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# IS CAPM STILL ALIVE FOR SENSEX STOCKS IN INDIAN STOCK MARKET? - AN EMPIRICAL ANALYSIS

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## ABSTRACT

*Capital Asset Pricing Model (CAPM) is one of the valuation model used to calculate the expected stock return for individual company in the stock market. Investors in Indian stock market used it extensively. This study mainly focused on the relevance and suitability of CAPM in BSE for Sensex stocks and to establish risk and return relationship for individual securities in this index. Using CAPM model in the Indian Stock Market, 30 stocks from Sensex were taken and evaluated the correlation between Intrinsic value and Market price for testing the relevance of CAPM. The results of the study proven that CAPM offered the evidence in favour for majority of Sensex stocks in Indian Stock Market. There exists linearity in the securities market line for most of the company in Indian stock market. This study proven that valuation accuracy of capital asset pricing model was kept at high level and can be used for predicting the intrinsic value of large market capitalised stocks. Finally this paper suggests the undervalued stocks in Indian stock market to build a Portfolio also.*

**Keywords:** Capital Asset Pricing Model, Portfolio, Stocks

**Cite this Article:** Dr. Suraj. E.S, Jeena Antony and Nitha. K. P, Is CAPM Still Alive for Sensex Stocks in Indian Stock Market? - An Empirical Analysis, *International Journal of Management*, 11 (4), 2020, pp. 210-220.

<http://iaeme.com/Home/issue/IJM?Volume=11&Issue=4>

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## 1. INTRODUCTION

Accurate valuation of stock is very important for investors, managers, analysts and researchers among others. They are taking efforts to value the firms and identify undervalued stocks for investment purpose. Managers are constantly relying on accurate valuation of shares in order to create shareholders' wealth. Many parties are interested in knowing the value of Sensex stocks with the help of accounting numbers using different valuation models. CAPM (Capital Asset Pricing Model) is a model takes into account the asset's sensitivity to systematic or market risk, often represented by beta in the stock market. This model was introduced by Treynor, Sharpe, Lintner and Mossin independently providing the estimations of return of different assets based on certain indicators. For individual securities, we make use of the security market line (SML) and its relation to expected return and systematic risk measured by beta coefficient. Investors need to be very careful while selecting the shares from the market. Every investment opportunity involves risk and return.

Risk Based Models considers systematic risk besides other variables. Possibility for an investor to experience losses due to factors that affect the overall performance of the financial markets called systematic risk. Sources of market risk include recessions, political turmoil, changes in interest rates, natural disasters and terrorist attacks. There are two categories of risk based models. a) Capital Asset Pricing Model b) Fama and French Model. The Capital Asset Pricing Model often expressed as CAPM of William Sharpe (1964) and John Litner (1965) describes the relationship between risk and expected return used in the pricing of risky securities. This model takes into account sensitivity of asset to systematic risk represented by beta as well as expected return of the market and return of risk free security. CAPM is used for pricing the individual securities and portfolio. CAPM emphasizes to calculate the expected return of a security. Two important things needs to be known by the investors: The risk premium of the overall equity/portfolio and security's beta for calculating the expected return and intrinsic value of stocks. This study assess the valuation accuracy of capital asset pricing model for sensex stocks using Mean Absolute Percentage Errors. It help the investors to identify the appropriate stocks from the sensex for predicting the intrinsic value of stock very accurately using CAPM. It also help to know the suitability of this model for companies for valuation purpose. Finally this paper suggests the undervalued or cheap stocks from sensex in Indian stock market to build a portfolio using CAPM.

## 2. Literature Review

**Shrivastav (2017)** studied stock return of 15 companies listed on National Stock Exchange (NSE) and analyzed for a period of 5 years from January 2006 to December 2010. Cross-sectional and Portfolio analysis were the two methods were adopted. In both the cases, the findings did not support the CAPM's basic hypothesis that higher risk (beta) is associated with a higher level of return. The finding of the study empirically concluded that CAPM is not valid in Indian capital market. **Bajpaia& Sharma (2015)** conducted the study for a period of 10 years from January 2004-December 2013 and took daily data for 10 years. Rolling regression is applied to a rolling sample of three years where a window of three years keeps moving for a quarter. A comparison between the developed model and the traditional model has been made and results show that CAPM is very much significant in the Indian equity market and the model developed in this study, performs better than the traditional model. **Levy (2011)** argues that although behavioral economics contradicts aspects of expected utility theory, CAPM and M-V remain intact in both expected utility theory and cumulative prospect theory frameworks. Furthermore, he says that there is no evidence to reject CAPM empirically when ex-ante parameters are employed.

**Levy and Roll (2010)** affirm that many conventional market proxies could be perfectly consistent with the CAPM and useful for estimating expected returns. This is possible if one allows for only slight estimation errors in the return moments. They call this data-massage “a reverse engineering approach”. They find that the minimal variations in sample parameters are required to ensure that the proxy is mean-variance efficient. Their research is an experiment because they use monthly returns of only the 100 largest US companies in the period December 1996–December 2006. **Choudhary&Choudhary (2010)** examines the Capital Asset Pricing Model (CAPM) for the Indian stock market using monthly stock returns from 278 companies of BSE 500 Index listed on the Bombay stock exchange for the period of January 1996 to December 2009. The findings of this study are not substantiating the theory’s basic result that higher risk (beta) is associated with higher levels of return. The results depict that residual risk has no effect on the expected returns of portfolios.

**Rahman, Baten, & Ashraf-Ul- Ala, 2006** conducted the study to assess whether CAPM is a good indicator of asset pricing in Bangladesh for the period of 1999-2003. The study is based on Fama-French (1992) methodology on five variables-Stock market return, Beta, Book to market value, Size (Market capitalization) and Size (Sales). The study results support the CAPM and show that the variables considered under the study have a significant relationship with stock return. **Fama and French (2004)** emphasize that there is little support for the theory’s basic hypothesis that higher risk (beta) is associated with higher returns. CAPM predicts that the intercept should equal zero and that the slope should equal the excess returns of the market portfolio. The findings of a large share of examined studies contradict the above hypothesis and provide evidence against the CAPM. The inclusion of the square of the beta coefficient to test for nonlinearity in the relationship between returns and betas indicates that the findings accord with the hypothesis and that the expected return beta relationship is linear.

**Ansari (2000)** has done an empirical assessment of the model in India. The study concludes that game is not lost for CAPM, the evidence is not sufficient to drop the use of CAPM however, one must recognize and understand its limitations while using it. **Andor (1999)** Tested the CAPM in the Hungarian Capital Markets using monthly data of 17 Hungarian companies listed on the Budapest Stock Exchange (BSE) for the period, 31st July 1991 to 1st June 1999 was used. The regression result showed the relationship between the company’s beta and their average returns. The study has concluded that the CAPM acceptably described the Hungarian Capital Market. Levy and Roll (2010) affirm that many conventional market proxies could be perfectly consistent with the CAPM and useful for estimating expected returns. Their research is an experiment because they use monthly returns of only the 100 largest US companies in the period December 1996–December 2006. **Banz (1981)** emphasizes problems linked to the use of the CAPM. In particular, he notes that when stocks are sorted on market capitalization (price times shares outstanding), average returns on small stocks are higher than predicted by the CAPM. **Fama & MacBeth (1973)** tests the relationship between average return and risk for the New York Stock Exchange and supports the CAPM and stated that there is a positive trade-off between return and risk. This study proposes a linear relationship between risk & return and there is no unsystematic risk that affects the portfolio average return.

**Merton (1987)** investigated on validity of CAPM with incomplete information. The data for the study is obtained from Compustat data base. The data of market value and market value per shareholder has been considered. The sample data of 1387 firms been used. The cross sectional study is applied to verify the results. The study concluded that incomplete information diffusion has significant contribution towards equilibrium expected returns on smaller firms. **Madhusoodanan (1997)** which rejects the CAPM validity for Indian stock market. The time

period of their study is from 1987 to 1995. The study concluded that high risk high return strategy is not lucrative in Indian stock market. **Srinivasan (1988)** conducted the empirical test of CAPM for the period starting from 1982 to 1985. This study also supports the CAPM for Indian capital market on the basis of their data from 1982-1985.

**Yalwar (1988)** conducted the test of CAPM for the period 1963-1982. The study finds evidence in support of the CAPM for Indian capital market with references to the period of the study. **Sehgal and Tripathi (2005)** studied the size effect and value effects and proved that it was visible in Indian stock market. Thereafter, there is not much evidence available to test the CAPM in Indian context taking into account data related to the pre and post 2008 financial crisis time period. **Roll and Ross [1994]** found that betas and mean returns having little relation which may be due to mean-variance-inefficient market proxies. The SL CAPM implies mean-variance efficiency of the market index, and the results are sensitive to the index proxy's location inside the ex-ante mean-variance frontier. **Reinganum (1981)** tested the security's return variation according to the beta as stated in theory. The data for the study is related to the time period 1963 to 1979 of all the stocks traded in New York Stock Exchange. The methodology used here is to compute beta for each security and rank them. On the basis of this ranking ten portfolios are formed. The return of each of these ten portfolios is calculated by taking average of the securities included in it. This results in the time series of return of these ten portfolios which are later tested to check whether all have different return or not. The study concluded that for the said time period, there is no significant evidence is found among the return of these portfolios, thus study concluded that beta is not systematically related to the average return.

### 3. OBJECTIVES OF THE STUDY

- 1) To measure the systematic risk and expected return of 30 stocks included in BSE Sensitive Index.
- 2) To measure the valuation accuracy of CAPM for Sensex stocks in India
- 3) To know the suitability of CAPM for Sensex stocks and suggest the most undervalued stocks.

### 4. RESEARCH METHODOLOGY

The research study is Descriptive in nature. The study used mainly secondary data. Secondary sources include annual reports, National Stock Exchange's official website ([www.nseindia.com](http://www.nseindia.com)), Bombay Stock Exchange's official website ([www.bseindia.com](http://www.bseindia.com)), websites of Individual Banks, Confederation of Indian Industries (CII) library, databases like Centre for Monitoring Indian Economy (CMIE) Prowess and Business Beacon and annual report library services like Ebsco Services. Secondary data include financial variables and accounting information such as market price of share, beta, Sensex value, Treasury bill rate etc. Total of 30 stocks from Sensex, constituting Bombay Stock Exchange are selected for the study.

#### 4.1. Hypothesis

To show whether there is any significant positive relationship between Intrinsic value and market price of bank stocks.

H01: There is no significant relation between intrinsic value and Market price of Capital Asset Pricing Model

**Simple Regression Analysis-** Simple regression analysis is used for finding the relationship between intrinsic value and market price of CAPM.

## 4.2. Statistical Tools

**MAPE-** Valuation accuracy of each Sensex stock is measured by calculating the mean absolute percentage of error between the target company's calculated intrinsic values with actual market price. Absolute percentage error is used because it measures how far the intrinsic value is deviated from the actual stock price, regardless of the intrinsic price is lower or higher than the actual price. A low percentage error is regarded as high valuation accuracy, while high percentage error indicates low accuracy. The formula used in determining the valuation accuracy is given below

$MAPE\ it = |(P'it - Pit)| / Pit \times 100\%$  where *MAPE it* is the Mean Absolute Percentage Error

**BIAS-** It is used to measure the undervalued and overvalued errors of each stock. This tells about the signed valuation errors of each stock and suggest whether the stock is undervalued or overvalued. This is one of the statistical tool used by investors to buy the undervalued stocks and sell overvalued stocks using valuation model. If BIAS is positive, stock is overvalued and BIAS is negative, then stock is undervalued in nature.

$BIAS = (P'it - Pit) / Pit \times 100\%$  where *BIAS it* is the Signed valuation errors .

**Karl Pearson's Coefficient of Correlation and Correlation Matrix:** Karl Pearson's Coefficient of Correlation matrix has been used to know the relationship between variables of the CAPM. Correlation is the degree of association between beta and stock .The range of correlation coefficient is between +1 and -1. If the correlation coefficient is negative, then the variables are inversely proportional & it is maximum when it is -1, if the coefficient is 0, there is no association between both of these variables. If the coefficient is positive then the variables are associated directly & it is maximum when it is +1.

## 4.3. Methodology

- 1) Select all 30 stocks included in Sensex
- 2) Estimating the expected return of each stock in Sensex.
- 3) Estimating the Intrinsic value of each stock and compare with market price on yearly basis.
- 4) Suggest the undervalued stocks from Sensex for Investment purpose using BIAS.
- 5) Measuring the accuracy of CAPM Model for Sensex stocks using MAPE.
- 6) Identifying the suitability of CAPM for Sensex stocks based on valuation accuracy
- 7) Study the correlation and test the significant and positive relationship between all variables in CAPM and study the relation between intrinsic value and market price of Sensex stocks.

## 5. RELEVANCE AND SUITABILITY OF CAPM FOR SENSEX STOCKS

For the application of the Capital Asset Pricing Model in the Indian Stock Market, 30 Sensex stocks have been taken into consideration. The stocks are from BSE Sensitive Index. Expected Rate of Return of 30 stocks from Sensex for 11 years of each year (2007-08 to 2018-19) is calculated by using the following formula:

$$\text{Expected Return} = R_f + \beta (R_m - R_f)$$

Then actual return of Sensex stocks of each year (2007-08 to 2018-19) has been calculated. Intrinsic value calculated based on the last year market price and expected rate of return information.

$\text{Intrinsic value} = \text{Last year Market Price} + \{\text{Last year Market Price} * \text{Expected Return}\}$

**Signed valuation errors** are calculated using bias.

$bias\ it = (P'it - Pit) / Pit \times 100\%$  where *bias it* is the signed percentage error for bank.

P'it = Market price, Pit= Intrinsic value

Descriptive statistics of BIAS was measured for 11 years from 2007-08 to 2018-19. The results are summarized using descriptive statistics such as Mean, Max, Min of BIAS are given for the signed percentage errors, in the CAPM Model. Mean of BIAS for 11 years state whether the stock is undervalued or overvalued in nature based on the long term fundamentals. If Mean of BIAS is positive, Stock is overvalued and Mean of BIAS is negative, then the stock is undervalued in nature.

**Table 1** Sensex - Stock wise Signed Valuation Errors (BIAS) of CAPM from 2007-08 to 2018-19  
Descriptive Statistics (in %)

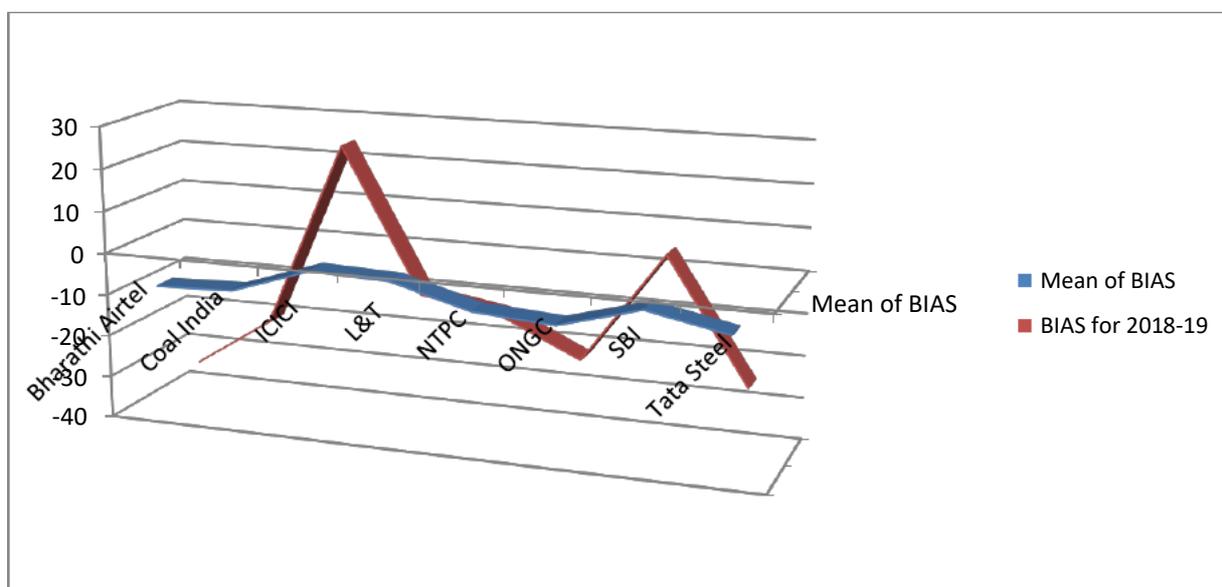
Company Name	Mean of BIAS	Max of BIAS	Min of BIAS	BIAS of 2019	Undervalued/ Overvalued stock based on the Mean of BIAS.
Asian Paints	22.32	188.96	-17.98	-8.11	Overvalued
Axis Bank	5.59	41.27	-16.04	26.91	Overvalued
Bajaj Auto	19.92	127.39	-13.70	-9.35	Overvalued
Bajaj Finance	62.10	239.65	-74.18	38.29	Overvalued
Bharathi Airtel	-8.53	15.32	-35.22	-32.81	Undervalued
Coal India	-7.88	5.60	-20.46	-20.46	Undervalued
HCL Technology	21.84	96.70	-41.47	4.83	Overvalued
HDFC	4.17	22.16	-8.69	-8.69	Overvalued
HDFC Bank	12.29	22.95	-3.85	8.84	Overvalued
Hero Motors	10.33	94.23	-37.19	-37.19	Overvalued
HUL	15.09	50.14	-21.15	12.76	Overvalued
ICICI	-1.55	24.13	-14.99	24.13	Undervalued
INDUSIND	29.66	182.04	-38.47	-14.55	Overvalued
ITC	8.86	32.88	-20.39	-3.12	Overvalued
Kotak Bank	13.88	46.24	-18.92	8.94	Overvalued
L&T	-2.19	25.61	-27.83	-10.17	Undervalued
M&M	12.28	57.84	-26.29	-26.29	Overvalued
Maruthi	13.25	52.51	-37.18	-37.18	Overvalued
NTPC	-7.46	14.64	-24.71	-13.34	Undervalued
ONGC	-8.75	12.28	-29.46	-22.23	Undervalued
Power grid	1.58	32.28	-30.41	-6.08	Overvalued
Reliance	2.39	42.75	-33.73	23.13	Overvalued
SBI	-3.41	19.89	-28.25	4.31	Undervalued
Sun Pharma	10.65	60.88	-28.51	-21.17	Overvalued
Tata Motors	33.58	466.22	-73.23	-55.83	Overvalued
Tata DVR	17.44	242.3	-62.26	-62.26	Overvalued
Tata Steel	-7.23	35	-40.31	-24.92	Undervalued
TCS	16.56	84.11	-10.83	0.09	Overvalued
Vedanta	6.71	152.53	-45.41	-45.41	Overvalued
YES Bank	17.62	143.43	-46.14	-25.74	Overvalued
BIAS for SENSEX	10.37				OVERVALUED

*Note: Results computed using SPSS 17.1*

Descriptive statistics of year wise Signed Valuation Errors (bias) of Sensex stocks for 30 stocks are calculated and presented. This tells about the undervalued and overvalued errors of

Sensex stocks for Capital Asset Pricing Model. Mean of signed valuation errors of CAPM showed that Sensex was overvalued in the year 2018-19. But there are undervalued stocks which are available in Sensex as on 2018-19 states the buying opportunity of stocks such as Bharathi Airtel, coal India, ONGC, NTPC, Tata steel etc. Stocks like Bajaj finance, Tata motors, and Indusind Bank seems to be overvalued in 2018-19. So It was found that all these stocks are the expensive stocks in 2018-19 which can be used for selling purposes. Majority of sensex stocks shown abnormal signed overvalued errors in the year 2008-09 throws light on the overvalued condition exist in the market during the same period. CAPM raised this question and immediately, most of the Sensex stocks plummeted in the Indian stock market. This validating the CAPM in Indian Stock market.

Undervalued stocks as on 2018-19 are Bharati Airtel, Coal India, ICICI, L&T, NTPC, ONGC, SBI & Tata steel which was based on 11 years fundamentals taken into consideration. BIAS of these stocks based on the fundamentals for the year 2018-19 also given here. This study throws light on comparing the Mean of BIAS (11 Years from 2007-08 to 2018-19) with BIAS of 2018-19 for all undervalued stocks to check whether both results suggests the investors to buy these stocks.



**Figure 1** Undervalued stocks- Comparing Mean of BIAS and BIAS for 2018-19

Based on the MEAN of BIAS from 2007-08 to 2018-19, all the 8 stocks ( Bharathi Airtel, Coal India, ICICI, L&T, NTPC, ONGC, SBI, Tata Steel) seems to be undervalued in nature. But based only on the year 2018-19 fundamentals, Six stocks from this list are only undervalued in nature. Two banks such as ICICI and SBI seems to be overvalued as on that year by taking the fundamentals of that year alone. Mean of BIAS from 2007-08 to 2018-19 and BIAS for 2018-19 suggest and identified six stocks such as Bharathi airtel, coal india, L&T, NTPC, ONGC & Tata steel which are undervalued in nature for the investment purpose.

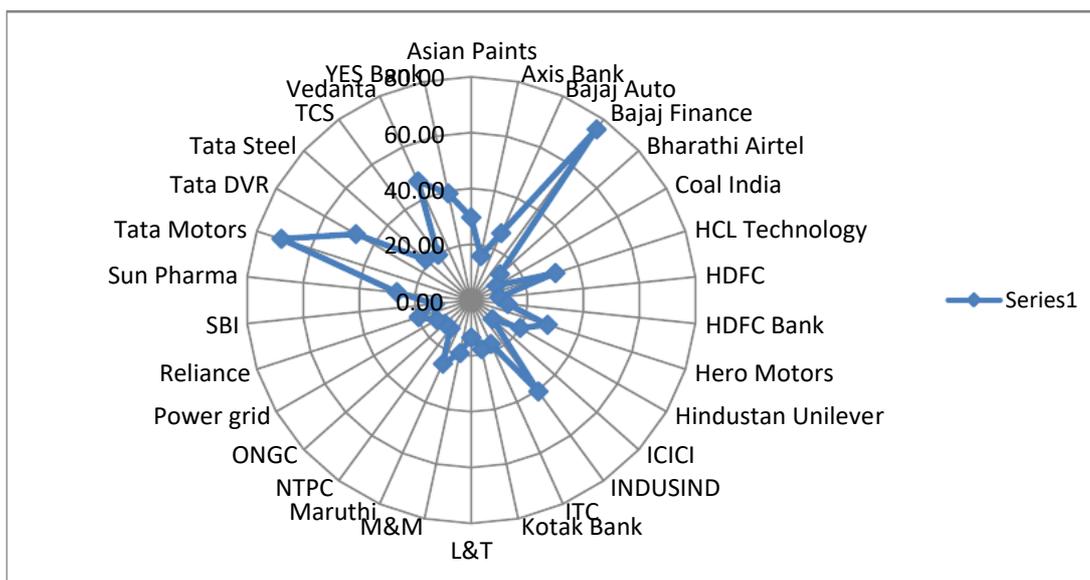
Descriptive statistics of year-wise Mean Absolute Percentage Errors (MAPE) of Sensex stocks for CAPM are calculated & presented below. The yearly average MAPE of most of the Sensex stocks are at very low level. MAPE tells about how far the intrinsic value is deviated from the actual stock price, regardless of the intrinsic price is lower or higher than the actual price. A low percentage error is regarded as high valuation accuracy, while high percentage error indicates low accuracy. Stocks with less than 20% MAPE are with high valuation accuracy, stocks with 20 to 40% MAPE are with moderate valuation accuracy and stocks with more than 40% MAPE are with low valuation accuracy.

**Table 2** Stock wise Mean Absolute Percentage Errors ( MAPE ) of CAPM from 2007-08 to 2018-19  
(Descriptive Statistics ( in % )

Name of company	Mean	Max	Min	Level of valuation accuracy
Asian Paints	29.56	188.96	0.09	Moderate
Axis Bank	16.12	41.27	2.51	High
Bajaj Auto	26.21	127.39	0.13	Moderate
Bajaj Finance	75.59	239.65	21.39	Low
Bharathi Airtel	13.72	35.22	0.87	High
Coal India	10.20	20.47	0.25	High
HCL Technology	31.40	96.70	1.18	Moderate
HDFC	9.96	22.16	1.11	High
HDFC Bank	12.99	22.95	0.07	High
Hero Motors	28.52	94.23	1.83	Moderate
Hindustan Unilever	19.99	50.14	5.81	High
ICICI	10.07	24.13	0.72	High
INDUSIND	40.43	182.04	6.27	Low
ITC	17.19	32.88	0.96	High
Kotak Bank	18.01	46.24	3.80	High
L&T	13.47	27.83	0.70	High
M&M	19.49	57.84	0.03	High
Maruthi	24.94	52.51	9.74	Moderate
NTPC	12.42	24.71	3.33	High
ONGC	12.66	29.46	0.51	High
Power grid	14.14	32.28	2.05	High
Reliance	19.60	42.75	0.21	High
SBI	13.08	28.25	1.55	High
Sun Pharma	26.56	60.88	1.74	Moderate
Tata Motors	70.87	466.22	2.73	Low
Tata DVR	47.31	242.30	3.62	Low
Tata Steel	21.75	40.31	1.98	Moderate
TCS	20.07	84.11	0.09	Moderate
Vedanta	46.61	152.53	0.56	Low
YES Bank	38.99	143.43	6.79	Moderate
Average MAPE of SENSEX	25.40			
<i>Note: Results computed using SPSS 17.1</i>				

In contrast to most of the other valuation methods, Capital asset pricing model yield more accurate value estimates because they capture the current trend of the market. Throughout the period of study, the combined explanatory power of Sensex return and beta is the most valued information by investors for picking these large market capitalised stocks from Sensex. It is also noted that capital asset pricing model delivers outstanding valuation accuracy for majority of the stocks. MAPE of 16 stocks from Sensex kept at lower than 20%. This indicates that CAPM is still alive and powerful in predicting the intrinsic value of Sensex stocks. This indicates the certainty in predicting the value of these large market capitalised stocks in Sensex using Capital Asset Pricing Model. But the Absolute valuation errors of Tata Motors and Bajaj

Finance were at maximum level of 466.2% and 239.65% respectively due to the anomalies of the year 2008-09.



**Figure 2** Valuation accuracy of Sensex stocks

Given the results of valuation model, it is obvious that judging the worth of stock price depends on the valuation method employed. Capital asset pricing model performs very well for stocks such as HDFC Bank, ONGC, NTPC, Coal India, HDFC etc. It was also observed that beta was able to capture the market risk exposure of 16 stocks with Low MAPE. Results indicate that CAPM explain the risk return relations of Sensex stocks in Indian stock market. It indicates that accuracy of model is very low for Indusind Bank, Tata motors, and Bajaj Finance respectively. So CAPM Model is not highly applicable to determine the value of these stocks due to the highest valuation errors. Since the study covered the recessionary period also, a lot of overvalued stocks plummeted after the recession 2008-09 also shown the anomalies.

**Table 3** Pearson Correlation Matrix for Capital Asset Pricing Model

Variables	MP	Beta	Rm	Rf
MP	1.000			
BETA	-.066 (.233)	1.000		
Rm	.041 (.459)	-.044 (.421)	1.000	
Rf	.022 (.686)	.146 (.088)	-.399** (.000)	1.000

*Note: Results obtained by using SPSS 17.1*  
 \*\* Correlation is significant at the 0.01 level (2 tailed)

Above table shows the correlation matrix for capital asset pricing model. Sensex return is positively correlated to market price. Risk free rate of return is also positively correlated to market price of Sensex stocks. Beta is negatively correlated with market price of Sensex stocks. As no two independent variables are highly correlated, there exists no multi-collinearity problem.

**Table 4** Testing the Reliability of Capital Asset Pricing Model using Simple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
CAPM	.942 <sup>a</sup>	.888	.888	319.48937	.000
<i>Note: Results computed using SPSS 17.1</i>					

Table 4 shows the simple regression results for testing the reliability of Capital Asset Pricing Model for Sensex stocks. As the p value is less than 0.01, the null hypothesis,  $H_0$ , is rejected. Thus, there is a significant and positive relationship between intrinsic value and market price of Capital Asset Pricing Model for Sensex stocks in India.

## 5. CONCLUSION

Stock market valuation is considered as the most complex and this is due to different underlying factors influencing the valuation of stocks. Further, regulatory considerations, market sentiments and constraints always affect the valuation of stocks. So, it is very essential to control the differences in fundamentals that affect the value of stocks. But generally, most of the valuation models were not able to generate accurate value estimates for stocks in the Indian stock market. Due to high levels of valuation errors, choosing appropriate stocks became a difficult task for investors in India. Hence, this study tested CAPM for Sensex stocks in Indian Stock Market. Study found that intrinsic value of Sensex stocks in India is significantly related to market price in Capital Asset Pricing Model. This study also proven that market price is a) positively influenced by risk free rate of return; and b) positively influenced by Sensex returns also under CAPM. So, investors can select 16 stocks with lowest Mean Absolute percentage Errors (MAPE) for predicting the intrinsic value after knowing the characteristics of the company which suits the situation in the market by using Capital Asset Pricing Model. It also helps to trace out and understand the emotional stock selling by investors through the fall of prices traced through this model in the year 2009-10 after the recession and over valuation in Indian market. CAPM showed abnormal valuation errors of YES bank for 5 years out of 11 Years which was an indication of anomalies for that stock. So investors can study on the abnormal valuation errors (MAPE more than 40 % for more than 4 years out of 11 years) of Sensex stocks for cautious investment. This study tested and suggested Capital Asset Pricing Model for valuing majority of the Sensex stocks in Indian stock market for investment purpose.

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