and earn higher returns by the market participants. While doing such speculation one has to be more prudent by forecasting the future market developments. For this purpose one can value shares based on two techniques known as Fundamental Analysis and Technical Analysis.

Current Study

Indian stock market is considered to be in Semi-Strong form and is well respected across the globe. Sovereign Wealth Funds (SWFs) of US and European countries are exploring Indian market and that itself talks about the quality of stocks available in this market. The information is quickly and widely disseminated, such dissemination helps each security's price to adjust rapidly in an unbiased manner to new information so that, and it reflects the nearest investment value. In a developing country like India market is highly influenced by market sentiments and these sentiments will drive the market. Some of the events affect economy as a whole, while some other events are sector specific.

This study tries to find possible value of equity of three leading **PHARMACY** companies with the help of dividend discount models. The target price and dividend rates are taken from the CRISIL research report and companies annual reports. The current study is useful to the companies to compare its value with the competitors and it also helps the investors to construct their portfolios in more effective manner.

Review of Literature

The most intuitive means for determining the value of the equity of a firm is the Dividend Discount Model. This model states that the present value of an asset can be measured as the discounted value of all of the future expected dividend payments.

Gordon and Shapiro (1956) and Gordon (1962) present a special case of the general model, whereby the value of the firm's equity can be represented as a growing perpetuity based on next period's expected dividend. Even though present study focuses on these models, it also recognizes that there are many alternative models such as multi-stage growth models.

Porterba and Summers (1988), study the risk premium but find that the magnitudes and variability in the implied risk premiums necessary for prices to be related to dividends are too large to be consistent with any rational. Fama and French (1988) find that the variation in dividend yields explains a large proportion of multi-year return predictability. Although many subsequent studies continue to find evidence in support of the predictive ability of dividends for equity returns, studies using longer time series of data bring the generality of these results into question, the predictive ability of the dividend ratio appears to be specific to a few time periods.

Arnoff and Bernstein (2002) provide an interesting historical perspective on how investors in the early 1900s viewed dividends as compared to how they are viewed today. To handle some of these differences, dividend growth rates have been modelled using a variety of different econometric models. Bollerslev and Hodrick (1995) and Donaldson and Kamstra (1996) use time series models to predict dividend behaviour and find that a number of models do a reasonable job of explaining both changes in dividends and changes in prices.

Table—1 Exhibiting Research Design

Research Type	Analytical
Research Context	Top three Pharma Firms
Research Approach	Quantitative
Data type	Continuous variables
Data collection tools	Various Financial Statements of the firms chosen and CRISIL data base.
Data Analysis Software	SPSS Version 18.0, MS Excel, MS Word, MS Power Point

Sampling Technique	Systematic Sampling
Sample Size	Top three Pharma companies, in terms of Size and Market Capitalization.

Methodology

Scope of the Study

For the purpose of this study, top three PHARMACY Companies were chosen based upon its Size and Market Capitalization, the data chosen for the study is for three years 2024 to 2026.

Statement of the Problem

Equity shares are considered as the ordinary shares having no privileges; it can be described more easily than fixed income securities. But, these investments are more difficult to analyse. Fixed income securities typically have a limited life and a well-defined cash flow stream. Equity shares don't have defined cash flow streams. The basic principle of valuing a fixed income security is same as valuing an equity share. The factors of growth and risk create complexities in the process of valuation of an equity share. An investor has to choose different valuation methods, to facilitate such selection in this research work the researchers emphasized on the usage of balance sheet valuation models and dividend discount models.

Objectives of the Study

- To understand different equity valuation methods
- To evaluate the performance of chosen Pharma companies using equity valuation methods.

Limitations of the Study

- The major limitation of this study is it is restricted to Indian environment only and therefore; no comparison was made in between two environments.
- The present study is restricted to a time period of 03 years starting from 2024 to 2026. Therefore, the data may be become redundant after this period.
- The data is based on the performance 03 companies chosen from Pharma industry, so data reflects the performance of only these companies.

Analysis and Interpretation

Dividend Discount Model

According to this model the value of an equity share is equal to the present value of dividends expected from the company plus the present value of the sale price expected when the equity share is sold.

Single Period Valuation Model

This model considers future dividends; it uses the future dividends to arrive at the current price of the equity share. It is calculated as follows:

$P_0 = D_1 / (1+r) + P_1 / (1+r)$, where, P_0 = Current Price of the equity share, D_1 = Dividend expected a year hence, P_1 = Price of the share expected a year hence, r = rate of return on the equity share.

Table showing values of Sun Pharma

	D_1	P_1	R	P_0
2024	34	1391.55	0.09	1553.84
2025	17	1582.40	13.71	1652.28
2026	18	1382.75	12.61	1485.32

Table showing values of Dr. Reddy Labs

	D ₁	P ₁	R	P ₀
2024	2.20	188.32	0.07	201.15
2025	3.20	232.08	10.32	215.25
2026	1.20	201.22	0.08	182.40

Table showing values of CIPLA

	D ₁	P ₁	r	P ₀
2024	2.00	58.25	10.17	63.30
2025	1.50	84.15	14.17	89.30
2026	1.00	79.35	0.08	88.45

Expected Rate of Return

Under this method the intrinsic value of an equity share is calculated from the forecasted values of two variables namely, dividend and share price. It is calculated as follows:

$$r = D_1/P_0 + g$$

Where, r= rate of return on the equity share, D₁ = Dividend expected a year hence, P₀=current price of the equity share, g = Expected growth of EPS

Table showing values of Sun Pharma

	D ₁	G	r	P ₀
2024	34	18.32	0.09	1553.84
2025	17	20.12	13.71	1652.28
2026	18	22.21	12.61	1485.32

Table showing values of Dr.Reddy Labs

	D ₁	G	r	P ₀
2024	2.20	0.08	0.07	201.15
2025	3.20	10.14	10.32	215.25
2026	1.20	0.07	0.08	182.40

Table showing values of Cipla

	D ₁	G	r	P ₀
2024	2.00	11.24	10.17	63.30
2025	1.50	12.32	14.17	89.30
2026	1.00	10.38	0.08	88.45

From the above tables it can be interpreted that the growth rate of SUN PHARMA and DR. REDDY LABS, are consistent as compared to the CIPLA. Again it is analysed that the growth rate of SUN PHARMA is much higher than the two companies and therefore, it is advised for the investors to put their money into this stock.

Gordon Model
Table showing values of SUN PHARMA

	D ₁	G	r	P ₀
2024	34	15.44	0.09	1442.86
2025	17	12.34	13.71	1622.28
2026	18	18.21	12.61	1582.21

Table showing values of DR. REDDY LABS

	D_1	G	r	P_0
2024	2.20	0.06	0.07	188.25
2025	3.20	0.14	10.32	205.26
2026	1.20	0.05	0.08	171.24

Table showing values of CIPLA

	D_1	G	r	P_0
2024	2.00	9.27	10.17	58.26
2025	1.50	10.22	14.17	87.35
2026	1.00	8.28	0.08	82.69

It is interpreted from the above tables that again SUN PHARMA is clearly heading at all times because it has a constant growth rate. It is considered to be a better investment option and the investors who are risk averter can opt for this share to get a moderate rate of return on their investments.

Conclusion

It is concluded that the investors can buy these shares, if the price is lower than the calculated price. At the same time the shares can be sold if its price is higher than the target price. Investors having the idea of consistent returns with good dividends can opt for SUN PHARMA stock. From the companies point of view it is concluded that key result ratios such as EPS (Earnings per share) Price Earnings ratio, Return on Investment ratios should be consistently monitored and certain policy decisions should be arrived at for improving the equity valuations.

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