Chapter 8
Summary, Results & Conclusions

In the current study, the Equity Risk Premium (ERP) expectations of the investors are estimated in the volatile Indian Capital Market. Nowadays, the investors are too much risk averse and therefore demanding the calculative risk in their investment. So the estimation of the ERP becomes very crucial for them to judge how much more return they expect over the risk free rate of return for holding a risky security in the Indian Capital Market. The Equity Risk Premium (ERP) is the basic element to calculate the market value of the risk. It is the collective action of all the investors which helps in estimating the equilibrium expectations of the return on the market portfolio in excess of the risk free return, which is so called Equity Risk Premium.

ERP is very crucial element in estimating the return expectations as it is the input to any of the return estimating model. This is important for both the investors and the corporate as it is a return for the former and the cost of equity for the corporate which affects the valuation process. Therefore, the correct estimation of the ERP becomes a necessity for the better matching of the expected returns with the actual returns which increases the wealth of the investor and correct valuation of the company stock. This research study helps in identifying and understanding the factors affecting ERP expectations to predict more accurate returns expected by the investors.

It has been found during the literature review that the large number of studies have been conducted on predicting the ex post and ex ante equity risk premium expectations of the investors investing in the International Capital Markets basically in the US and UK Markets, but very few studies are available for the investors investing in the Indian Capital Markets. As the Indian Capital Markets are developing and are not as mature as the US and UK Capital Markets, therefore the characteristics of both these markets are different, so in this study an attempt has been made to study the risk expectations of the investors and the corporate in the Indian Capital Market.

Under this umbrella heading “Estimating the Equity Risk Premium Expectations of the Investors in the Indian Capital Market”, various precise objectives were defined to provide a direction and
definite solution to the each problem making the equity risk premium expectations for each scenario in an optimum way. The following five objectives were framed for the study to estimate the ERP expectations in the respective scenarios.

- Analyzing the behavioral/ psychological factors that affect the equity risk premium expectations of the investors.
- Identifying the financial variables which may have probable effect on the Equity Risk Premium Expectations.
- Exploring the extent of effect of above identified variables on the equity risk premium expectations.
- Seeking the effect of the Market Capitalization on the Equity Risk Premium Expectations of the investors.
- Seeking if the Equity Risk Premium Expectations of the investors vary before and after the financial recession.

For achieving the above objectives, the last ten year period from 2003 to 2013 was selected and the data was collected for the sample 60 companies, (20 each of large cap, mid cap and small cap companies listed in the Bombay Stock Exchange) to represent the whole Indian Capital Market and analyzing the ERP expectations of the investors in each year separately and in the consolidated period. The various financial factors were explored and their effect was studied on the return expectations of the investors in the different years and different scenarios like investing during the recession period or investing in the different market capitalization companies in the Indian Capital Market. Different factors affect the return expectations of the investors differently in each year and in each scenario depending upon the circumstances of the respective period and the scenario. The variables which were explored in the study were Beta of the stock, Earnings per share (EPS), Dividend Payout Ratio, Debt Equity Ratio, Current Ratio, Return on Assets, Net Profit Margin in %, P/E Multiple and P/B Multiple and analyzed which variable(s) have the significant effect on the ERP expectations in the respective situation which is discussed later in this chapter.

The stratified randomly sampling technique was applied to select the 60 companies from the whole market taking 20 companies randomly from each strata of large cap, mid cap and small
cap companies so as to represent the whole representation of population of the Indian Capital Market.

The yearly returns were calculated by averaging the daily returns which were taken from the daily prices of shares of the different companies from April 2013 to March 2013. And all the other variables were calculated by taking the values from the respective company’s balance sheet and other financial statements of the above said period.

The linear multiple regression was applied for accomplishing the above objectives with all the financial variables identified of the each company as the independent variables and the ex post returns of the company as the dependent variable in analysis of the respective period. Along with the linear multiple regression, the paired t test was applied to analyze the effect of recession on the ERP expectations pre and post recession whereas the one way ANOVA was applied for analyzing the market capitalization impact on the ERP expectations of the investors.

### 8.1 Analysing behavioral/ psychological factors that affect the equity risk premium expectations of the investors.

Firstly to check if the psychological or behavior factors of the investors other than the market factors affect the ERP expectations, the traditional and the most prominent CAPM model is verified on the above data, to explore if the other than market factors affect the return expectations of the investors in the capital market. The following facts were explored by verifying the same on the 10 years data on the large cap, mid cap and the small cap companies.

#### 8.1.1 Results for the large cap companies

- It was found that from the 20 large cap companies, only 6 companies obeyed the CAPM model in which beta is the only significant factor in predicting the future returns expectations but the rest 14 companies violated the CAPM model and indicates the effects of other variables too in predicting the equity risk premium expectations of the investors. So, it questions the validity of the traditional CAPM model and proves the effect of psychological and behavior factors of the investors while investing in the large cap companies of the Indian Stock Market.
8.1.2 Results for the mid cap companies

- It was found that from the 20 mid cap companies, only 7 companies obeyed the CAPM model in which beta is the only significant factor in predicting the future returns expectations but the rest 13 companies violated the CAPM model and indicates the effects of other variables too in predicting the equity risk premium expectations of the investors. So, this also questions the validity of the traditional CAPM model and proves the effect of psychological and behavior factors of the investors while investing in the mid cap companies of the Indian Stock Market.

8.1.3 Results for the small cap companies

- It was found that from the 20 small cap companies, 10 companies obeyed the CAPM model in which beta is the only significant factor in predicting the future returns expectations but the rest 10 companies violated the CAPM model and indicate the effects of other variables too in predicting the equity risk premium expectations of the investors. So, this also questions the validity of the traditional CAPM model and proves the effect of psychological and behavior factors of the investors while investing in the small cap companies of the Indian Stock Market, but in small cap companies 50% of the companies obeyed the CAPM model, thereby signifying that beta is an important factor for investing in the small cap companies, as these companies are more risky being less established, so the measurement of the market sensitivity is the important factor in the small cap companies.

This study shows that out of 60 companies representing the whole Indian Capital Market only 23 companies obeyed the CAPM model and majority of them could not. Therefore, the null hypothesis is rejected as majority does not obey the traditional CAPM Model. This overall analysis questions the validity of the CAPM model and infers that there are other psychological, behavior and financial factors in determining the equity risk premium for the investors in the Indian Capital Market, and hence there is a need of another model in estimating the Equity Risk Premium expectations.
8.2 Exploring the extent of effect of the identified variables on the equity risk premium expectations.

After understanding the fact that there are other than market factors that also have an effect on the return expectations of the investors, the previous researches are reviewed to explore various financial variables that may have probable effect in determining the ERP expectations. Some of the variables identified through the review are Beta of the stock, Earnings per share (EPS), Dividend Payout Ratio, Debt Equity Ratio, Current Ratio, Return on Assets, Net Profit Margin in %, P/E Multiple and P/B Multiple which were analyzed in detail in the present research analytically in the Indian Capital Market scenario to show the extent of each variable in determining the equity risk premium expectations of the investors. For the same, values of all the variables were calculated for the 60 companies listed in the Bombay Stock Exchange from the period April 2003 – March 2013 through the use of the published balanced sheets and other financial statements of the respective company. The annual ex post returns were calculated by averaging the daily returns of these companies earned in the respective period. The multiple linear regression was applied with the ex post returns earned by these companies in the relevant period as the dependent variable and all other variables of the above said period as the independent variables. The regression was applied on each year separately and also on the whole consolidated 10 years data. The results of the regression are as follows:

8.2.1 Regression results of the year 2003-04

- There are strong negative correlations between return-current ratio, return-P/E multiple, Net profit margin-D/E ratio, Return on assets-D/E ratio, current ratio-D/E ratio, D/E ratio-Dividend Payout ratio, D/E ratio-Earning per Share, D/E ratio-P/E multiple, D/E ratio - P/B multiple, Dividend payout ratio - beta of the stock and strong positive correlations between return-D/E ratio, Net profit margin-EPS, Net profit Margin-ROA, Net profit margin-P/B multiple, ROA-dividend payout ratio, ROA- EPS, current ratio-P/E multiple, dividend payout ratio-P/B multiple, EPS-P/B multiple and P/E multiple-P/B multiple at 5% level of significance.
• The current ratio is the only variable which has a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2003-04.

• The regression equation for predicting the return expectations for the year 2003-04 can be framed as follows:

\[
\text{Return} = 0.091 + .515 \text{ Net Profit Margin} + 0.037 \text{ Return on Assets} - 0.409 \text{ current ratio} + 0.244 \text{ D/E ratio} + 0.018 \text{ D/P ratio} + 0.371 \beta - 0.027 \text{ EPS} - 0.018 \text{ P/E multiple} + 0.076 \text{ P/B multiple}.
\]

8.2.2 Regression results of the year 2004-05

• There are strong negative correlations between return-current ratio, return-D/P ratio, Net profit margin-D/E ratio, Net profit margin-P/E multiple, current ratio-D/E ratio, D/E ratio-Dividend Payout ratio, D/E ratio-Earning per Share, D/E ratio- P/B multiple, Dividend payout ratio-beta of the stock, D/P ratio-P/E multiple, beta-P/B multiple, EPS-P/E multiple and strong positive correlations between return-D/E ratio, return-beta, Net profit margin-EPS, Net profit Margin-ROA, Net profit margin-P/B multiple, Net profit margin-D/P ratio, ROA-dividend payout ratio, D/E ratio-beta, dividend payout ratio-EPS, EPS-P/B multiple and P/E multiple-P/B multiple at 5% level of significance.

• The D/E ratio is the only variable which has a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2004-05.

• The regression equation for predicting the return expectations for the year 2004-05 can be framed as follows:

\[
\text{Return} = 0.184 + .274 \text{ Net Profit Margin} + 0.041 \text{ Return on Assets} - 0.167 \text{ current ratio} + 0.288 \text{ D/E ratio} - 0.046 \text{ D/P ratio} + 0.209 \beta - 0.055 \text{ EPS} - 0.045 \text{ P/E multiple} + 0.141 \text{ P/B multiple}
\]

8.2.3 Regression results of the year 2005-06

• There are strong negative correlations between return-EPS, Net profit margin-D/E ratio, Net profit margin-P/E multiple, current ratio-D/E ratio, D/E ratio-Earning per Share, D/E ratio- P/B multiple, beta-P/E multiple, EPS-P/E multiple and strong positive correlations
between return-D/E ratio, return- P/E multiple, Net profit margin-EPS, Net profit margin-P/B multiple, ROA-EPS, current ratio-D/P ratio, and P/E multiple-P/B multiple.

- The above table shows that the D/E ratio is the only variable which has a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2005-06.
- The regression equation for predicting the return expectations for the year 2005-06 can be framed as follows:

\[
\text{Return} = 0.107 + 0.366 \text{ Net Profit Margin} - 0.031 \text{ Return on Assets} - 0.076 \text{ current ratio} + 0.486 \text{ D/E ratio} + 0.01 \text{ D/P ratio} - 0.024 \beta - 0.097 \text{ EPS} + 0.035 \text{ P/E multiple} + 0.188 \text{ P/B multiple}
\]

8.2.4 Regression results of the year 2006-07

- There are strong negative correlations between Net profit margin-D/E ratio, Net profit margin-P/E multiple, current ratio-D/E ratio, D/E ratio-Earning per Share, EPS-P/E multiple and strong positive correlations between return-beta, return- P/E multiple, return – P/B multiple, Net profit margin-ROA, Net profit margin- current ratio, Net Profit Margin – EPS, ROA-EPS, current ratio-EPS, and P/E multiple-P/B multiple.
- The beta and the P/B multiple have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2006-07.
- The regression equation for predicting the return expectations for the year 2006-07 can be framed as follows:

\[
\text{Return} = -0.132 - 0.587 \text{ Net Profit Margin} + 0.117 \text{ Return on Assets} + 0.098 \text{ current ratio} + 0.146 \text{ D/E ratio} - 0.049 \text{ D/P ratio} + 0.554 \beta + 0.012 \text{ EPS} + 0.012 \text{ P/E multiple} + 0.240 \text{ P/B multiple}
\]

8.2.5 Regression results of the year 2007-08

- There are strong negative correlations between Return – Dividend payout ratio, Net profit margin-D/E ratio, current ratio-D/E ratio, D/E ratio-Earning per Share, Dividend Payout ratio – beta, EPS-P/E multiple and strong positive correlations between return-beta,

- The Dividend payout ratio, Beta and the P/B multiple have a significant effect at 5% level of significance in predicting the equity risk premium expectations for the investors in the year 2007-08.

- The regression equation for predicting the return expectations for the year 2007-08 can be framed as follows:

\[
\text{Return} = \ -0.020 - 0.728 \text{ Net Profit Margin} + 0.141 \text{ Return on Assets} - 0.057 \text{ current ratio} - 0.025 \text{ D/E ratio} - 0.091 \text{ D/P ratio} + 1.073 \beta + 0.007 \text{ EPS} - 0.103 \text{ P/E multiple} + 0.259 \text{ P/B multiple}
\]

8.2.6 Regression results of the year 2008-09


- The Dividend payout ratio, Beta and the P/B multiple have a significant effect at 5% level of significance in predicting the equity risk premium expectations for the investors in the year 2008-09.

- The regression equation for predicting the return expectations for the year 2008-09 can be framed as follows:

\[
\text{Return} = \ -0.151 - 0.468 \text{ Net Profit Margin} - 0.014 \text{ Return on Assets} - 0.039 \text{ current ratio} - 0.057 \text{ D/E ratio} - 0.009 \text{ D/P ratio} - 0.552 \beta + 0.094 \text{ EPS} - 0.075 \text{ P/E multiple} + 0.243 \text{ P/B multiple}
\]

8.2.7 Regression results of the year 2009-10

- There are strong negative correlations between Return – beta, Net profit margin-D/E ratio, current ratio-D/E ratio, Dividend Payout ratio – beta and strong positive

- None of the variables selected have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2009-10.
- The regression equation for predicting the return expectations for the year 2009-10 can be framed as follows:

\[
\text{Return} = 0.064 - 0.147 \text{Net Profit Margin} + 0.043 \text{Return on Assets} - 0.066 \text{current ratio} - 0.024 \text{D/E ratio} - 0.033 \text{D/P ratio} - 0.304 \text{beta} + 0.084 \text{EPS} + 0.006 \text{P/E multiple} + 0.090 \text{P/B multiple}
\]

8.2.8 Regression results of the year 2010-11

- None of the variables selected have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2010-11.
- The regression equation for predicting the return expectations for the year 2010-11 can be as follows:

\[
\text{Return} = -0.255 + 0.257 \text{Net Profit Margin} - 0.095 \text{Return on Assets} - 0.028 \text{current ratio} + 0.043 \text{D/E ratio} - 0.049 \text{D/P ratio} + 0.11 \text{beta} + 0.129 \text{EPS} + 0.115 \text{P/E multiple} - 0.016 \text{P/B multiple}
\]

8.2.9 Regression results of the year 2011-12

The above table shows that beta, EPS and P/B multiple have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2011-12.

The regression equation for predicting the return expectations for the year 2011-12 can be framed as follows:

\[
\text{Return} = -0.092 - 0.111 \text{ Net Profit Margin} + 0.002 \text{ Return on Assets} - 0.079 \text{ current ratio} + 0.084 \text{ D/E ratio} + 0.019 \text{ D/P ratio} - 0.391 \text{ beta} + 0.116 \text{ EPS} - 0.063 \text{ P/E multiple} + 0.105 \text{ P/B multiple}
\]

### 8.2.10 Regression Results of the year 2012-13


The P/B multiple has a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in the year 2012-13.
The regression equation for predicting the return expectations for the year 2012-13 can be framed as follows:

\[
\text{Return} = -0.192 + 0.119 \text{ Net Profit Margin} - 0.018 \text{ Return on Assets} - 0.047 \text{ current ratio} + 0.042 \text{ D/E ratio} + 0.026 \text{ D/P ratio} - 0.218 \beta + 0.011 \text{ EPS} + 0.063 \text{ P/E multiple} + 0.165 \text{ P/B multiple}
\]

8.2.11 Regression Results of the consolidated 2003-2013


- The Net profit Margin, Return on Assets, beta, EPS and P/B multiple has a significant effect at 5% level of significance in the whole consolidated period 2003-2013 which are termed as the critical variables in deciding the Equity Risk Premium Expectations of the investors in the Indian Capital Market.

- The regression equation for predicting the return expectations for the years 2003-2013 can be framed as follows:

\[
\text{Return} = 0.119 - 0.638 \text{ Net Profit Margin} + 0.097 \text{ Return on Assets} - 0.088 \text{ current ratio} - 0.038 \text{ D/E ratio} + 0.015 \text{ D/P ratio} + 0.151 \beta - 0.093 \text{ EPS} + 0.006 \text{ P/E multiple} + 0.176 \text{ P/B multiple}
\]

8.2.12 Summary of all the regression results for all years.

Table 8.1  Summary of all the regression results for all years.
It can be observed from the preceding table 8.1 that the variables which were capable of establishing a statistically significant relationship at 5% level of significance with the dependent variable i.e. return were current ratio for one year, Debt Equity Ratio for 2 years, Dividend Payout Ratio for 1 year, EPS for 3 years, Beta for 3 years, And Price to Book value Multiple for 5 years. Further the variables that were statistically significant at 1% level of significance were beta for 2 years, EPS for 2 years and Price to Book value Multiple for 4 years.

The results of the individual years are in conformity with the results of regression analysis of consolidated data (2003 – 2013), as in the consolidated data, all the variables except the current ratio, Debt Equity Ratio and Dividend Payout ratio and the Price to Earnings Multiple were significantly related to the dependent variable.

In this section of the report, the effect of recession on the ERP Expectations has been observed and analyzed. It has been verified, if the recession in the economy affects the return expectations of the investors or not. For this, the whole period was divided into two parts that is pre recession period (2003 – 2008) and post recession period (2008 – 2013). First the paired t test was applied between the pre and post recession returns and the significant value of the t statistic determines the significant effect of the recession and then the ERP expectations are explored using regression analysis in the two periods separately and the results are as follows:

### 8.3.1 Paired t – test Results of pre recession and post recession returns

- The correlation coefficient between the pre and post recession returns came out to be -0.357 which means that the returns are negatively correlated between the two periods. Also, the significant value was .005 which means that the correlation is highly significant even at 1% level of significance.
- It has been found that there is significant difference between the return expectations of the investors in the pre and post recession period with the significance value 0.000 which means the difference is highly significant at 1% level of significance.

Therefore, based on this analysis the null hypothesis is rejected and proved that there is significant difference in the return expectations of the investors in the pre and post recession periods.

### 8.3.2 Regression Results of the pre recession period 2003- 2008

- There are positive correlations between Return – Debt Equity Ratio, Beta, Price to Book Multiple; Net Profit Margin – Return on Assets, Current Ratio, Dividend Payout Ratio, EPS, P/B Multiple; Return on Assets – EPS; Current Ratio – Dividend Payout Ratio, EPS, P/E Multiple, P/B Multiple; Debt Equity Ratio – Beta; Dividend Payout Ratio – EPS, P/B Multiple; EPS – P/B Multiple; P/E Multiple – P/B Multiple and strong negative correlations between Return – Net Profit Margin, Current Ratio, D/E Ratio, D/P Ratio, EPS; Net Profit Margin – Current Ratio, Beta, P/E Multiple; Current Ratio – D/E Ratio, EPS; D/E Ratio – D/P Ratio, EPS, P/E Multiple, P/B Multiple; D/P Ratio – Beta; Beta – EPS, P/E Multiple, P/B Multiple; and EPS – P/E Multiple.
• The Return on Assets, Debt to Equity Ratio, Beta, EPS and P/B multiple have a significant effect at 5% level of significance in predicting the equity risk premium expectations for the investors during pre recession period in the year 2003-2008.

• The regression equation for predicting the return expectations for the pre recession period 2003-2008 can be framed as follows:

\[
\text{Return} = 0.046 - 0.206 \text{ Net Profit Margin} + 0.089 \text{ Return on Assets} - 0.067 \text{ current ratio} + 0.215 \text{ D/E ratio} - 0.032 \text{ D/P ratio} + 0.528 \text{ beta} - 0.056 \text{ EPS} - 0.049 \text{ P/E multiple} + 0.227 \text{ P/B multiple}
\]

8.3.3 Regression Results of the post recession period 2008-2013

• There are positive correlations between Return – Debt Equity Ratio, D/P Ratio, P/E Multiple, Price to Book Multiple; Net Profit Margin – Return on Assets, Current Ratio, Dividend Payout Ratio, Beta, EPS; Return on Assets – Current Ratio, EPS; Current Ratio – Dividend Payout Ratio, EPS; Debt Equity Ratio – Beta; Dividend Payout Ratio – EPS, P/B Multiple, P/E Multiple; EPS – P/B Multiple and strong negative correlations between Return – Net Profit Margin, D/E Ratio, Beta; Net Profit Margin – D/E Ratio, Beta, P/E Multiple; Current Ratio – D/E Ratio, Beta, P/E Multiple; D/E Ratio – D/P Ratio, P/B Multiple; D/P Ratio – Beta; Beta – P/B Multiple; and EPS – P/E Multiple.

• The Beta, EPS and P/B multiple have a significant effect at 5% level of significance in predicting the equity risk premium expectations for the investors in the year 2008-2013.

• The regression equation for predicting the return expectations for the post recession period 2008-2013 can be framed as follows:

\[
\text{Return} = -0.226 + 0.341 \text{ Net Profit Margin} + 0.021 \text{ Return on Assets} - 0.020 \text{ current ratio} - 0.052 \text{ D/E ratio} - 0.026 \text{ D/P ratio} - 0.194 \text{ beta} + 0.041 \text{ EPS} + 0.086 \text{ P/E multiple} + 0.164 \text{ P/B multiple}
\]

8.3.4 Factors significant in determining the ERP Expectations in pre and post recession period

Table 8.2: Factors significant in determining the ERP Expectations in pre and post recession period

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<td>Return on Assets</td>
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<td>Debt Equity Ratio</td>
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<td>Beta of the stock</td>
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- It is found that during the pre-recession period, investors perceive the above-mentioned factors significant in determining the ERP expectations as all these variables are important in making the risk premium expectations.
  
a) Return on assets determines the ability of the company to earn profits on their overall assets and signifies how efficiently they are using their assets to earn returns which frame the risk premium for the investors.
  
b) Debt Equity Ratio determines the amount of debt in the capital structure of the company. Higher the debt the company has, the higher risk is perceived by the investors as the company has more fixed obligations and thus adds risk to the shareholders.
  
c) Beta of the stock signifies the sensitivity of the stock returns with the market returns. Higher the sensitivity means higher the value of beta which further means more risk premium is demanded by the investors to bear that higher risk sensitivity.
  
d) Earnings per share determine the overall profit distribution for the shareholders. This signifies how much an investor earns against his investment of one share in the company. This also affects the risk premium expectations of the investors as investors invest in the stock market to get the maximum returns and to increase their earnings per share.
  
e) Price to Book Value Multiple is based on the historical or the book value of the assets rather than the market value. A lower P/B value means that the stock is undervalued and signifies that there is some problem in the company fundamentals. It also tells the investor whether he is paying too much for if the company went bankrupt immediately.
• In the post recession period in contrast with the pre recession period, the following results are explored.
  a) Price to earnings multiple becomes significant in the post recession period as in the post recession, investors become more risk averse and perceives the stock market to be more riskier and started determining how much they are willing to pay per rupee of earnings.
  b) The other variables like Return on Assets and Debt Equity Ratio becomes insignificant as after recession, companies try to utilize their resources very judicially to manage the cost and attempts have been made to minimize the cost and earn the positive returns in the required situation. The companies also try to reduce their debt burden in the post recession period, thereby making the debt equity ratio an insignificant variable during the post recession period.

8.4 Seeking the effect of market capitalization (the size of the company) on the Equity Risk Premium Expectations of the Investors in the Indian Capital Market.

In this section of the report, the effect of market capitalization has been observed and analyzed on the ERP Expectations. It has been verified if the size of the company affects the return expectations of the investors or not. For this the whole set of companies were divided into three categories that were large cap, mid cap and small cap companies depending upon their market capitalization. First the one way ANOVA was applied among the all three categories returns and the significant value of the f statistic determines the significant effect of the market capitalization and then the ERP expectations were explored using regression analysis in the different categories separately and the results are as follows:

8.4.1 One Way ANOVA Results:

• The small cap firms have the highest standard deviation and the large cap have the least standard deviations, signifying that the small cap stocks were more risky and volatile, as compared to the mid cap and large cap stocks due to the uncertainties involved in the small cap companies.
The significance value (f value) is 0.255 which means the difference is not significant even at 5% level of significance, hence the null hypothesis is accepted and there is no significant difference between the return expectations of the investors while investing in the different size companies.

8.4.2 Regression Results of the large cap companies

- There are strong positive correlations between return – beta, return – P/B ratio, Net Profit Margin – Current Ratio, Net Profit Margin – D/P ratio, Net Profit Margin – EPS, Net Profit Margin – P/E Multiple, Net Profit Margin – P/B Multiple, Return on Assets – Beta, Current Ratio – D/P Ratio, Current Ratio – EPS, Current Ratio – P/B Ratio, D/E ratio – Beta, D/P Ratio – P/B ratio and EPS – P/E multiple and strong negative correlations between Return – Net Profit Margin, EPS, P/E Multiple; Net Profit Margin – P/E Multiple, Beta; Return on assets – P/B Multiple; Current Ratio – D/E ratio, Beta; D/E ratio – D/P ratio, P/B multiple; D/P ratio – beta; Beta – EPS, P/E multiple and P/B multiple at 1 or 5 % level of significance.
- The Net Profit Margin, EPS and P/B multiple have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in investing in the large cap stocks.
- The regression equation for predicting the return expectations in the large cap companies can be framed as follows:

\[
\text{Return} = 0.188 - 1.146 \text{ Net Profit Margin} + .072 \text{ Return on Assets} - 0.003 \text{ current ratio} - 0.049 \text{ D/E ratio} - 0.031 \text{ D/P ratio} + 0.125 \text{ beta} - 0.084 \text{ EPS} - 0.006 \text{ P/E multiple} + 0.212 \text{ P/B multiple}
\]

8.4.3 Regression Results of the mid cap companies

- There are strong positive correlations between Return – D/E ratio, Beta, P/B multiple; Net Profit Margin – Return on Assets, Current Ratio, D/P ratio, EPS, P/E multiple; Return on Assets – D/E Ratio, EPS; Current ratio – EPS; D/E Ratio – Beta; D/P Ratio – P/B multiple; EPS – P/E multiple; P/E multiple – P/B multiple and strong negative correlations between Return – Net Profit Margin, Current Ratio, EPS; Net Profit Margin.
– D/E Ratio, Beta; Return on Assets – Beta, P/B multiple; Current Ratio – D/E Ratio, Beta; D/E Ratio – D/P ratio, Beta, P/B multiple; D/P Ratio – Beta; Beta – EPS, P/E Multiple, P/B multiple at 1% or 5% level of significance.

- The ROA, Stock Beta, EPS, P/E multiple and P/B multiple have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in investing in the mid cap stocks.

- The regression equation for predicting the return expectations in this category can be framed as follows:

\[
\text{Return} = -0.103 - 0.276 \text{ Net Profit Margin} + 0.234 \text{ Return on Assets} + 0.03 \text{ current ratio} + 0.123 \text{ D/E ratio} - 0.008 \text{ D/P ratio} + 0.443 \beta + 0.116 \text{ EPS} + 0.027 \text{ P/E multiple} + 0.309 \text{ P/B multiple}
\]

8.4.4 Regression Results of the small cap companies

- There are strong correlations between Return – D/P Ratio, Beta, P/B Multiple; Net Profit Margin – Return on Assets, Current Ratio, D/P Ratio, EPS, P/E Multiple; Return on Assets – Current ratio, EPS, P/E Multiple; Current Ratio – D/P Ratio, EPS, P/B Multiple; D/E Ratio – Beta, P/B Multiple and EPS – P/E Multiple and strong negative correlations between Return – Net Profit Margin, Return on Assets, Current ratio, EPS, P/E multiple; Net Profit Margin – D/E Ratio, Beta; Return on Assets – D/E Ratio, Beta, P/B Multiple; Current ratio – D/E Ratio, Beta; D/E Ratio – D/P ratio, EPS; D/P Ratio – Beta; Beta – EPS, P/E Multiple.

- The Current Ratio, Debt Equity Ratio, Dividend Payout Ratio, EPS, and P/B multiple have a significant effect at 5 % level of significance in predicting the equity risk premium expectations for the investors in investing in the small cap stocks.

- The regression equation for predicting the return expectations for investors in this category can be framed as follows:

\[
\text{Return} = 0.134 - 0.873 \text{ Net Profit Margin} + 0.107 \text{ Return on Assets} - 0.274 \text{ current ratio} - 0.251 \text{ D/E ratio} + 0.057 \text{ D/P ratio} + 0.166 \beta - 0.08 \text{ EPS} + 0.002 \text{ P/E multiple} + 0.304 \text{ P/B multiple}.
\]
8.4.5 Factors significant in determining the ERP Expectations under different market capitalization

Table 8.3: Factors significant in determining the ERP Expectations under different market capitalization

<table>
<thead>
<tr>
<th>Large Cap Companies</th>
<th>Mid Cap Companies</th>
<th>Small Cap Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Profit Margin</td>
<td>Return on Assets</td>
<td>Current ratio</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>Beta of the stock</td>
<td>Debt Equity ratio</td>
</tr>
<tr>
<td>Price to Book Multiple</td>
<td>Earnings per share</td>
<td>Dividend Payout Ratio</td>
</tr>
<tr>
<td></td>
<td>Price to Earnings Multiple</td>
<td>Earnings per share</td>
</tr>
<tr>
<td></td>
<td>Price to Book Value Multiple</td>
<td>Price to Book Value Multiple</td>
</tr>
</tbody>
</table>

- The investments in the large cap companies are stable and less risky, therefore it is found that these companies have the low Price to Earnings Multiple, and hence seems to be insignificant in determining the ERP expectations of the investors which become significant in the mid cap investments as these companies have more uncertainty and risk.

- The investors consider the return on assets as the determining factor while investing in the mid cap companies as it signifies how efficiently the company is utilizing their resources, costs and assets but while investing in the large cap companies, investors are more concerned for the net profit margin, as they are the established companies and very well managed their asset turnover, so the net profit margin is the concern with the large cap companies.

- The mid cap companies are less established and therefore has more sensitivity to the market changes. So, beta of the stock becomes another significant variable in determining the ERP expectations of the investors while investing in the mid cap companies.

- The small cap companies are not so established companies and might be got public recently, therefore they have the huge debt in their capital structure, making the debt equity ratio a determining factor in estimating ERP since the investors perceive the high debt company to be risky one and demand high risk premium.
• Also, majority of the small cap companies are new in the business without the established and standard work procedures and fight for their survival. So, they have to keep high current assets to meet their current liabilities as they have the longer working capital turnover cycle. So, the current ratio becomes another significant factor in estimating the ERP Expectations for small cap investors.

• The small cap companies are yet to establish, therefore their objective is to increase the future growth rate of the company. For the same, the small cap companies have to plough back their profits as retained earnings and might not declare dividends to their investors, which might add risk factor to the investors as majority of the investors believe in “the bird in the hand theory” of dividend policy which says investors perceives those stocks less risky which are giving the regular dividends. So, being the low dividend paying companies, investors have the high ERP Expectations and Dividend Payout ratio becomes the significant factor in case of small cap companies.

The above results conclude that there is no effect of market capitalization on the equity return expectations of the investors in the Indian Capital Market and the investors can estimate their return expectations by using the respective regression equation in which he wants to invest.

8.5 Conclusion

This study helps the investors to estimate the expected equity returns in the large cap, mid cap and the small cap companies in the different scenarios like at the time of recession in the Indian Capital Market. Also, this research explores the various financial factors other than the market factors that the investor should analyze before investing in the capital market to fulfill his return expectations.

The investor can estimate the required return by using the respective regression equation and putting the values of the explored variables of that period in the respective scenario equation and earn the expected returns with minimum risk with minimum uncertainties, which enhances his chances of earning capital gains and making calculative profit in the stock market.

This research also validates that there are other psychological and behavior factors that affect the investors in earning the equity returns in the market.
This research is important for both the investors and the corporate as it helps to predict the equity returns expected by the investors. The expected equity return is the return expected by the investors which is the cost of equity for the corporate. So, this study apart from determining the equity risk premium for the investors also helps in determining the cost of equity to the firm. This also helps the firms to decide their optimum cost structure for raising the capital so that they can increase their profits.

8.6 Further Scope of the Research

In the present study the effect of investor’s psychological and behavior aspect is explored and it is found that these are the important factors that determine the ERP expectations of the investors in the Indian Capital Market but in the future studies various psychological and behavior aspects of the investors like the different demographics, personality traits and investing habits of the investors, can also be explored and the extent to which they determine the ERP expectations for the investors can be measured which affect the overall return expectations for the investors which could not be found in the present study.

Also in the present study, the differential ERP Expectations are explored on the basis of the financial recession period that is the return expectations of the investors in the pre-recession and the post-recession period and on the basis of the company’s capitalization that is if the investors are having different return expectations for investing in the large cap, mid cap or the small cap companies. In the future studies the differential ERP expectations can also be explored on the basis of different sectors in which the companies fall that is if the investors are demanding different expected returns while investing in the IT, Power, Financial Services, Telecom companies etc at some particular moment of time depending upon the individual circumstances of the individual industry.