Valuation of Shariah Compliant Stocks Using the DCF Technique : Evidence from India

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Abstract

Shariah compliant stocks are ethical and faith-based companies. There is a myth that Islamic finance is philanthropy, but Shariah is a canonical law, which the observant Muslims adhere to in their daily lives. Basically, Islamic stock indices are subsets of conventional benchmarks that include only those companies which qualify the Shariah Index screening on the basis of sectoral and financial screening. The main objective of this study was to estimate the valuation of Shariah compliant companies, which are listed on the S&P BSE 500 Shariah. There are 10 sectors working in the Shariah Index. There are ten select companies, one company from selected sectors. Selected 'A' category companies were taken for the study and the time period of the study is from January 2010 to December 2014. Various models for valuation were applied for the analysis, which includes: Beta (CAPM), FCFE Model, *t*-test, and so forth. The results of the study explained the significant relation between intrinsic value and market value of shares. The relationship is supported to FCFE of Shariah compliant stocks. DCF is a valuation method used to approximate the fruitfulness of an investment opportunity for the future. Shariah compliant stocks are continuously growing in the capital markets of India. The recorded growth has proven that Shariah investments are not only favorable for religious values, but also lead to the economic growth of a nation.

Keywords : **Islamic finance, Shariah compliants, equity valuation, FCFE, DCF**

JEL Classification : C60, G31, M41

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Islamic finance is subset of conventional finance. The major differences are interest (Riba), Gambling (Maysir) and Uncertainty (Gharar) prohibited in it. Investment is the application of money for earning more money but Islamic Finance does not seek like this, it believes on partnership, profit/Loss sharing, joint venture, leasing and interest free micro finance. Before investment in any security and business people have to judge the portfolio first, whether it is prohibited or not. Islam is very secular and spiritual religion it provide some rules and guideline to investment money in business and capital market. Shariah Law has restricted some businesses which are not entertained in Islamic Law and also provide financial screening criteria by which companies are as followed to enter the Islamic Investment. Throughout the world Islamic finance and capital is flourishing in terms of ethical and faith based investment.

The world famous business consulting firm Ernst & Young estimated Global Islamic banking Assets Growth to reach 1.811 trillion dollar in 2013 from 1.334 trillion in2011 with growth rate 35.75%. Islamic bond market (Sukuk) has given outstanding performance in the world. Islamic bond (sukuk) maturity was 179 billion dollars in 2011 & expected to reach 400 billion in 2015 with growth rate 123.46%.India has 175 million Muslim population,

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which is third largest in the world. Raghuram Rajan mooted first idea of Islamic finance in 2008 when he was Chief Economic Advisor to the Ministry of Finance but Rajan report was not accepted by RBI Governor of the time, D Subbarao. He said Islamic banking and Finance was not legally feasible in the current statutory and regulatory framework.

The SEBI (Alternative Investment Funds) Regulations, 2012 (AIF Regulations) were introduced with the objective of regulating pooled investment vehicles in India. Shariah practitioners were quick to realize that AIFs can be used to set-up dedicated Shariah based investment funds under the AIF Regulations (SBI regulations, 21st May, 2012). NBFC (Non-banking financial company) was started on 2013 with the name of Cheraman Financial Services Ltd (CFSL). It is based on interest free loan. CFSL has received approval from regulatory authority SEBI, and also Venture Capital fund of Rs 250 crore ($40 million). First Shariah Index was launched by an exchange with the help of BSE -TASIS SHARIAH 50 in Jan 2008.

TASIS (Taqwaa Advisory & Shariah Investment Solutions) was the advisory and consultancy provided to BSE. TASIS was working basically to filter the companies for the Shariah Compliant. There were two ways to screen the companies, first sectoral based screening, (from the view point of Shariah law, businesses such as those dealing in pork, alcohol, gambling, conventional financial services, media or advertising, tobacco, pornography, music etc are non-permissible for investment)Second financial based screening,(there were some ratio restriction have given in terms of cash compliance, debt equity and income from other sources). In May 2013, BSE had first strategic partnership between BSE and S&P Dow Jones Indices was designed to represent all Shariah compliant stocks of the broad-based S&P BSE 500 index. Now-a-days S&P BSE 500 Shariah Index is working under the supervision of S&P (Standard and Poor). S&P Financial Services is an American financial services company. S&P BSE 500 Shariah has also been screening the stocks on the basis of financial aspect.

(i) Leverage Compliance : Debt / Market Value of Equity (36 month average) < 33 %

(ii) Cash Compliance : Accounts Receivables / Market value of Equity (36 month average) < 49 %;
(Cash + Interest Bearing Securities) / Market value of Equity (36 month average) <33%

(iii) Revenue Share from Non-Compliant Activities : (Non-Permissible Income other than Interest Income) / Revenue < 5%

(iv) Dividend Purification Ratio : This ratio is provided to investors for purification purposes, it is calculated as: Dividends * (Non Permissible Revenue / Total Revenue).

Valuation of stock depends upon multitude factors likes earning of the company, dividend destitution, growth rate, risk exposure. Valuation of a company is more famous for the fundamental and technical analysis. Valuation of Shariah Index is also taken same way to analysis the company. There is a slight difference between conventional finance and Islamic finance, which is Shariah Law.

Literature Review

The valuation of assets depends upon the present value of all its future cash flows. In the others words the future cash flows generated by the assets should be discounted at the required rate in order to know its present intrinsic value. The scholar has tried to go through the available researches in the field of conventional finance and Islamic finance. Mostly, these have been carried out form conventional stock market. There is a dearth of studies on Shariah investment in India, the following is a glimpse of the available literature review.

Sukhija (2014) study was intended to examine the impact of fundamental factors with share price in different

period of time, this study focused on the time period from financial year 2000 to 2013, and Earning per Share has positive and significant impact on the share price at five percent level. However, the variables book value, PER and ROCE have a positive relationship with share price and are insignificant. Study related to BSE 200 index in which 80 companies were selected on the behalf of market capitalization. The variable DPS, DPR and Growth have a negative impact on share price and were insignificant. The second part of normal period contains the period from 01-04-2009 to 31-03-2013. PER and ROCE have positive and significant impact on the share price at five and ten percent level. The variable BV, DPS, EPS, DPR and Growth have a positive relationship with share price and statistically insignificant.

Panda (2013) in this study author has analyses fundamental analysis of selected stock of India, Basically stock valuation using the CAPM and FCFF Model. Researcher has selected five companies on the behalf of two criteria first on the basis of companies listed in index and second all companies were NSE 'A' categories the time period of study was each quarter of 2011. Statistically *t*-test was used between intrinsic value and market value. Deviation also shows in percentage. A *t*-test resulted signification impact of deviation between intrinsic value and market value. Author estimated all five companies t-test result, it was found that out of five companies only four companies accepted null hypothesis on the behalf of EFCF Model, except the Hero Honda and supports the robustness of the EFCF Model. At last this study was suggested only valuation was not total mystery for the correct value and right technique can be expressed true value.

Mebame and Ikhatua (2013) study was intended to examine the effect of accounting information to stock volatility in Nigerian capital market. In this study Arch family model used for checking the volatility of Nigerian stock market. Outcome shows accounting information on book values, earnings per share and dividend per share is found to related to stock volatility. The results also support the of volatility clustering in Nigeria provided by Ogum, et al. (2005) and also agree with their conclusion that stock returns volatility is not quite persistent in Nigeria as the sum of the GARCH coefficients were not so close to 1.

Sadegi (2008) investigated the impact of the introduction of Bursa Malaysia Islamic index on the financial performance and liquidity of the screening securities involved in the Islamic index in Malaysia. The study employed event study methodology to estimate mean cumulative returns of the Shariah compliant stocks in the days surrounding the event and also investigate the changes in liquidity using trade volume and bid ask spread surrounding the event days as liquidity proxies. The study found that the introduction of the Shariah index has positive and strong impact on the financial performance of the Shariah compliant stocks.

Damodaran (2006) Valuation is considered the heart of finance and understanding what determines the value of a firm and how to estimate that value seems to be a prerequisite for making sensible decisions. Hakim and Rashidian (2004) analyses the risk and return of the Dow Jones Islamic World Index, Dow Jones World index and Dow Jones Sustainability (DJS) World index by using weekly closing value of the indices and LIBOR, a proxy of the risk-free rate during period January 5, 2000 to August 30, 2004. By employing CAPM, the results of the study reveals that the most popular index is market competitive but has underperformed in relation to another morally restricted but non-Islamic index. The study concludes that investors in the Muslim index are not suffering a discernible cost for complying with the Shariah restriction.

Penman (2000) 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 within a clean surplus relationship and all the assumptions are identical. Moreover, for all sets of accounting rules, these models produce the same valuation when infinite-horizon forecasts are used. Thus, the dividend, cash flow and residual the study assumes different circumstances for beta coefficient as well as the growth rate estimates. First, the study assumes that the growth rate is unified in the DDM and the CFM and then it will be different. Second, the study assumes that the fundamental attributes will be discounted by the cost of equity based on firm's beta and then they will be discounted by the cost of equity based on firm industry's beta.

Objectives of the Study

- To analyze the Discounted Cash flow (DCF) model of the Shariah compliant stocks.
- To apply the FCFE model for calculate the forecasted free cash flow of the Shariah compliant stocks.
- To calculate the intrinsic value of Shariah compliant stocks.
- To compare the intrinsic values with market values of Shariah compliant stocks.

Data and Methodology

The present study focuses on the Shariah based listed companies in India. This research used S&P BSE 500 Shariah Index in which 500 companies are listed. 179 Indian companies were listed in different ten sectors. This study has selected 10 companies, one from each sector on the basis of market capitalization. All these companies belongs to S&P BSE 500 Shariah "A" categories companies. Selected companies' areas are as follows :

S.N.	Companies Names	Sectors Names
1	Finolex Cable Ltd.	Telecommunication Services
2	Lupin Ltd.	Health Care
3	TCS	Information Technology
4	CESC Ltd.	Energy
5	Britannia Industries Ltd.	Consumer Staples
6	Ultratech Ltd.	Materials
7	Amara Raja Batteries Ltd.	Industries
8	CRISIL Ltd., MMTC Ltd.	Finance
9	BHEL	Utilities
10	Asian Paints Ltd.	Consumer Discretionary

This study is based on secondary data. The required data has been collected through data base of BSE, www.asiaindex.co.in, www.moneycontrol.com, Annual reports of the companies. Time period of the study covers five years form Jan. 2010 to Dec. 2014 in millions. Risk free rate data has been collected from RBI official site of 364-day Treasury Bills, Implicit yield at cut-off price (percent). Various accounting and statistical tools and techniques have been applied for analysis which includes- Beta (CAPM), FCFF, Intrinsic Value, and *t* -test.

The study has used free cash flow to equity which is based on the principle of future cash flow of a company should be free to be distributed among the share holders. Predominantly, equity free cash flow (EFCF) is the cash flow available to the company's suppliers of equity capital or equity shareholders, after meeting all operating expenses (including interest and tax), principal payment and necessary investments into short term assets, that is, working capital and long term assets, that is, capital expenditure (Damodaran, 1996, 2004). The following formula is used for the model :

$$Vo = EFCF\ 1\ /\ (1+ Ke)$$

where,

Vo = the value of the stock, *EFCF* = equity free cash flow, and *Ke* = cost of equity. The above mentioned formula is divided into two parts the nominator part and the denominator part (Panda, 2013). The nominator part is calculation of *FCFE* is the amount which is available for the shareholder.

FCFE = Net Income +/- Changes in Working capital + Depreciation & Amortization – *CAPEX*

Where, *FCFE* = equity free cash flow, *CAPEX* = capital expenditure. Net income means net profit after deduction of all expenses and depreciation and tax. Difference used for this study current assets and current liabilities as working capital changes. For capital expenditure used as purchase of fixed assets, investment of joint venture company, investment in association, addition to fixed assets, and land & advance to subsidiary companies (Damodaran, 1996, 2004).

The denominator part is calculation of CAPM. The discounted cash flow model is based on the principle that all future cash flows should be discounted at a required rate of return and that is the cost of equity. The CAPM can be expressed as the following expression that relates the required expected return of an investment to systematic risk and the relevant cost of equity is simply the rate of return investors expect from investing in the firm's stock. CAPM (capital assets pricing model) is requires: *(Rf)* risk free rate, Beta (the stock beta), (R_m) expected market return.

$$E(R) = Rf + \text{Beta}\ (R_{market} - Rf)$$

Risk free return is the rate of return which is free risk. This is rate is fixed by the Reserve Bank of India's (RBI) central board of directors. For the year 2014, the risk free rate is 6.37%. Beta (β), is the systematic risk. For this study beta is used by every company. Market return of S&P BSE 500 Shariah Index is taken from 2009 to 2014.

Data Analysis and Interpretation

According to Table 2, the calculated cost of equity of the company is 13.66%. It gives the details of the forecasted cash flow status from 2010 to 2014 and table xii shows the calculated intrinsic values for the year 2010-14. The findings are as follows. The intrinsic value of Finolex share in 2010 to 2014 is 95.70. The market share price is 136.45 which are 42.58% more than the intrinsic value. *T*-test result (Table 13) shows that the calculated *t*-value between the intrinsic and the market value is -.431 which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that intrinsic value and market value are supported to FCFE Model. Finolex Ltd. is working flawlessly in terms of DCF or earning available for the shareholders from 2010 to 2014.

Table 3 the calculated cost of equity of the company is 13.76%. It gives the details of the forecasted cash flow status from 2010 to 2014 and table xii shows the calculated intrinsic values for the year 2010. The findings are as follows. The intrinsic value of Lupin share in 2010 to 2014 is 776.80. The market share price is 989.9 which are 27.43% more than the intrinsic value. Table 13 shows result of *t*-test -.431 which is less than the table value, that is, 3.182. So, here null hypothesis is accepted that supports to FCFE Model. DCF represent the future opportunity

Table 1. Calculation of Cost of Equity of Select Shairah Compliant Companies

S.N.	Companies Names	Risk free rate (Rf)	Beta Value	Market Return	Cost of Equity (Ke)
1	Finolex Cable Ltd.	6.37%	0.98	13.8	13.66%
2	Lupin Ltd.	6.37%	0.99	13.8	13.76%
3	TCS	6.37%	1.02	13.8	13.99%
4	CESC Ltd.	6.37%	0.94	13.8	13.37%
5	Britannia Industries Ltd.	6.37%	0.34	13.8	8.96%
6	Ultratech Ltd.	6.37%	0.72	13.8	11.78%
7	Amara Raja Batteries Ltd.	6.37%	0.55	13.8	10.34%
8	CRISIL Ltd.	6.37%	0.55	13.8	10.5%
9	BHEL	6.37%	1.915	13.8	20.59%
10	Asian Paints Ltd.	6.37%	1.77	13.8	19.54%

Table 2. Forecasted Equity Free Cash Flow of Finolex Cable Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 13.67%	Discounted cash flow
2010	576.26	2,222.83	372.27	379.239	7.29	2,792.12	2995.693	0.880	2457.063
2011	867.792	3,294.57	387.758	406.9	10.36	4,143.22	4572.455	0.774	3206.851
2012	981.9	3,074.00	394.7	559.9	12.26	3,890.70	4367.700	0.681	2649.567
2013	1,452.70	4,612.20	466.3	498.4	15.71	6,032.80	6980.553	0.599	3613.647
2014	2,076.80	5,010.20	484.3	1116.7	18.82	6,454.60	7669.356	0.527	3401.574

Table 3. Forecasted Equity Free Cash Flow of Lupin Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 13.77%	Discounted cash flow
2010	6489.3	15,393.20	815.7	6856.8	20.06	15,841.40	19019.343	0.879	13924.5906
2011	8625.5	9,968.50	1711.8	5836.4	25.37	14,469.40	18140.287	0.773	11184.8462
2012	8676.5	12,125.60	2275.2	7559.4	21.62	15,517.90	18872.870	0.68	10552.172
2013	13,141.60	21362.1	3321.9	5613.2	25.25	32,212.40	40346.031	0.597	19230.8028
2014	18,363.70	34709.5	2609.7	8786.7	26.49	46,896.20	59319.003	0.525	24620.505

Table 4. Forecasted Equity Free Cash Flow of TCS Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 14%	Discounted cash flow
2010	7,000.64	7,395.02	660.89	1044.79	37.90	14,011.76	19322.22	0.877	12288.31
2011	9,068	9,790.38	735.26	1,850	37.00	17,743.36	24308.40	0.769	13644.64
2012	10,413	12,672.65	917.94	2,007	35.2	21,997.01	29739.96	0.675	14847.98
2013	13,917.31	19,733.75	1079.92	2,638	36	32,093.14	43646.67	0.592	18999.14
2014	19,163.87	27227.38	1,349	3,126	38.9	44,614.25	61969.19	0.519	23154.80

for the investment in Shariah compliant stocks and Lupin Ltd. shows the earning offered for the equity shareholders.

According to Table 4, the accounted cost of equity of the company is 13.99%. This table gives the details of the forecasted cash flow status from 2010 to 2014 and Table 12 shows the calculated the intrinsic value of TCS share in 2010 to 2014 is 2186.63. The market share price is 2189.84, which is .15% more than the intrinsic value. T-test result Table 13 shows that the calculated t-value between the intrinsic and the market value is -.431 which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that intrinsic value and market value are sustained to FCFE Model. DCF values are confirmed that growing behavior of Shariah compliant stocks and cash flows are available for equity shareholders continuously 5 years.

Table 5, the explaining calculated cost of equity of the company is 13.37%. It gives the details of the forecasted cash flow status from 2010 to 2014 and Table 12 shows the calculated intrinsic values for the year 2010-14. The intrinsic value of CESC share in 2010 to 2014 is 525.82. The market share price is 454.54, which are 13.56% lower than the intrinsic value. This is the right time to buy the CESC share from market. Table13 shows result of *T*-test -.431 which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that supports to FCFE Model. Discounted Cash Flow values from 2010 to 2012 shows a positive Cash Flow for the equity

Table 5. Forecasted Equity Free Cash Flow of CESC Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 13.37%	Discounted cash flow
2010	433.3	1,155.02	317.75	1421.48	8.33	484.59	524.96	0.882	427.41
2011	488.37	1,295.98	267.37	1659.82	8.77	391.90	426.27	0.778	304.90
2012	551.31	1,470.54	289.48	1024.01	9.17	1,287.32	1405.37	0.686	883.10
2013	618.50	495.99	306.21	2023.98	9.52	-603.28	-660.71	0.605	-364.98
2014	651.89	85.91	338.59	2035.32	9.26	-958.93	-1047.73	0.534	-512.07

Table 6. Forecasted Equity Free Cash Flow of Britannia Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 8.96%	Discounted cash flow
2010	116.51	371.81	37.54	179	34.08	346.86	465.07	0.918	318.42
2011	145	248.19	44.59	204	46.57	234.07	343.08	0.842	197.09
2012	187	-121.28	32.57	229	66.82	111.43	185.89	0.773	86.14
2013	233.87	-290.92	57.08	222	85.75	359.68	668.11	0.709	255.01
2014	369.83	-98.364	63	266	160.06	68.37	177.79	0.651	44.51

Table 7. Forecasted Equity Free Cash Flow of Ultratech Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 11.78%	Discounted cash flow
2010	1,093	173.00	388	274	259.18	1,380.00	4956.684	0.895	1235.1
2011	1,404	305.00	766	1,242	184.79	1,233.00	3511.461	0.8	986.4
2012	2,446	164.00	903	3,158	465.21	355.00	2006.496	0.715	253.825
2013	2,655.00	25	945	3,247	462.6673	378.00	2126.882	0.64	241.92
2014	2,144.00	551	1,052	2,228	268.8295	1,519.00	5602.520	0.573	870.387

shareholders, But in the years 2013 and 14, there is no inflow of cash for the equity shareholder although there is net profit of ₹ 618.50, ₹ 651.89 cr. respectively, but value of cash out flow as on 1st April 2009 for the year ending 2013 and 14 are 364.98, 512.07.

Table 6 explaining the accounted cost of equity of the company is 8.96%. This table gives the details of the forecasted cash flow status of all five years and table xii shows the calculated intrinsic value of Britannia share in 2010 to 2014 is 804.36. The market share price is 862.9, which is 7.28% more than the intrinsic value. The results of T-test Table 13 shows that the calculated t-value between the intrinsic and the market value is -.431, which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that intrinsic value and market value are supports to FCFE Model. The value of the cash flows, as on 1st April 2009 for the year ending 2010, 2011, 2012, 2013, 2014 are 318.42, 197.09, 86.14, 255.01, and 44.51, respectively. This shows that Britannia is continuously providing free cash flow to its equity shareholder.

According to Table 7, the calculated cost of equity of the company is 11.78%. It gives the details of the forecasted cash flow status from 2010 to 2014 and table xii shows the calculated the intrinsic value of Ultratech share in 2010 to 2014 is 1790.52. The market share price is 2027.90, which is 13.26% more than the intrinsic

Table 8. Forecasted Equity Free Cash Flow of Amara Raja Batteries Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 10.34%	Discounted cash flow
2010	1,670	3,120	429	685	10.13	4,534.84	4994.09	0.906	4108.57
2011	1,480.96	3635	417.12	672	9.65	4,861.21	5330.44	0.821	3991.05
2012	2,151	5239.52	464.73	873	21.57	6,981.40	8487.10	0.744	5194.16
2013	2,867.05	6,806.59	660.92	1,464.25	22.30	8,870.31	10848.07	0.675	5987.46
2014	3,674.36	6,649.07	645.71	3,737.22	22.23	7,231.92	8839.42	0.611	4418.70

Table 9. Forecasted Equity Free Cash Flow of CRISIL Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 10.50%	Discounted cash flow
2010	196	133	20	127	7.64	221.97	238.93	0.905	200.88
2011	186.51	146	22	185	29.76	169.08	219.40	0.819	138.48
2012	193	62.56	24	331	42.44	-51.81	-73.80	0.741	-38.39
2013	281.18	191.01	23	293.709	46.18	201.71	294.87	0.671	135.35
2014	425.15	165.57	37.92	297	63.03	331.64	540.68	0.607	201.31

Table 10. Forecasted Equity Free Cash Flow of BHEL Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 20.59%	Discounted cash flow
2010	4,311	10,426	458	1749.75	18.71	13,445.25	15960.86	0.829	11146.11
2011	6,011	12,519	544	2,088	21.02	16,985.62	20556.00	0.688	11686.11
2012	7,040	17,843	800	1,330	20.56	24,353.29	29360.33	0.57	13881.38
2013	6,615	22,963	953	988.52	16.65	29,542.48	34461.30	0.473	13973.59
2014	3,461	25431	983	899.62	8.01	28,975.38	31296.31	0.392	11358.35

value. T-test result Table 13 shows that the calculated t-value between the intrinsic and the market value is -.431 which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that intrinsic value and market value are sustained to FCFE Model. DCF is accessible for the equity shareholders throughout the period of study.

Table 8 elaborating the calculated cost of equity of the company is 10.34%. This table gives the details of the forecasted cash flow status of all 5 years and Table 12 shows the calculated the intrinsic value of Amara Raja Batteries share in 2010 to 2014 is 214.76. The market share price is 409.85, which is 90.82% more than the intrinsic value. The results of T-test table xiii shows that the calculated t-value between the intrinsic and the market value is -.431 which is less than the table value i.e. 3.182. So, here null hypothesis is accepted that intrinsic value and market value are supports to FCFE Model. Cash flows are obtainable for the equity shareholders continuously period of study.

According to Table 9, the calculated cost of equity of the company is 10.50%. It gives the details of the forecasted cash flow status from 2010 to 2014 and table xii shows the calculated the intrinsic value of CRISIL share in select five years is 953.56. The market share price is 1293.50, which is 35.65% more than the intrinsic value. T-test result Table 13 shows that the calculated t-value between the intrinsic and the market value is less than market value, which is accepted hypothesis. DCF value of 2010-11 shows a positive Cash Flow for the equity

Table 11. Forecasted Equity Free Cash Flow of Asian Paints Ltd. from 2010 to 2014

Years	Net income	Changes in W.C.	Depreciation & Amortisation	CAPEX	ROE "g"	FCFE	Forecasted FCFE (FCFE*"g")	PVF @ 19.54%	Discounted cash flow
2010	775	1,182	61	400	38.50	1,616.49	2238.84	0.836	1351.39
2011	775.15	778.45	94.48	456	30.40	1,192.50	1555.02	0.699	833.56
2012	958	487.51	99.49	919	39.00	626.09	870.27	0.585	366.26
2013	1,050.00	683.70	126.98	787.37	35.00	1,073.31	1448.97	0.489	524.85
2014	1,169.06	1,198.57	212.32	1176.96	32.00	1,402.99	1851.95	0.409	573.82

Table 12. Calculated Intrinsic Value of Select Companies From the Year 2010 to 2014 and Comparison with Market Value

S.N.	Companies Names	Intrinsic Value	Market Value	Deviation
1	Finolex Cable Ltd.	95.70	136.45	42.58%
2	Lupin Ltd.	776.80	989.90	27.43%
3	TCS	2186.63	2189.84	0.15%
4	CESC Ltd.	525.82	454.54	13.56%
5	Britannia Industries Ltd.	804.36	862.90	7.28%
6	Ultratech Ltd.	1790.52	2027.90	13.26%
7	Amara Raja Batteries Ltd.	214.78	409.85	90.82%
8	CRISIL Ltd., MMTC Ltd.	953.56	1293.50	35.65%
9	BHEL	158.96	180.75	13.71%
10	Asian Paints Ltd.	143.19	505.15	252%

shareholders, In 2012, there is no cash for the equity shareholder although there is net profit (193 cr.), but value of cash out flow as on 1st April 2009 for the year ending 2012 is (-38.39).

As per the Table 10, the calculated cost of equity of the company is 20.59%. This table gives the details of the forecasted cash flow status from 2010-2014 and Table 12 shows the calculated the intrinsic value of BHEL share in select five years is 158.96. The market share price is 180.75, which is 13.71% more than the intrinsic value. The results of T-test table xiii shows that the calculated t-value between the intrinsic and the market value is -.431 which is less than the table value, that is, 3.182. So, here null hypothesis is accepted. Earning for the equity shareholders is accessible from the period of 2010 to 2014.

According to Table 11, the calculated cost of equity of the company is 19.54%. It gives the details of the forecasted cash flow status from 2010 to 2014 and Table 12 shows the calculated the intrinsic value of Asian Paints share in select five years is 143.19. The market share price is 505.15, which is tremendously high 252% more than the intrinsic value. T-test result Table 13 shows that the calculated t-value between the intrinsic and the market value is less than market value, which is accepted hypothesis. Cash flow is available for the equity shareholder from 2010 to 2014.

Calculation of Intrinsic Value of Shariah Compliant

This is approach of the investor that fundamental analysis affects the performance of the companies. Every share has assumed to have economic worth based on the present and future earning capacity of share. This is also called intrinsic and fundamental value. Table 13 shows the difference between intrinsic value and market value for this

Table 13. Results of *t*-test of all Selected Companies

	Intrinsic Value	Market Value
Mean	765.033	905.078
Variance	519089.083	532756.196
Observations	10.000	10.000
Hypothesized Mean Difference	0.000	
Df	18.000	
t Stat	-0.432	
P(T<=t) one-tail	0.336	
t Critical one-tail	1.734	
P(T<=t) two-tail	0.671	
t Critical two-tail	2.101	

purpose Null Hypothesis is, $H0_{FCFE}$:μ , The difference between the calculated Fundamental value derived using the FCFE Model and Market value, is not significant.

Discussion

The word valuation has different connotation to different people. Mostly, people consider about models and numbers. There are many models and numbers like discounted cash flow technique and Intrinsic value method etc. there are three broad theme established in valuation. One is intrinsic valuation, in which we value an asset on its fundamental DCF. It is the most commonly used method under this theme of valuation. Second approach is the relative valuation Ratios. Generally, the market to book value is the most common technique in relative valuation. Third approach to valuation is the Applying Option pricing models to valuation, which is based on the contingent cash flows. Hence the present research will apply the relative approach to valuation and try to find out the maximum return or cost of equity of the selected firms.

In this paper, calculated observation is showing that BHEL is a company where cost of equity is high in comparison to the rest of select company. In comparison to this, cost of equity is lower in case of Britannia. There is a DCF value of 2010-14 shows a positive Cash Flow for the equity shareholders of selected companies, e.g, Finolex, Lupin, TCS, CESC, Britania, Ultratech and Amar raja Betteries. On the other side, CRISIL value of cash out flow, as on 1st April 2009 for the year ending 2012, is (-38.39). This indicates a negative DCF of CRISIL. BHEL earning for the equity shareholders are accessible from the period of 2010 to 2014. Asian paints Cash flow is available for the equity shareholder from 2010 to 2014.

Conclusion

The object was to calculate intrinsic value on the behalf of market value and book value of the all 10 select companies' shares. FCFE Model has been used for this purpose. Using this model, yearly intrinsic values of selected companies' share is calculated. Average yearly market value is calculated by taking the average of the closing prices of all selected concerned company's share price. The intrinsic value is accounted and then compared with market value. Standard deviation is expressed in percentage. The result of T-test is conducted to check the significance level of intrinsic value and market value, whether null hypothesis was accepted and supported theFCFE Model or not. There are many models and methods for valuation of shares. DCF method of valuation seeks the potential of future investment. Most of the Shariah Compliant stocks have a positive sign on

the DCF valuation except the CESC ltd. and CRISIL Ltd. Shariah compliant stocks are working with ethical and faith based investment in India, which is not only for the Muslim community but also for the Non-Muslim community.

In this study Shariah compliant stocks had an evident tremendous growth in India. Highest Recorded annualized return of S&P BSE 500 Shariah was 49% February 2015 in comparison with benchmark indices (Sensex) 41%. There are severalamendments, which are needed in Indian regulatory for economy growth. Islamic Finance is working prominently worldwide, in terms of share, Bond (Islamic Sukuk), Islamic Insurance (Takaful) and Islamic microfinance. This paper suggests that IRDA will allow the Islamic Insurance, Banking Act should be amendment for the Islamic banking, Mutual Funds and Microfinance with interest free. Islamic finance is helpful in elimination of poverty from the country as well as the world because it protects borrowers from the unwillingly burden of Interest. Interest is not only the solution for wealth maximization and ethical investment. BSE Shariah index has grown in the emerging country like India where different group of religious people are survived. Due to consideration of political, social, cultural, and religious aspect of the nation, Shariah scholars are tapped to all characteristics for the secular nation to make the Shariah Index where ethical and faith based investment viz-a-viz contribution of economic and sustainable development of the nation.

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