Understanding Investors' Sentiment Using Dividend Models:
An Empirical Study

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Abstract

Dividend is a part of profits of a company, which is distributable among its shareholders according to the decision taken and resolution passed in the meeting of Board of Directors. Dividend policy of a company sets the guidelines to be followed while deciding the amount of dividend to be paid out to the shareholders. The company needs to adhere to the dividend policy while deciding the proportion of earnings to be distributed and the frequency of the distribution. Because, the payment of dividend will have a considerable impact on the market price of the share as propounded by Walter and Gordon under relevance theories of dividend. Further, the investors may rely on various analyses, such as, fundamental and technical analyses for their investment decisions. In this context, an attempt is made in this study to find out whether the cost of capital can be helpful in predicting the investors' expectations using Walter's and Gordon's Dividend Models by selecting companies from financial services. The study reveals that the Overall Cost of Capital (Ko) is not a good predictor of market price in case of financial services companies.

Key Words: Dividend, Cost of Capital, Earnings per Share, Market Price

Introduction

Dividend is a part of profits of a company, which is distributable among its shareholders according to the decision taken and resolution passed in the meeting of Board of Directors. Dividend may be paid either as a fixed percentage on the share capital or at a fixed amount per share. Dividend policy of a company sets the guidelines to be followed while deciding the amount of dividend to be paid out to the

shareholders. The company needs to adhere to the dividend policy while deciding the proportion of earnings to be distributed and the frequency of the distribution. Because, the payment of dividend will have a considerable impact on the market price of the share as propounded by Walter and Gordon under relevance theories of dividend. Thus, how much amount of profit is to be distributed as dividend is one of the crucial decisions of the financial manager.

Statement of the Problem

Investors do not have a method of estimating Return on Investment. They are not sure about the market prices of stocks given the fluctuation in stock prices. Investors rely on technical and fundamental analysis provided by stock brokers, that may not always be correct.

Need for the Study

Most of the financial market players are using technical and fundamental analysis to advice investors about when to buy what stock in how much quantity and it is found that their estimates of return on investment are not accurate. On many occasions, their customers have complained lower than market returns on their investments. In order to improve their estimates of stock performance and investor satisfaction with their advises, this study is undertaken to relate investor sentiments to Ko derived from the Walter's and Gordon's Dividend Models.

Objectives of the Study

Following are the objectives set for the study:

- To calculate market prices of shares of selected companies using Walter and Gordon's Dividend Models;
- To estimate the value of k_0, i.e., expected rate of return of the investors and there by understand the sentiments of the investors towards the company.

Scope of the Study

The study is limited to selected shares of Financial Services industry only comprising of Dhunseri Investments, Capri Gold, and Keynote Corporation, and is confined to 5 years (20011-2016) period.

Data Sources

The data used in this study has been collected from readily available sources that is secondary data. The web sites such as NSEINDIA, BSEINDIA, MONEYCONTROL etc. are visited.

Tools of Analysis

- To calculate the market price of the selected companies, the two dividend models namely, Walter's and Gordon's Models were applied.

Walter's Model:

$$P = \frac{D}{Ko} + \frac{\frac{r}{Ko}(E-D)}{Ko}$$

Gordon's Model:

$$P = \frac{E\ (1\text{-b})}{Ko - g}$$

- As per the relevance theories of dividend, there will be only equity or retained earnings and hence, the overall cost of capital (K_o) will be equal to cost of equity (K_e). Thus, the cost of equity is calculated by following earnings capitalization approach.

Therefore, $K_o = K_e = (E/P_o) * 100$

Where E = Earnings per share; P_o = Average Market Price of the share

- Average market price of the share is calculated based on the data available on NSEINDIA or BSEINDIA.

Limitations

- In this study, only companies from financial service sector were considered.
- For effective analysis, companies with positive Earnings Per Share only were chosen.
- The period of the study is limited to five years commencing from 2011-12 to 2015-16.
- The analysis may vary from industry to industry as various factors influence the prices of shares.
- In view of the space constraint, the details of the companies selected for the study is not included.
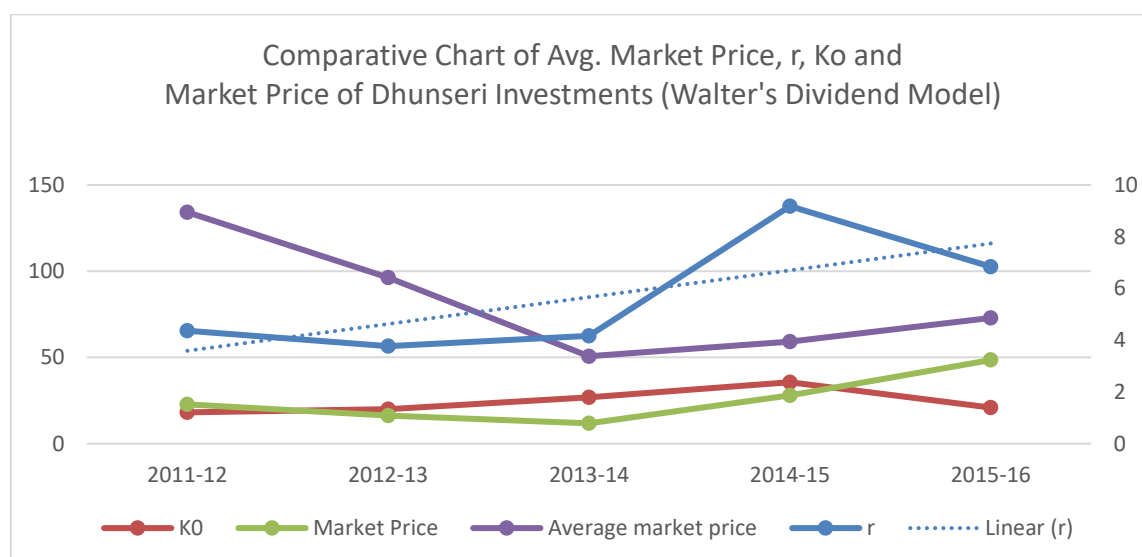
Analysis of Investors Sentiment Using Dividend Models

Dhunseri Investments

The following describes the calculation of market price of the share using Walter's Dividend Model.

Table 1 (a) - Analysis of Investors Sentiment of DHUNSERI INVESTMENTS

(WALTERS' DIVIDEND MODEL)

Year	Average Market Price (Rs.)	D (Rs.)	R (%)	K₀ (%)	E (Rs.)	Market Price (Rs.)
2011-12	72.98	1.25	4.36	18.16	13.26	22.761
2012-13	59.221	1.25	3.77	20	11.85	16.241
2013-14	50.723	1.25	4.17	26.87	13.63	11.802
2014-15	96.38	1.5	9.18	35.63	34.35	27.964
2015-16	134.22	1.5	6.84	21.01	28.2	48.512

Source: Researcher's compilation

Chart 1

Comparative Chart of Avg. Market Price, r, Ko and Market Price of Dhunseri Investments (Walter's Dividend Model)

The investors' expectations are indicated by K_o. The firm's average market price is much better than the expected price calculated based on Walter's Dividend Model.

Table 1 (b) - Analysis of Investors Sentiment of DHUNSERI INVESTMENTS

(GORDON'S DIVIDEND MODEL)

Year	Average Market Price (Rs.)	E (Rs.)	D (Rs.)	B (%)	K_0 (%)	g or b*r	DPR (%)	Market Price (P) (Rs.)
2011-12	72.98	13.26	1.25	90.57	18.16	0.0395	9.43	8.799
2012-13	59.221	11.85	1.25	89.45	20	0.034	10.55	7.518
2013-14	50.723	13.63	1.25	90.82	26.87	0.038	9.18	5.421
2014-15	96.38	34.35	1.5	95.63	35.63	0.088	4.37	5.590
2015-16	134.22	28.2	1.5	94.68	21.01	0.065	5.32	10.322

**Source:** Researcher's compilation

Chart 2
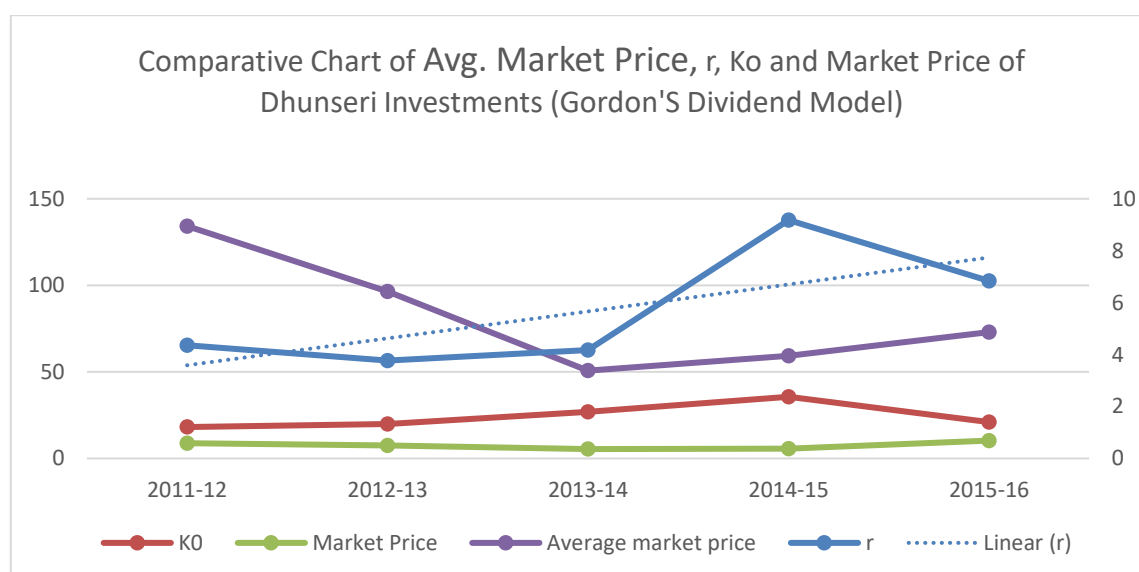
The firm's average market price is very high than the predicted market price calculated based on Gordon's Model. The firm performed better besides having low pay-out ratio.

Table 2 (a) : Analysis of Investors Sentiment of CAPRIGLOBAL

(WALTERS' DIVIDEND MODEL)

Year	Average Market Price (Rs.)	D (Rs.)	R (%)	K_0 (%)	E (Rs.)	Market Price (Rs.)
2011-12	87.628	1	4.97	13.181	11.55	37.768
2012-13	107.577	1.5	8.45	19.781	21.28	50.297
2013-14	129.987	1.5	8.56	17.986	23.38	66.233
2014-15	178.623	1.5	8.24	13.621	24.33	112.409
2015-16	153.536	1.5	3.79	7.659	11.76	85.865

**Source:** Researcher's compilation

Chart 3
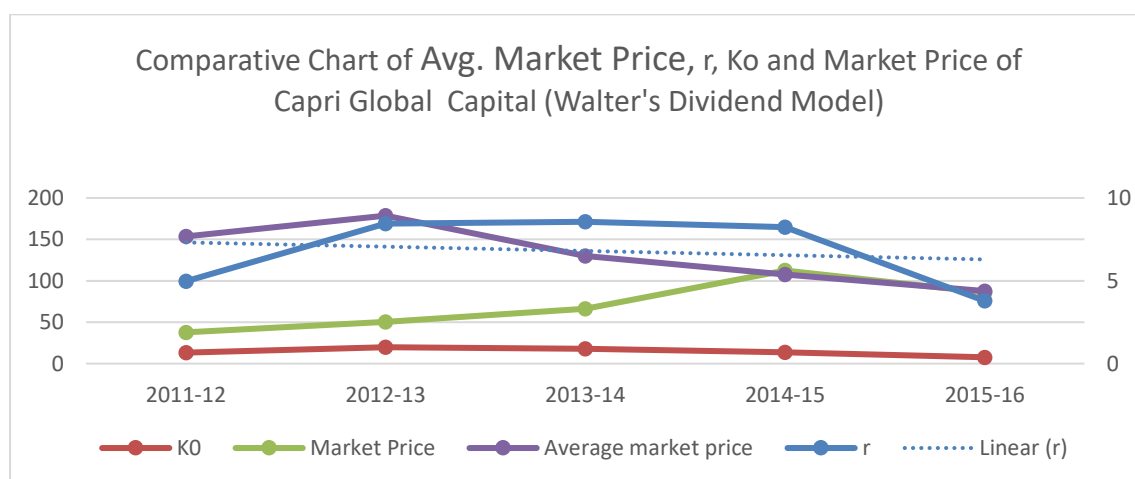
From the above chart, it can be concluded that the firm's average market price is almost double than the investors' expected price calculated based on Walter's Dividend Model.

Table 2(b) - Analysis of Investors Sentiment of CAPRIGLOBAL

(GORDON'S DIVIDEND MODEL)

Year	Average Market Price (Rs.)	E (Rs.)	D (Rs.)	B (%)	K_0 (%)	g or b*r	DPR (%)	Market Price (P) (Rs.)
2011-12	87.628	11.55	1	91.33	13.181	0.045	8.67	11.588
2012-13	107.577	21.28	1.5	92.93	19.781	0.079	7.07	12.612
2013-14	129.987	23.38	1.5	93.57	17.986	0.080	6.43	15.068
2014-15	178.623	24.33	1.5	93.83	13.621	0.077	6.17	25.490
2015-16	153.536	11.76	1.5	87.24	7.659	0.033	12.76	34.472

Source: Researcher's compilation

Chart 4
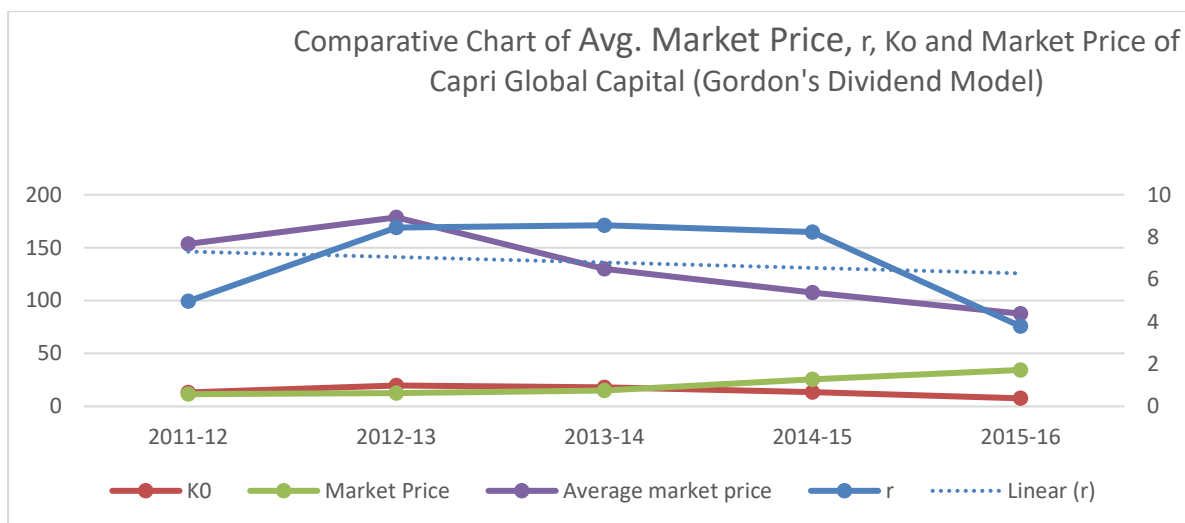
Comparative Chart of Avg. Market Price, r, Ko and Market Price of Capri Global Capital (Gordon's Dividend Model)
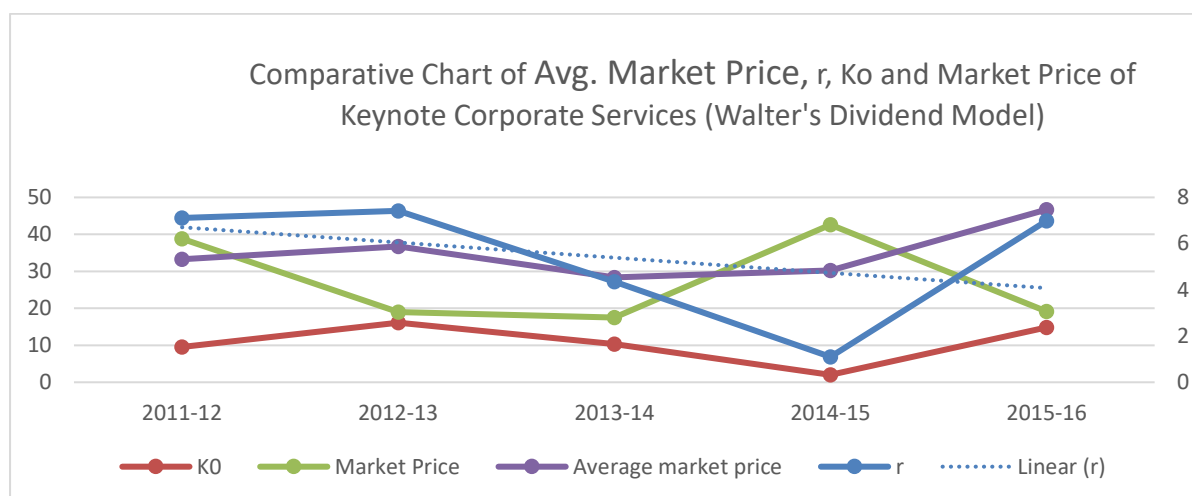
The average market price of Capri Global Capital was increased as against the expectations of the investors at a higher rate.

Table 3 (a) - Analysis of Investors Sentiment of KEYNOTE CORPORATE SERVICES (WALTERS' DIVIDEND MODEL)

Year	Average Market Price (Rs.)	D (Rs.)	R (%)	K_0 (%)	E (Rs.)	Market Price (Rs.)
2011-12	46.714	1.5	7.11	9.547	4.46	38.799
2012-13	30.272	1.5	7.42	16.120	4.88	18.956
2013-14	28.370	1	4.35	10.363	2.94	17.508
2014-15	36.763	1	1.1	2.013	0.74	42.621
2015-16	33.28	1	6.98	14.874	4.95	19.186

Source: Researcher's compilation

Chart 5

Comparative Chart of Avg. Market Price, r, Ko and Market Price of Keynote Corporate Services (Walter's Dividend Model)
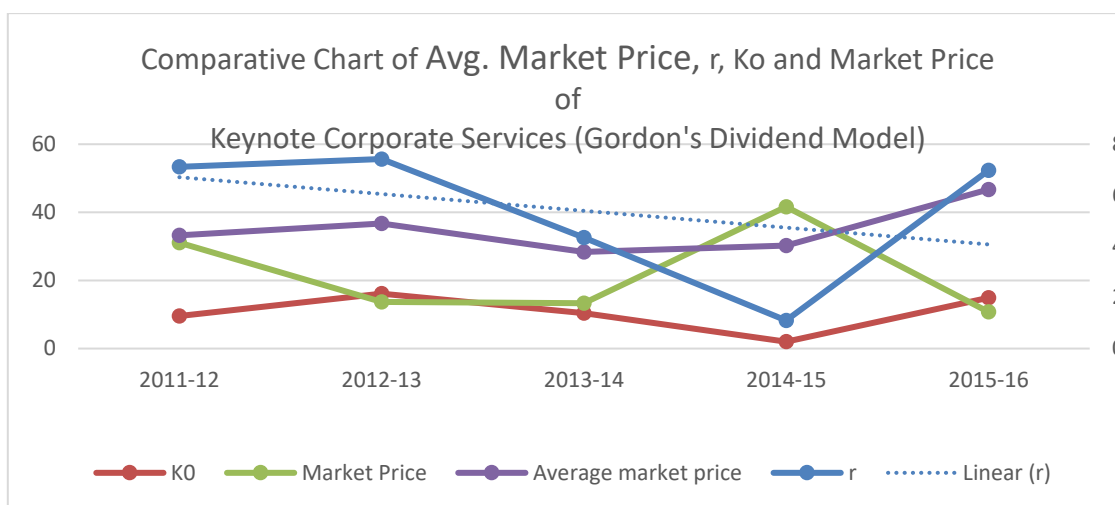
The chart clearly states that the average market price was in line with the predicted price of the investors calculated based on Walter's Model.

Table 3 (b) - Analysis of Investors Sentiment of KEYNOTE CORPORATE SERVICES (GORDON'S DIVIDEND MODEL)

Year	Average Market Price (Rs.)	E (Rs.)	D (Rs.)	B (%)	K_0 (%)	g or b*r	DPR (%)	Market Price (P) (Rs.)
2011-12	342.777	30.41	20	34.23	8.871	0.033	65.77	357.639
2012-13	310.701	26.23	20	23.75	8.442	0.019	76.25	307.052
2013-14	379.163	65.33	20	69.36	17.230	0.122	30.64	394.181
2014-15	601.865	54.49	20	63.23	9.054	0.087	36.77	6623.576
2015-16	480.500	57.06	15	73.7	11.875	0.096	26.3	664.822

Source: Researcher's compilation

Chart 6

Comparative Chart of Avg. Market Price, r, Ko and Market Price of Keynote Corporate Services (Gordon's Dividend Model)

The chart describes that the average market price was slightly fluctuated during the period of the study and was not as expected by the investors' market price calculated based on Gordon's Model.

Findings of The Study

Dhunseri Investments

Walter's Model:

- The investors' expectations are indicated by K_o. The firm's average market price is much better than the expected price calculated based on Walter's Dividend Model.

Gordon's Model:

- The firm's average market price is very high than the predicted market price calculated based on Gordon's Model. The firm performed better besides having low pay-out ratio.

Capri Global

Walter's Model:

- The Capri Global's average market price is almost double than the investors' expected price calculated based on Walter's Dividend Model.

Gordon's Model:

- The average market price of Capri Global Capital was increased as against the expectations of the investors at a higher rate.

Keynote Corporate Services

Walter's Model:

- The average market price of Keynote Corporate Services was in line with the predicted price of the investors calculated based on Walter's Model.

Gordon's Model:

- The average market price was slightly fluctuated during the period of the study and was not as expected by the investors' market price calculated based on Gordon's Model.

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Suggestions & Conclusion

The study reveals that the Overall Cost of Capital (Ko) is not a good predictor of market price in case of financial services companies. Therefore, investors sentiment may be better predicted based on various other aspects such as Dividend Pay-out Ratio, Return on Investment. Further analysis of more stocks from the same industry needs to be done to enable quantitative estimation of market prices using K_0. In times of severe financial crises, predictions may go wrong and therefore, qualitative and quantitative analysis play a crucial role in the estimation of investors' sentiment.

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