

VALUE INVESTING

DR.M. SHARMEEN FAROOQ¹ & DR. VENU THYAGARAJAN²

¹Senior Assistant Professor, Ethiraj College for Women, Chennai, India

²Associate Professor, Pachaiyappas College, Chennai, India

ABSTRACT

Value creation is the ultimate measure of performance. Companies exist to create economic value for their shareholders. The measurement of value is complex which deals with company's historical financial results and also its ability to create value in the future. Intrinsic value is a vital measure derived when the entire value of the firm is expressed on per share basis. The intrinsic value is the actual value of a security and the strength of a stock and greater this value, the more it is a safe bet from the point of view of investment. The current paper intends to verify whether the intrinsically stronger stocks provide higher abnormal returns to the shareholders with the use of three select methods of valuation Free Cash Flow to the Firm, Economic Value Added and Relative Valuation. The study motivates the prospective investor to prefer intrinsic value as a basis for investment and select the appropriate method of valuation for analyzing the stock.

KEYWORDS: Free Cash Flow to the Firm, Economic Value Added, Relative Valuation and Intrinsic Value

INTRODUCTION

Valuation is a method of estimating the economic value of an asset or capital. Information about a stock is normally incomplete, complex, uncertain and vague, making it a challenge to predict the future economic performance as share prices do not always reflect the true value of the stocks. But the intrinsic prices should match market prices in the long run. Hence the paper indicates that valuation of the firm and consequently its intrinsic value is a technical suggestion to the investors to purchase the shares when they were undervalued (market price < intrinsic value) and sell the shares when they were overvalued (market price > intrinsic value). When investment is done in consideration of intrinsic values the investor stands to gain higher abnormal returns in relation to stock prices.

OBJECTIVES OF THE STUDY

The aim of the paper is to study the relationship between the intrinsic values under the common methods available in the field of valuation and the returns made by the security. The emphasis is to focus on the advantages of the use of intrinsic prices to review an investment in comparison to the market prices. The utility of intrinsic values would improve the investment quality helping the investors to select the right stocks in their portfolios.

The primary goal of investment is to earn returns above those made by the market. In this direction, the study concentrates on the abnormal returns of the stocks to verify whether investment based on intrinsic values has an impact on returns. This study would enable to channelize investments into stocks with potential higher returns in the future.

REVIEW OF LITERATURE

Academic literature suggests that there are many valuation methods useful for the valuation of firms. The following literature seeks to provide evidence of the relationship between the intrinsically stronger stocks and returns from

the stock.

Benninga and Sarig, (1997) advised to use more than one valuation method to estimate the firm value because there is a great deal of uncertainty in relation to value estimation as it involved predicting the returns of the company and if the different methods gave the similar results it meant that the estimated value was reliable. Hence in the current study three valuation methods are used to estimate the intrinsic values to analyze the undervaluation or overvaluation of the stock.

Jeffrey M. Bacidore et al., (1997) used comprehensive statistical analysis of both REVA and EVA to estimate their correlation with and their ability to predict shareholder value creation. The results indicated that the proportion of positive REVA that correspond to positive abnormal returns was significantly higher than the same proportion for EVA. Gary C. Biddle, Robert M. Bowen & James S. Wallace (1998) study tests asserted that Economic Value Added (EVA®) was more highly associated with stock returns and firm values than accrual earnings. Frankel and Lee (1998) tested the residual income model of Ohlson (1995) operationalised with analysts' earnings forecasts. They found that the model predicted abnormal returns over one-, two, and three-year holding periods. Bradshaw (2000) and Ali, Hwang and Trombley (2003) confirmed these results. Hence these studies provide motivation to conduct research and find evidence of whether the undervalued stocks result in higher abnormal returns.

CHOICE OF VALUATION METHODS

The methods which have been undertaken for the study are those which are popular and mandated for use in India. They are namely the Free Cash Flow to the Firm, a Discounted Cash Flow technique prescribed by RBI, Economic Value Added for its wide application in Indian companies and Relative Valuation technique the most common tool for analyzing companies even without financial statements.

METHODOLOGY

The study makes an assessment of the benefit derived from intelligent investment decision making by means of intrinsic prices. The intrinsic values computed under three select methods of valuation are the basis for the choice of investment to purchase the shares when they were undervalued (market price < intrinsic value) and sell the shares when they were overvalued (market price > intrinsic value). When the investment decision is made in the long run on this regard, the undervalued stocks show higher abnormal returns than the overvalued stocks. The investment is assumed to be carried out in the year 2013 with the use of intrinsic values. The abnormal returns on the stock are computed with the use of the market model after a period of two years from the date of valuation. The index that is considered for the purpose is BSE Sensex which measures the performance of thirty largest and financially sound companies. The abnormal return is computed for a period of six months as the excess of stock returns over and above the beta times the market returns. Further to facilitate better comparison between companies the returns are cumulated over the period and separately aggregated for the overvalued and undervalued stocks.

DATA COLLECTION

This study is based on secondary data drawn from Prowess database of Centre for Monitoring Indian Economy (CMIE) for the purpose of intrinsic value determination. The study is restricted to thirty two companies from different industries such as Paints and Varnishes, Pharmaceuticals, Food and Beverages, Automobiles, Computer Software,

Electrical Machinery, FMCG and Consumer Durables. The share prices and dividend information for a period of six months from April to September 2015 is collected from moneycontrol.com.

The following table presents the list of companies for which analysis has been carried out in the mentioned manner:

Table 1: Companies Included in the Sample

Co No.	Industry	Name of the Company	Co. No.	Industry	Name of the Company
1	Paints and Varnishes	Asian Paints Ltd.	17	Computer Software/Information Technology	HCL Technologies Ltd.
2		Berger Paints India Ltd.	18		Infosys Ltd.
3		Kansai Nerolac Paints Ltd.	19		Oracle Financial Services Software Ltd.
4		Akzo Nobel India Ltd.	20		Polaris Financial Technology Ltd.
5	Pharmaceuticals	Amrutanjan Healthcare Ltd.	21	Electrical machinery	Finolex Cables Ltd.
6		Cipla Ltd.	22		Havells India Ltd.
7		Merck Ltd.	23		Crompton Greaves Ltd.
8		Novartis India Ltd.	24		Honda Siel Power Products Ltd.
9	Food and Beverage	EID-Parry (India) Ltd.	25	Fast Moving Consumer Goods	Dabur India Ltd.
10		Britannia Industries Ltd.	26		Godrej Consumer Products Ltd.
11		GlaxoSmithkline Consumer Healthcare Ltd.	27		Colgate-Palmolive (India) Ltd.
12		Meleod Russel India Ltd.	28		Hindustan Unilever Ltd.
13	Automobiles	Tata Motors Ltd.	29	Consumer Durables	Symphony Ltd.
14		Force Motors Ltd.	30		Blue Star Limited
15		Maruti Suzuki India Ltd.	31		Whirlpool Of India Ltd.
16		S M L Isuzu Ltd.	32		Hitachi Home And Life Solutions (India) Ltd.

COMPUTATION OF INTRINSIC VALUES

A key input for the cash flows is the calculation of after tax operating income or EBIT. The study calculates Earnings before Interest and Taxes (EBIT) with due consideration only to sales, operating income and operating expenses. The cost of capital is calculated using the market values of equity and book values of debt. The cost of equity is computed using the popular CAPM approach and cost of debt with the Synthetic Default Rating method. The study uses the three year average cost of capital as the discount rate for the explicit forecasted period of high growth under Free Cash Flow to the Firm (FCFF), Economic Value Added (EVA) and Relative Valuation (RV). After the forecasted period the company is

assumed to reach its stable growth phase when its terminal value is discounted with the lower stable period cost of capital.

All the methods use two stages of explicit and stable period of growth to value the firms in the sample. The enterprise value under FCFF is calculated as the sum of present value of cash inflows in the explicit period and the present value of terminal value of the company. The value of the enterprise in EVA is calculated as the total of present values of EVA's discounted using average cost of capital, opening capital comprising book value of equity and debt in 2013 and a capital adjustment which is the present value of EBIT in the terminal year divided by the company's return on capital. The current study uses the spreadsheet program firmmult.xls developed by the valuation expert Prof. Aswath Damodaran, New York University, Stern School of business for the calculation of Enterprise value and intrinsic price under Relative Valuation. The equity value for each company has been calculated after deducting the debt of the company and adding the cash and cash equivalents. The intrinsic value per share is arrived by dividing the computed equity value by the number of equity shares in the company. The method of computing the equity value and intrinsic value is the same for all the methods FCFF, EVA and RV.

The results of the intrinsic value computation are presented in the table below:

Table 2: Intrinsic Values under the Three Methods with Market Price

Co No	INT Val-FCFF(Rs)	INT Val-EVA(Rs)	INT Val - RV(Rs)	MP(Rs)	FCFF	EVA	RV
1	1090.02	2160.85	4188.96	4888.60	o	o	o
2	87.68	93.41	88.38	98.73	o	o	o
3	955.27	897.45	1107.37	1227.00	o	o	o
4	1235.52	1102.05	1685.87	1018.05	u	u	u
5	98.89	86.17	80.88	113.85	o	o	o
6	581.63	352.00	414.22	381.03	o	o	u
7	553.40	761.68	769.00	560.65	u	u	u
8	822.57	812.36	843.09	617.00	u	u	u
9	177.74	175.51	225.74	149.53	u	u	u
10	554.59	561.97	529.86	526.85	u	u	u
11	3744.94	3712.44	4101.82	4305.48	o	o	o
12	304.86	296.01	216.37	342.20	o	o	o
13	248.58	293.37	223.08	270.05	o	u	o
14	383.28	242.59	379.63	344.48	u	o	u
15	1519.09	1160.09	1066.78	1292.15	u	o	o
16	298.26	427.72	373.57	290.00	u	u	u
17	759.39	693.52	556.37	794.25	o	o	o
18	2515.95	2443.93	2664.36	1442.49	u	u	u
19	2092.90	2043.24	2004.28	2555.00	o	o	o
20	100.79	111.22	104.93	110.50	o	u	o
21	104.46	75.32	78.20	45.23	u	u	u
22	225.05	353.47	291.42	131.57	u	u	u
23	100.00	107.24	102.99	93.40	u	u	u
24	370.32	490.42	282.24	442.53	o	u	o
25	123.53	125.54	105.42	135.90	o	o	o
26	789.67	780.37	772.97	789.00	e	o	o
27	2048.06	2183.53	2805.58	1240.38	u	u	u
28	570.39	561.51	481.70	467.68	u	u	u
29	497.38	490.82	572.46	310.00	u	u	u
30	127.57	95.95	72.94	156.00	o	o	o
31	153.75	161.16	155.40	218.50	o	o	o
32	124.51	281.84	84.58	129.33	o	u	o

o-overvalued, u-undervalued

The above table shows that all the methods depict consistency in results. The results indicate that 26 out of 32 companies give valuation in the same direction – overvaluation or undervaluation. The above results are confirmed by Penman (1998) who states that these valuation techniques should give consistent and identical estimates of intrinsic firm value, provided that all the forecasts of the different items are consistent with each other and all the assumptions are identical. But the current study uses a different assumption for EVA and RV as the return on capital is made equal to the cost of capital which causes a variation in the results between the methods. If this assumption was not made for EVA, then the company would destroy value in the long run.

The intrinsically stronger stocks are the undervalued stocks; their fair values are higher than the market price. When an investor invests in such stocks which are incorrectly priced over time they would get corrected automatically with the receipt of new information of the company's performance. Valuation thus helps an active investor to make logical decisions of investment with long term horizon. Hence, using valuation would allow the market to correct its valuation mistakes and for price to revert to its true value.

The hypothesis chosen for the study are as follows:

Ho1: There is no significant difference in the abnormal returns generated between the undervalued and overvalued stocks when investment decision is made based on the intrinsic values of FCFF

Ho2: There is no significant difference in the abnormal returns generated between the undervalued and overvalued stocks when investment decision is made based on the intrinsic values of EVA

Ho3: There is no significant difference in the abnormal returns generated between the undervalued and overvalued stocks when investment decision is made based on the intrinsic values of RV

The increases in stock prices also enable investors' abnormal gains on the stock. The abnormal gains on each of the stocks in the sample have been computed as the excess of the returns made by the stock after adjustment for dividends and stocks split in the following manner.

Table 3: Abnormal returns calculations for Asian Paints Ltd

1	2	3	4	5	6	7	8	9	10=Col 7-9	11
Time Period 2015	Stock Price	DPS	Split Factor	Index level	Index	Stock Return	Market Return	beta*Market Return	Abnormal Return	CAR
April	810	0	1	27011.3	1					
May	770.25	4.3	1	27828.4	1	-0.0438	0.0303	0.0363	-0.0801	
June	778.65	0	1	27780.8	1	0.0109	-0.0017	-0.0021	0.0130	-0.0671
July	746.975	0	1	28114.6	1	-0.0407	0.0120	0.0144	-0.0551	-0.1222
Aug	870	0	1	26283.1	1	0.1647	-0.0651	-0.0782	0.2429	0.1207
Sep	824.95	0	1	26154.8	1	-0.0518	-0.0049	-0.0059	-0.0459	0.0747

The calculations for abnormal return is given below.

$$AR_{it} = R_{it} - R_{pt} \quad (1)$$

where R_{it} is the monthly stock return and R_{pt} is the monthly return of the market index SENSEX. The monthly return of the stock and market index is calculated in the following manner

$$R_{it} = ((\text{Price of stock in a month} \times \text{Split factor} - \text{Stock price the previous month} + \text{Dividend per share} \times \text{Split$$

factor) / Stock price in the previous month) x Index (2)

$$R_{pt} = (\text{Index level in a month} - \text{index level the previous month}) / \text{index level the previous month} \times \text{Index} \quad (3)$$

The split factor and index are assumed to be equal to 1 and the dividend per share was included in the respective months when the dividends are declared by the company in the period of computation of returns. The market return was deducted from one and abnormal return was calculated as following for each month

$$\text{Abnormal return} = \text{monthly stock return} - (\text{beta} \times \text{market return}) \quad (4)$$

The beta in the above formula was taken from the BSE website and in case of its non availability estimated using the program beta estimator, a spreadsheet developed by Valuation expert Aswath Damodaran, Stern School of Business, New York. The abnormal returns for the period are summed to obtain the cumulative abnormal return with the following formula (5)

$$CAR_t = \frac{\sum_{i=1}^{n_t} AR_{it}}{n_t}$$

The following table depicts the cumulative abnormal returns for the overvalued and undervalued stocks under each of the methods.

Table 4: Cumulative Abnormal Returns for the Sample Companies

Co No	CAR	FCFF		EVA		RV	
		o	u	o	u	o	u
1	0.0747	0.0747		0.0747		0.0747	
2	0.0768	0.0768		0.0768		0.0768	
3	0.1226	0.1226		0.1226		0.1226	
4	0.0549		0.0549		0.0549		0.0549
5	-0.0478	-0.0478		-0.0478		-0.0478	
6	0.0570	0.0570		0.0570			0.0570
7	-0.0406		-0.0406		-0.0406		-0.0406
8	0.3488		0.3488		0.3488		0.3488
9	-0.1412		-0.1412		-0.1412		-0.1412
10	0.3894		0.3894		0.3894		0.3894
11	-0.0220	-0.0220		-0.0220		-0.0220	
12	-0.3720	-0.3720		-0.3720		-0.3720	
13	-0.4903	-0.4903			-0.4903	-0.4903	
14	0.6031		0.6031	0.6031			0.6031
15	0.2666		0.2666	0.2666		0.2666	
16	-0.0428		-0.0428		-0.0428		-0.0428
17	0.1327	0.1327		0.1327		0.1327	
18	0.1887		0.1887		0.1887		0.1887
19	0.2500	0.2500		0.2500		0.2500	
20	0.1475	0.1475			0.1475	0.1475	
21	-0.0692		-0.0692		-0.0692		-0.0692
22	-0.0777		-0.0777		-0.0777		-0.0777
23	0.0648		0.0648		0.0648		0.0648
24	0.0716	0.0716			0.0716	0.0716	
25	0.1093	0.1093		0.1093		0.1093	
26	0.1706			0.1706		0.1706	
27	-0.0197		-0.0197		-0.0197		-0.0197
28	-0.0102		-0.0102		-0.0102		-0.0102

29	-0.1462		-0.1462		-0.1462		-0.1462
30	0.1566	0.1566		0.1566		0.1566	
31	-0.0144	-0.0144		-0.0144		-0.0144	
32	0.0143	0.0143			0.0143	0.0143	
	Average	0.0167	0.0913	0.1042	0.0143	0.0380	0.0773

The FCFF method performs best in identifying intrinsically stronger or weaker stocks. The trend with focus on company valuation shows that the intrinsically undervalued stocks produce the highest abnormal returns under FCFF followed by RV and EVA. The results of EVA indicate lower abnormal returns for the undervalued stocks. This distortion in results arise due to the overvaluation of Company no 14 which generates the highest abnormal returns among all stocks.

MANAGERIAL IMPLICATIONS

Each of the methods in the study supports the prediction ability of long-run abnormal returns. The study shows that the high intrinsic stocks yield higher returns than the low intrinsic stocks. Hence the prospective investor could easily make logical investment decisions rather than move with market sentiments. The results of the study indicate that the FCFF method of valuation is considered as the closest estimate of the intrinsic value, followed by RV and EVA. Hence, the managers and investors can safely assume that the FCFF method as the best estimate of the market price can be used in the long run.

The stock prices and intrinsic values will coincide with each other in the long term. When managers make good strategic decisions based on analysis of intrinsic value, the financial markets rewards them by setting stock prices according to their company's financial fundamentals. This relationship helps the manager put the company's resources to their best use and create maximum value for shareholders. Managers should not be deterred with significant disparities in the share prices and intrinsic value caused by capital market efficiencies in the short run. When deviations occur between intrinsic and market prices, the stock market corrects itself within a few years to its intrinsic valuation level. Hence the Corporate Managers and investors need to understand the true, intrinsic value of companies to exploit any market deviations if and when they occur by better timing the implementation of strategic decisions.

The current study is in the direction to reduce psychological phenomena that induce the investors' to purchase shares and increase the momentum to value equity taking into account the share prices' past evolution using the above mentioned methods of valuation. The results of statistical analysis presented in the study makes investors invest easily. Valuation enables investors to verify values rather than depend on brokers reports.

CONCLUSIONS

The results of the study have implications for the management and the prospective investors. It attempts to rationalize investment decisions in stock with technical consideration to true intrinsic values using FCFF as the basis rather the influence of irrational issues. Hence valuation is not a mystery but an art in the hands of prospective investors which can be utilized to make good returns on investments.

REFERENCES

1. Ali, A. et al, (2003). Residual-Income-Based Valuation Predicts Future Stock Returns: Evidence on Mispricing vs. Risk Explanations. *The Accounting Review*, 78 (2), 377-396.

2. Alon Brav, et al, (1999). Is the abnormal return following equity issuances anomalous? *Journal of Financial Economics*, 56 (2000), 209-249.
3. Aswath Damodaran, (1996). *Investment Valuation: Tools and techniques for determining the value of any asset*, University edition, USA: John Wiley & Sons.
4. Aswath Damodaran, (1998). Value Creation and Enhancement: Back to the Future, *Contemporary Finance Digest*, 2(4), 5 - 52.
5. Barber, B., et al, (1997). Detecting long run abnormal stock returns: The empirical Power and specification of test statistics, *Journal of Financial Economics*, 43(3),341–372.
6. Biddle, G.C. et al, (1997). Does EVA beat earnings?, Evidence on associations with stock, *Journal of Accounting and Economics*, 24(3), 301-336.
7. Benninga, Simon Z. et al, (1997). *Corporate Finance. A Valuation Approach*, New York: Mcgraw-Hill.
8. Bacidore Jeffrey, et al, (1997). ‘The search for the best financial measure’ *Financial Analysts Journal*, 53 (May/June), 11-20.
9. Copeland Tom, et al, (2000). *Valuation: measuring and managing the value of companies*, (3th ed.). United States Of America: McKinsey & Company.
10. Fama, E. (1998a.) Market efficiency, long-term returns, and behavioural finance. *Journal of Financial Economics*, 49(3), 283-306.
11. Ohlson J, (1995). ‘Earnings, Book Values and Dividends in Equity valuation’, *Journal of Contemporary Accounting Research*, 11 (2), 661-687.
12. Ronald Shrieves, et al, (2001). Free Cash Flow, Economic Value Added and Net Present Value-A reconciliation of variation of Discounted Cash Flow valuation”, *The Engineering Economist*, 46(1), 33-52.
13. Sloan, R. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings, *The Accounting Review* 71(3), 289-316.
14. Sougiannis, T., et al, (2001). ‘The Accuracy and Bias of Equity Values Inferred from Analysts’ Earnings Forecasts” *Journal of Accounting, Auditing, and Finance*16 (Fall 2001), 331-362.
15. Steiger, Florian (2010). *The Validity of Company Valuation Using Discounted Cash Flow Methods*, Working Paper, European Business School, London.
16. Stewart, G.B. (1990). *The Quest for Value: the EVA management guide*, New York: Harper Business.