

HEB

## Study of Overvaluation and Undervaluation of Selected Stocks Using Discounted Cashflow Model

CASS

*Dr. Manjula Shastri<sup>1</sup> & Aditi Gupta<sup>2</sup>*

<sup>1</sup>Associate Professor, Department of Finance, Amity Business School, Noida

<sup>2</sup>Research Scholar, Amity Business School, Noida

*Address for Correspondence: editojohp@gmail.com*

### ABSTRACT

The research study conducted was to estimate the true intrinsic values of selected stocks of twenty Indian manufacturing companies using discounted cash flow technique if equity free cash flow and cost of equity for year 2018 and forecasted for 2019 on quarterly figures. These true intrinsic values of selected stocks of these 20 companies were then compared with their prevailing market values which were estimated by these 20 Indian manufacturing companies closing market prices for year 2018-19 on quarterly figures. The objective of this research is to estimate the true value of selected stocks of the Indian companies to interpret their overvaluation and undervaluation using discounted cash flow (DCF) model. The overvaluation and undervaluation of a stock would have direct impact on its investment demand. To perform the valuation, the DCF model estimates quarterly intrinsic values for the year 2018. Then to estimate overvaluation and undervaluation of the stocks, they would be compared with the market values of the same year. To interpret the findings of the research, twenty (20) "A" category NSE listed Indian companies have been considered for the required analysis and estimation. By using the deviation between the true value of these stocks and the market values we determine the significance level. To estimate the significance level t-test and hypothesis would be used.

**Keywords:** Discounted cash flow, intrinsic values, valuation, stock, market values, overvaluation, undervaluation, equity free cash flow and cost of equity.

*Access this Article Online*

<http://heb-nic.in/cass-studies>

Quick Response Code:

Received on 20/02/2019  
Accepted on 25/02/2019 © HEB All rights reserved



## INTRODUCTION

The price of the stock is affected by the market risk, the growth rate of the stock and the earnings of the company, these factors have direct impact on the price of the stock. These multiple factors play a major role in valuation of intrinsic value of equity stock. Financial analysts have in present scenario have been divided into two major segments either technicians or fundamentalist. But the reality holds that they are very few of them existing is today's financial world.

Where technicians pay far more attention on historical data, historical pricing pattern and volatility of equity and share market. On the other side fundamentalist pay more attention on market movements and economic scenario and their effect on financial instruments. It becomes a regressive study to take in account of all the demographic and macroeconomic factors into consideration while valuating securities. For this, such valuation model is required to be taken to give a real picture and valuation of stock traded in the financial market.

### I. REVIEW OF LITERATURE

To know the present value of an asset, the future cash flows need to be discounted at the estimated rate to determine its intrinsic value. This research paper tries to determine intrinsic values of selected stocks and compare them with their market values to evaluate the deviation and the significance level between them. Pablo Fernandez (2003) shows that the three residual Income models for equity valuation always yield the same value as the Discounted Cash Flow Valuation models. We use three residual income measures: Economic Profit, Economic Value Added (EVA) and Cash Value Added. We also show that economic profit and EVA are different, although Copeland, Koller and Murrin (2000, page 55) say that economic profit is a synonym of EVA. Florian Steiger (2008) examines every aspect of discounted cash flow model in determining true value of the company. M. SharmeenFaroo states the role of equity free cash flow model in evaluating the true value of the stock. For evaluating Equity free cash flows the most significant role is played by Net Income. To calculate Equity free cash flows has been include with help of selected companies' income and expenditure statement. Ms. Shradhanjali Panda (2013) aims at determining valuation of a company by determining intrinsic values using discounted cash flow model. Where technicians pay far more attention on historical data, historical pricing pattern and volatility of equity and share market. On the other side fundamentalist pay more attention on market movements and economic scenario and their effect on financial instruments. It becomes a regressive study to take in account of all the demographic and macroeconomic factors into consideration while valuating securities. Mohamed Zaheeruddin (2013) shows the financial industry which is involved in providing financial services and financial intermediaries by mobilization of funds to all the investors who are willing to invest into equity stock through purchasing smaller units of market securities. Security industry is providing high tend liquidity in highly competitive financial and economic market. The study analyzes equity industry on the basis of performance ratios, market risk and financial returns. NadicaIvanovska (2014) states the importance of expected growth rate and uncertainty involved in

determining these future cash flows for valuation of a company. For the valuation of the company discounted cash flow techniques are used to estimate true values of all investment opportunities in comparison to cash flow which is available. Sonali Agarwal Chand Tandon (2015) states the valuation of the company discounted cash flow techniques are used to estimate true values of all investment opportunities in comparison to cash flow which is available. This research paper includes analysis of selected manufacturing companies from different separate sectors of the Indian market. The service companies have not considered for this research paper as they affected by the prevailing global factors.

## **II. OBJECTIVES OF THE STUDY:**

The financial market is neither rigid nor rational. It keeps fluctuating which makes it difficult to estimate the true value of stock. Some stock could have been valued more or some could have been valued less. This research paper analyzes whether the valuated stock value matches the market stock price or not. The objectives of the study are:

- To determine intrinsic value of equity stock of selected firms by using their variables, equity free cash flow and cost of equity
- To compare the valuated stock's intrinsic value with their market stock value resulting in their overvaluation and undervaluation.
- To test the significance level between the calculated intrinsic value and the market value of the stock.
- To estimate the true value of a company and its effect on market prices with significant impact on supply and demand of its stock in the investing market

## **III. RESEARCH METHODOLOGY:**

### **3.1. Selection of companies :**

This research paper includes analysis of 20 selected manufacturing companies from different separate sectors of the Indian market. The service companies have not considered for this research paper as they affected by the prevailing global factors. These companies have been selected on the basis of them being top 20 listed as "A" group NSE companies and the second criteria is that these are all index companies. These selected 20 companies are:

- BAJAJ AUTO
- LUPIN LIMITED
- TATA STEEL
- INDIAN OIL CORPOARATION
- DABUR
- BHARAT ELECTRONICS LIMITED

- TATA MOTORS
- ASIAN PAINTS
- NESTLE
- VEDANTA
- ULTRA TECH CEMENT
- GAIL
- COLGATE
- MARICO
- BRITANNIA
- TVS MOTOR
- CIPLA
- SAIL- STEEL AUTHORITY OF INDIA LIMITED
- RELIANCE INDUSTRY LIMITED
- ITC LIMITED

### **3.2. Nature of the data :**

The data used for performing analysis in this research paper is secondary in nature. Financial values of the 20 companies have been taken from CMIE record to evaluate these companies stocks and their intrinsic value. To estimate the market stock value of these 20 companies' data has been taken from NSE official website. The closing prices of the company's stock prices are taken into consideration to estimate market values. The time period taken to perform the analysis is 10 years starting from 1<sup>st</sup> January 2008 to 31<sup>st</sup> December 2018.

### **3.3. Methodology:**

Equity free cash flow model has been used to estimate the intrinsic value of the given companies' stock. Financial values on the quarterly basis are taken to perform valuation in this report of 2018. For estimating values for 2019 the growth rate has been calculated by retention ratio multiplied by ROE. Each quarter of 2019 is estimated by forecasted cash flows by using the calculated growth rate. Capital Asset Pricing Model is used for estimating cost of equity to discount the cash flows to each quarter of 2018.

### **3.4. Research design :**

Equity free cash flow (EFCF) model has been used to estimate the intrinsic value of the given companies' stock. This model states that the cash flows are to freely distributed among the shareholders. The formula for Equity free cash flow model is:

Value of Stock ( $V_0$ ) = Equity free cash flow (EFCF)

/ 1+Cost of Equity (Ke)

Equity free cash flow model is divided into two parts. First is the numerator and second is the denominator.

As per the formula of the model, numerator to calculate value of stock is Equity free cash flow. This is evaluated by:

Equity free cash flow = Net income +/- Changes in Working Capital + Depreciation & Amortization – Capital expenditure

Post fulfilling the main objective of the study to evaluate Equity free cash flows for the given year, the next task is to evaluate growth rate. Growth rate is calculated by:

Growth rate = retention ratio \* return on equity (ROE)

As per the formula of the model, denominator to calculate value of stock is Cost of Equity. To calculate cost of equity, Capital asset pricing model of discounted cash flow. CAPM model calculates expected return with other essential elements to estimate cost of equity. The formula for cost of equity:

Cost of Equity (Ke) = Risk Free Rate (RF) + Systematic risk of sock of a company ( $\beta$ )\*(Expected Market Return (Rm) – risk free rate (RF)); Market Risk Premium

Risk free rate of return has Zero risk on investment. The beta represents sensitivity of stock return in comparison to rates of return of the whole market.

For t – test:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

t- Test has been used to determine the deviation and significance level between the estimated intrinsic values and the market values of the five selected companies.

Null Hypothesis is:

Ho: The difference between the market value and the estimated intrinsic value is not significant.

Alternate Hypothesis is:

Ha: The difference between the market value and the estimated intrinsic value is significant.

**IV. ANALYSIS AND INTERPRETATION OF RESULT****Table 1: Calculation of cost of equity of sample companies :**

<b>Company Name</b>	<b>Risk Free Rate (Rf)</b>	<b><math>\beta</math> value</b>	<b>Market risk premium</b>	<b>Ke (Cost of Equity)</b>
Bajaj Auto	6.5%	0.39	6.1	8.8%
Lupin Ltd	6.5%	0.36	6.1	8.7%
Tata Steel	6.5%	0.86	6.1	11.7%
Ioc	6.5%	0.48	6.1	9.4%
Dabur	6.5%	0.37	6.1	8.7%
Bel	6.5%	0.40	6.1	9%
Tata Motors	6.5%	0.86	6.1	11.7%
Asian Paints	6.5%	0.36	6.1	8.7%
Nestle	6.5%	0.37	6.1	8.7%
Vedanta	6.5%	0.48	6.1	9.4%
Utc	6.5%	0.39	6.1	9%
Gail	6.5%	0.38	6.1	8.8%
Colgate	6.5%	0.48	6.1	9.4%
Marico	6.5%	0.40	6.1	9%
Britannia	6.5%	0.37	6.1	8.7%
Tvs Motors	6.5%	0.39	6.1	8.8%
Cipla	6.5%	0.36	6.1	8.7%
Sail	6.5%	0.86	6.1	11.7%
Reliance	6.5%	0.48	6.1	9.4%
Itc	6.5%	0.37	6.1	8.7%

**Table 12: Result of t-test :**

<b>Name Of The Company</b>	<b>t-test value in EFCF Model</b>
Bajaj Auto	3.494
Lupin Ltd	0.466
Tata Steel	-1.269
Ioc	-1.242
Dabur	-3.262
Bel	-1.467
Tata Motors	-2.578
Asian Paints	-1.436
Nestle	-1.455
Vedanta	-3.358
Utc	3.956
Gail	-1.369
Colgate	-1.578
Marico	0.278
Britannia	-2.456
Tvs Motors	3.494
Cipla	0.466
Sail	-1.269
Reliance	-1.242
Itc	-3.262

**5.1. Bajaj auto :**

The company BAJAJ AUTO has a cost of equity (ke) of 8.8% as shown in TABLE 1. The estimated true intrinsic values of BAJAJ AUTO after discounting it to 2018 are shown in TABLE 2.

The data shown is as follows:

**Table 2: Calculated intrinsic value of BAJAJ AUTO for the year 2018 and comparison with market value :**

Quarters	intrinsic value per	Market value	Deviation
Q1	1996	1820	8.9%
Q2	2012	1904	5.38%
Q3	2004	1922	4.09%
Q4	2086	1958	6.13%

**Interpretation:**

- For BAJAJ AUTO, the significance level of T-test in equity free cash flow model rejects the Null hypothesis as shown in TABLE 12 and is above 0.
- The estimated true intrinsic value is higher than the prevailing market value for BAJAJ AUTO ( TABLE 2) which results in undervaluation of this company's stock and which makes its investment demand weaker.

**5.2. Lupinlimited :**

The company LUPIN LIMITED has a cost of equity (ke) of 8.7% as shown in TABLE 1. The estimated true intrinsic values of LUPIN LIMITED after discounting it to 2018 are shown in TABLE 3.

The data shown is as follows:

**Table 3: Calculated intrinsic value of for LUPIN LIMITED the year 2018 and comparison with market value :**

Quarters	Intrinsic value per	Market value	Deviation
Q1	338	335	1.4%
Q2	342	332	2.9%
Q3	343	322	3.8%
Q4	342	337	8.8%

**Interpretation:**

- For LUPIN LIMITED, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0..
- The estimated true intrinsic value is higher than the prevailing market value for LUPIN LIMITED (TABLE 3) which results in undervaluation of this company's stock and which makes its investment demand weaker.



### 5.3. Tata steel :

The company TATA STEEL has a cost of equity (ke) of 11.7% as shown in TABLE 1. The estimated true intrinsic values of TATA STEEL after discounting it to 2018 are shown in TABLE 4.

The data shown is as follows:

**Table 4: Calculated intrinsic value of TATA STEEL for the year 2018 and comparison with market value:**

Quarters	Intrinsic value per share	Market Value	Deviation
Q1	223	229	1.2%
Q2	216	224	4.7%
Q3	220	231	5.8%
Q4	222	232	3.1%

### Interpretation :

- For TATA STEEL, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for TATA STEEL (TABLE 4) which results in overvaluation of this company's stock and which makes its investment demand stronger.

### 5.4. Indian oil corporation (Ioc) :

The company IOC has a cost of equity (ke) of 9.4% as shown in TABLE 1. The estimated true intrinsic values of IOC after discounting it to 2018 are shown in TABLE 5.

The data shown is as follows:

**Table 5: Calculated intrinsic value of IOC of each quarter for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per	Market value	Deviation
Q1	1001	1022	2.1%
Q2	1124	1212	7.9%
Q3	1143	1222	6.54%
Q4	1120	1225	9.2%

**Interpretation :**

- For INDIAN OIL CORPORATION, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for INDIAN OIL CORPORATION (TABLE 5) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.5. Dabur :**

The estimated true intrinsic values of DABUR after discounting it to 2018 are shown in TABLE 6.

The data shown is as follows:

**Table 6: Calculated intrinsic value of DABUR for the year 2018 and comparison with market value:**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	225	230	2.1%
Q2	220	232	5.12%
Q3	220	231	4.8%
Q4	230	236	2.7%

**Interpretation :**

- For DABUR, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for DABUR (TABLE 6) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.6. Bharat electronics limited :**

The estimated true intrinsic values of BHARAT ELECTRONINCS LIMITED after discounting it to 2018 are shown in TABLE 7.

The data shown is as follows:

**Table 7: Calculated intrinsic value of BHARAT ELECTRONICS LIMITED for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	224	230	2%
Q2	218	232	5.2%
Q3	222	231	4%
Q4	228	236	2.17%

**Interpretation :**

- For BHARAT ELECTRONICS LIMITED, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for BHARAT ELECTRONICS LIMITED which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.7. Tata motors :**

The estimated true intrinsic values of TATA MOTORS after discounting it to 2018 are shown in TABLE 8.

The data shown is as follows:

**Table 8: Calculated intrinsic value of TATA MOTORS for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market Value	Deviation
Q1	223	229	1.2%
Q2	216	224	4.7%
Q3	220	231	5.8%
Q4	222	232	3.1%

**Interpretation :**

- For TATA MOTORS, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for TATA MOTORS (TABLE 8) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.8. Asian paints :**

The estimated true intrinsic values of ASIAN PAINTS after discounting it to 2018 are shown in TABLE 9.

The data shown is as follows:

**Table 9: Calculated intrinsic value of ASIAN PAINTS for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market Value	Deviation
Q1	221	229	2.2%
Q2	214	224	5.7%
Q3	221	231	6%
Q4	223	232	3%

**Interpretation :**

- For ASIAN PAINTS, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for ASIAN PAINTS which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.9. Nestle:**

The estimated true intrinsic values of NESTLE after discounting it to 2018 are shown in TABLE 10.

**Table 10: Calculated intrinsic value of for NESTLE the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	338	335	1.4%
Q2	342	332	2.9%
Q3	343	322	3.8%
Q4	342	337	8.8%

**Interpretation :**

- For NESTLE, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0..
- The estimated true intrinsic value is higher than the prevailing market value for NESTLE (TABLE 10) which results in undervaluation of this company's stock and which makes its investment demand weaker.

**5.10. Vedanta :**

The estimated true intrinsic values of VEDANTA after discounting it to 2018 are shown in TABLE 11.

**Table 11: Calculated intrinsic value of VEDANTA of each quarter for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	1001	1022	2.1%
Q2	1124	1212	7.9%
Q3	1143	1222	6.54%
Q4	1120	1225	9.2%

**Interpretation :**

- For VEDANTA, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for VEDANTA (TABLE 11) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.11. Ultra tech cement :**

The estimated true intrinsic values of UTC after discounting it to 2018 are shown in TABLE 13.

**Table 13: Calculated intrinsic value of UTC for the year 2018 and comparison with market value :**

Quarters	intrinsic value per share	Market value	Deviation
Q1	1996	1820	8.9%
Q2	2012	1904	5.38%
Q3	2004	1922	4.09%
Q4	2086	1958	6.13%

**Interpretation :**

- For UTC, the significance level of T-test in equity free cash flow model rejects the Null hypothesis as shown in TABLE 12 and is above 0.
- The estimated true intrinsic value is higher than the prevailing market value for UTC which results in undervaluation of this company's stock and which makes its investment demand weaker.

**5.12. Gail :**

The estimated true intrinsic values of GAIL after discounting it to 2018 are shown in TABLE 14.

**Table 14: Calculated intrinsic value of GAIL of each quarter for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	1001	1022	2.1%
Q2	1124	1212	7.9%
Q3	1143	1222	6.54%
Q4	1120	1225	9.2%

**Interpretation :**

- For GAIL, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for GAIL (TABLE 14) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.13. Colgate :**

The estimated true intrinsic values of COLGATE after discounting it to 2018 are shown in TABLE 15.

**Table 15: Calculated intrinsic value of COLGATE for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	224	230	2%
Q2	218	232	5.2%
Q3	222	231	4%
Q4	228	236	2.17%

**Interpretation :**

- For COLGATE, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for COLGATE which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.14. Marico :**

The estimated true intrinsic values of MARICO after discounting it to 2018 are shown in TABLE 16.

**Table 16: Calculated intrinsic value of MARICO of each quarter for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	1001	1022	2.1%
Q2	1124	1212	7.9%
Q3	1143	1222	6.54%
Q4	1120	1225	9.2%

**Interpretation :**

- For MARICO, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is lower than the prevailing market value for MARICO (TABLE 16) which results in overvaluation of this company's stock and which makes its investment demand stronger.

**5.15. Britannia :**

The estimated true intrinsic values of BRITANNIA after discounting it to 2018 are shown in TABLE 17.

**Table 17: Calculated intrinsic value of for BRITANNIA the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	338	335	1.4%
Q2	342	332	2.9%
Q3	343	322	3.8%
Q4	342	337	8.8%

**Interpretation :**

- For BRITANNIA, the significance level of T-test in equity free cash flow model accepts the Null hypothesis as shown in TABLE 12 and is below or equal to 0.
- The estimated true intrinsic value is higher than the prevailing market value for BRITANNIA which results in undervaluation of this company's stock and which makes its investment demand weaker.

**5.16. Tvs motors :**

Intrinsic values are shown in the Table 18 which has been calculated after discounting it to 2018.

**Table 18: Calculated intrinsic value of TVS MOTORS for the year 2018 and comparison with market value :**

Quarters	intrinsic value per share	Market value	Deviation
Q1	1995.89	1820	8.81%
Q2	2011	1902	5.42%
Q3	2002	1920	4.09%
Q4	2085	1956	6.18%

**Interpretation :**

- The t-test value in equity free cash flow (Table 12) model rejects the null hypothesis for TVS Motors as it is above 0.
- The intrinsic value is higher than the market value (TABLE 18) resulting in undervaluation of the company and weak investment demand for TVS Motors.

**5.17. Cipla :**

Each quarter of 2019 has the evaluated future cash flows of the company.

**Table 19: Calculated intrinsic value of CIPLA for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	338.62	334.2	1.30%
Q2	322	331	2.8%
Q3	333	321	3.6%
Q4	341	338	8.79%

**Interpretation :**

- The t-test value in equity free cash flow (Table 12) model accepts the null hypothesis for CIPLA as it is below and equal to 0.
- The intrinsic value is higher than the market value resulting in undervaluation of the company and weak investment demand for CIPLA.

**5.18.SAIL – steel authority of india limited :**

Each quarter of 2019 has the evaluated future cash flows of the company which. Intrinsic values are shown in the Table 20 which have been calculated after discounting it to 2018.



**Table 20: Calculated intrinsic value of SAIL for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	231.4	228.67	1.17%
Q2	215	225	4.65%
Q3	219	231	5.47%
Q4	223	230	3.13%

**Interpretation :**

- The t-test value in equity free cash flow (Table 12) model accepts the null hypothesis for SAIL as it is below and equal to 0.
- The intrinsic value is lower than the market value (TABLE 20) resulting in overvaluation of the company and strong investment demand for SAIL – Steel Authority of India Limited.

**5.19. Reliance industry limited :**

Each quarter of 2019 has the evaluated future cash flows of the company. Intrinsic values are shown in the Table 21 which have been calculated after discounting it to 2018.

**Table 21: Calculated intrinsic value of reliance industry limited of each quarter for the year 2018 and comparison with market value :**

Quarters	Intrinsic value per share	Market value	Deviation
Q1	1002	1023	2.09%
Q2	1123	1211	7.83%
Q3	1145	1225	7%
Q4	1121	1226	9.36%

**Interpretation :**

- The t-test value in equity free cash flow (Table 12) model accepts the null hypothesis for Reliance Industry Limited as it is below and equal to 0.
- The intrinsic value is lower than the market value (TABLE 21) resulting in overvaluation of the company and strong investment demand for Reliance Industry Limited.

**5.20. ITC limited :**

Each quarter of 2019 has the evaluated future cash flows of the company. Intrinsic values are shown in the Table 22 which have been calculated after discounting it to 2018.

**Table 22: Calculated intrinsic value of ITC for the year 2018 and comparison with market value**

:

Quarters	Intrinsic value per share	Market value	Deviation
Q1	226	231	2.21%
Q2	219	230	5.02%
Q3	221	232	4.97%
Q4	229	235	2.62%

**Interpretation :**

- The t-test value in equity free cash flow (Table 12) model accepts the null hypothesis for ITC Limited as it is below and equal to 0.
- The intrinsic value is lower than the market value (table 22) resulting in overvaluation of the company and strong investment demand for ITC Limited.

**V. FINDINGS & CONCLUSION**

The research analysis of the above mentioned valuation process resulted in significant deviation between the true intrinsic values and market values of these twenty selected stocks. The companies having higher true intrinsic value than their prevailing market values were BAJAJ AUTO, LUPIN LIMITED, NESTLE, ULTRA TECH CEMENT, BRITANNIA, TVS MOTORS & CIPLA which results in undervaluation of these companies' stocks and which makes their investment demand weaker. The companies having lower true intrinsic value than their prevailing market values were all others which results in overvaluation of these companies' stocks and which makes their investment demand stronger. The objective to determine the significance level using the deviation between the intrinsic values and the market values of selected stocks was fulfilled by using T-test and hypothesis. The conclusion of the test was that excluding BAJAJ AUTO, ULTRA TECH CEMENT & TVS MOTORS (rejects hypothesis), all other companies accepted the null hypothesis. The accepted hypothesis states that the deviation between the calculated true intrinsic value and the prevailing market value is not significant. The research study proves the necessity to understand overvaluation and undervaluation of stock and the prevailing deviation between true intrinsic value and market value of stock to determine the effect on the stock's investment demand in the Indian financial market.

**VII. REFERENCES**

- Nadica Ivanovska (2014) – “Fundamental Analysis And Discounted Free Cash Flow Valuation Of Stocks At Macedonian Stock Exchange” , Journal of Finance and Accounting, pp 2-15.
- Ms. Shradhanjali Panda (2013) – “Valuation Of Selected Indian Stocks Using Discounted Cash Flow Technique”, International Journal of Business and Management, Volume 2 Issue 7.
- Florian Steiger (2008) – “The Validity Of Company Valuation Using Discounted Cash Flow Methods”, United School of Business Management, pp 1-8
- Mohamed Zaheeruddin (2013)– “Valuation Of Firm: Methods & Practices-An Evaluation”, Journal of auditing and accounting, volume 50, no 4, pp 1053-95
- Sonali Agarwal Chand Tandon (2015)– “Valuation Approaches And Metrics: A Survey Of The Theory And Evidence”, Contemporary Accounting Research 8, pp 1-19
- Pablo Fernandez (2003) – “Key Input Factors For Discounted Cash Flow Valuations”, Journal of Business, 37, 501-537
- Copeland, Koller and Murrin (2000) – “economic profit is a synonym of EVA”, Journal of Finance, pp 1-55