CHAPTER 6

SUMMARY, CONCLUSIONS AND SUGGESTIONS

This chapter summarises the results of the study. Further, it highlights the conclusions and provide some useful suggestions to the corporate managers and the regulatory bodies. Finally it concludes with some directions which could be useful for future research.

The Indian economy is suffering from sheer liquidity crisis in all its business segments. A recent surge in the volume of non-performing assets, blockages in investment, insolvency of the firms due to lack of proper management, etc provide sufficient evidence to this fact. In their 2018 report on working capital in India titled 'Are you Leaving Cash on the Table? -India Inc. ', the global professional services firm EY has revealed that nearly Rs. 2 trillion could be freed if working capital practices of the Indian firms are amended. The findings of the study also disclosed that all the major working capital efficiency measures like average days receivables, days payables and days inventory outstanding have shown a considerable increase since the last decade for the listed Indian firms. It appears that companies in India find it easier to manage their cash needs by stretching payables rather than bringing in operational efficiencies across the board.

The Conundrum

Parabolic Drugs, a renowned pharmaceutical firm, had to raise funds through an IPO in order to meet its additional working capital requirements while it was in its expansion mode. It had working capital cycles which were longer than its peers like Aurobindo Pharma and Orchid Chemicals. Provogue India, one of the leading clothing brands, has working capital ratios which have been degrading since 2010. The two major reasons behind this were large amount of funds blocked in raw materials and decreased inventory turnover for the firm. Hyderabad based ICSA is another firm which has been facing issues with its working capital management. The company has a history of long receivable periods because it's major revenue comes from the government agencies which make payments on the basis of project milestones. Due to higher receivables and inventory, it has not been able to report positive operating cash flow for the last six years, since 2012. Vardhman textiles is also going through a tough time. An unfavourable cotton policy has resulted in a pile-
up of inventory. This, in turn, has led to an increase in its working capital. There are ample examples which exhibit the inefficiency of the management in handling the working capital issues faced by the corporations. Therefore, this study aimed to examine the relationship between corporate governance measures and working capital efficiency of the Indian firms.

This chapter summarises and concludes the results of the present study. Further, it also presents suggestions based on the outcomes of the study and indicates the areas for future research. There are seven sections to this chapter. The first section summarises the needs and objectives of the study, section two summarises the research methodologies adopted to test the hypothesis. It is followed by the third section which details the results that have been obtained from the analysis. The fourth sections elucidates the broad conclusions which are drawn from the analysis. The fifth section states the limitations of the study which is followed by the sixth section which details the suggestions based on the outcomes of the study. The chapter concludes with the last section that highlights the areas for future research.

### 6.1 NEED AND OBJECTIVES OF THE STUDY

Several empirical studies have been carried out in this context. The review of literature, with regards to this study, has been done under three main heads: 1) Corporate Governance, 2) Working Capital Efficiency and 3) Corporate Governance and Working Capital Efficiency. These studies have been successful in examining the relationship between corporate governance and working capital efficiency and have provided a conclusive evidence of a significant impact of governance mechanisms on efficiency in working capital management. However, the extant research on the impact of corporate governance on working capital efficiency has originated in context of agency problems in developed countries and relatively little is known on this issue with regards to emerging economies like India. Differences exist in industrial economies and emerging economies with respect to economic output levels, quality of enforcement, ownership and control structures, etc.

The governance literature in India focused mainly on the relationship of corporate governance with firm profitability, performance and to some extent with the capital markets. On the other hand, literature available on working capital focused on the
relationship of operational efficiency and profitability with management of working capital. Moreover, the existing literature have tried to study the relationship between corporate governance and working capital management in an absolute manner.

To bridge the gap in literature, this study has tried to take a more relative approach as it focuses on the relationship between governance mechanisms and working capital efficiency. This study has four objectives i.e. to examine and measure corporate governance of selected Indian manufacturing firms, to examine and measure working capital efficiency of selected Indian manufacturing firms, to examine the effect of corporate governance practices on the working capital efficiency of selected Indian manufacturing firms and to suggest measures for improvement of corporate governance practices and working capital efficiency.

6.2 METHODOLOGIES APPLIED

There are two broad variables involved in the study viz., corporate governance and working capital efficiency. Six measures of corporate governance which are included for the analysis are board structure, board independence, CEO-Duality, CEO-Tenure, audit committee size and audit committee independence. The data with respect to these measures has been extracted from the corporate governance reports of the companies. Additional information has been taken from the CMIE PROWESS database and Bloomberg. Working capital efficiency has been measured with the help of six working capital efficiency ratios viz., average collection period, average payment period, inventory conversion period, cash conversion cycle, size of the cash holdings and current ratio.

In addition to this, the second objective of the study, which involves measuring and examining the working capital efficiency of the sample firms, determines the efficiency levels of the firms using the Working Capital Efficiency Index, developed by Bhattacharya in 1997. It comprises of three sub-indexes viz., Performance Index, Utilization Index and Efficiency Index. The panel data regression model also involves three control variables which are sales growth, firm size and firm performance. Sales growth has been measured as a as the difference between the current year sales and the previous year sales, divided by the previous year sales. Firm size has been determined by taking a natural log of the total book value of assets of the firm. Firm
performance has been represented by the most common accounting measure i.e. return on assets (ROA).

The sample for the study comprised of BSE-500 Index manufacturing firms. All these manufacturing firms have been categorized into nine major subsets viz., Automobiles, Capital Goods, Fast Moving Consumer Goods (FMCG), Food and Agro-Based Products, Infrastructure Developers, Mining and Mineral Products, Pharmaceuticals, Textile and Miscellaneous Manufacturing, based on their industry classification given in the CMIE PROWESS database as on May, 2016. The companies whose corporate governance reports were missing, for any of the year under study, have been excluded. Finally, companies which had financial year ending other than 31st March have also been deleted. Out of the total sample of 500 companies, a final sample of 262 firms has been selected, forming a panel dataset of 1572 company year observations.

The study involves application of various statistical tools and models, along with the implementation of a combination of parametric and non-parametric techniques of data analysis. In order to examine the change in the corporate governance measures, Paired sample t-test and Wilcoxon Sign-Rank Test have been applied. The working capital efficiency of the sample firms has been measured and examined using the Working Capital Efficiency Index in the second objective. The findings have been further substantiated by applying a one sample t-test. In order to examine the relationship between corporate governance and working capital efficiency, panel data random effects models have been used as the data has both cross-section and time variations.

6.3 SUMMARY OF EMPIRICAL FINDINGS

The thesis attempted to examine three broad objectives. The first objective pertained to examining the corporate governance practices of the sample firms using parametric and non-parametric tools. The second objective involved a sector wise working capital efficiency analysis of the sample firms using the Working Capital Efficiency Index developed by Bhattacharya, 1997. Lastly, the third objective involved analysing the relationship between corporate governance and working capital efficiency variables using panel data regression model. The summary of the main findings are as follows:
6.3.1 Corporate Governance Practices

For examining the corporate governance practices of the sample firms, the entire sample of nine industries has been divided on the basis of their working capital efficiency scores, obtained by applying the working capital efficiency index, in to two sub-categories viz., low in working capital efficiency firms and high in working capital efficiency firms. Summary statistics of mean and standard deviation have been applied to study the corporate governance mechanisms with respect to magnitude of working capital efficiency. Thereafter, a Paired sample t-test and Wilcoxon Sign-Rank Test have been applied to all the sample firms combined, in order to examine if these corporate governance practices have changed over time or not.

The analysis of the corporate governance descriptives indicates that firms which were more efficient in working capital management had a comparatively smaller board size, with lesser amount of independent directors on the board, as compared to the less efficient firms. Moreover, CEO-Duality characteristic is also observed to be lower in case of more efficient firms i.e., fewer number of firms, in the more efficient category, have the same person as the CEO/Managing Director and the Board Chairperson as compared to less efficient firms.

While examining the time period for which a person served as the CEO/Managing Director of the firm, it has been concluded that the firms which scored higher on working capital efficiency had a longer CEO-Tenure as compared to firms which scored lower on the efficiency index. Therefore, evidence was found supportive of the fact that the longer the CEO/Managing Director stays with firm, the more he/she feels related to the firm and contributes higher towards efficient decision-making. However, the firms didnot differentiate much in their audit committee characteristics. In all the nine industries, both the less efficient firms and the more efficient firms, had an average board size of four members out of which three were observed to be independent. Overall, the empirical evidence supports the conjecture that the firms which are efficient in their working capital management have a relatively smaller board size, smaller proportion of independent directors on the board, donot promote duality in the chair of the Board Chairperson and the CEO/Managing Director and have their CEO/Managing Directors serving them for comparatively longer time durations.
With regards to the change in the corporate governance characteristics over the study period FY 2010 - FY 2015, the statistical tests inferred that there were significant changes in the corporate governance variables over the period under study. The analysis of the data using paired t-test revealed that board size (BS) and board independence (BI) had undergone a significant change during the study period, with a mean change of 1.22 and 0.36, respectively. The reason for this change could be the revamping of the board structures in order to meet the legislative requirements, which had undergone a considerable change, after the introduction of The New Companies Act, 2013.

The time period for which the person served as the CEO/Managing Director of the firm, termed as CEO-Tenure in the study, had also undergone a significant change during the period under analysis with a mean change of 1.432 and a very high standard deviation of 6.69. The time period for which the CEO/Managing Director served the firm showed a lot of variation among the sample because on one end, there are firms which frequently rotated their CEO/Managing Director and on the other end, there are firms like Sundram Fasteners, Pidilite Industries, Jagran Prakash Limited, etc, which have the same person as the CEO/Managing Director since inception, which totals to a term of 40-50 years. Both the variables, representing the audit committee characteristics, had undergone a significant change during the study period. This is again because of the introduction of the New Companies Act, 2013, which lays down that audit committees of listed firms should comprise of minimum three directors, two-third of which are independent. Prior to this regulation, there were some firms which did not report any information about the formation of an audit committee, in their annual reports.

The only governance variable which did not undergo a change during the study period was CEO-Duality, because of the obvious reason that firms which displayed this aspect of duality, depicted it for a very long period of time. Bajaj Electricals, whose Chairman/Managing Director is Shekhar Bajaj since 1994, Hatsun Agro Products limited, whose Chairman/Managing Director is R.C. Chandramogan since it's inception in 1986 are some of the common examples. The analysis involving Wilcoxon Sign-Rank Test also depicted similar outcomes. Both the tests exhibited that all corporate governance measures, except CEO-Duality, had undergone a significant change over the study period i.e. FY 2010 vis-a-vis FY 2015.
6.3.2 Working Capital Efficiency

The second objective of the study pertains to the measuring and examining of the working capital efficiency of the selected Indian manufacturing firms. Consistent with the prior research (Ghosh & Maji, 2003; Ramachandran & Janakiraman, 2009) the Working Capital Efficiency Index, developed by Bhattacharya (1997) had been used for this purpose. It comprises of two sub-indexes viz., the performance index and the utilization index. The Performance Index has been constructed for controlling and managing the performance of each individual current asset class. Individual current assets indices are established for each class of current assets, by indexing the change in the amount of that particular current asset with the change in the sales. However, the performance ratio does not take into consideration the capacity of the asset to generate sales. The utilization ratio helps to incorporate this aspect. The purpose of the utilization ratio is to measure as to what degree the working capital of the firm has been utilized to generate sales. Thereafter, the efficiency ratio had been calculated by multiplying the values of performance index and utilization index.

This analysis had been done industry-wise and the entire sample was divided into nine major industries viz., Automobiles, Capital Goods, Fast Moving Consumer Goods (FMCG), Food and Agro-Based Products, Infrastructure Developers, Mining and Mineral Products, Pharmaceuticals, Textile and Miscellaneous Manufacturing, as classified in PROWESS on May, 2016. After obtaining the working capital efficiency ratios, an industry average had been calculated for each industry class using this ratio. The final efficiency scores had been obtained by dividing the individual working capital efficiency ratio by the industry average. A ratio greater than one implies that the firm is more efficient than others and a value less than one implies that the firm is less efficient in managing it's working capital as compared to the others in the industry.

The results revealed that out of a total sample of 262 firms, 117 qualified in the more working capital efficient firm category. The remaining 145 firms, which comes to about 55 percent of the total sample, have been categorized as less working capital efficient firms as they had a final score of less than unity. The Anil Aggarwal controlled Vedanta Limited scored the highest with the final efficiency score of 2.08, which implies that the efficiency level of this firm is almost the double of the industry
average. However, Orient Cement Ltd. scored the least with the final efficiency score of 0.49. The industry-wise analysis highlights that seven out of nine industries have more than majority of the firms in the less working capital efficient category. Infrastructure industry was the best performer, where 29 firms out of a total of 50 firms had a final efficiency score of more than unity. It was followed by the Fast Moving Consumer Goods (FMCG) industry, where seven out of fourteen firms have been classified in the more working capital efficient category. The irony of the situation is that Food and Agro-Based Products and capital goods industries, which are the backbone of our economy, were the least scorers in the entire sample, with more than majority firms in the less working capital efficient category.

The next part of the analysis tested the hypothesis that the sample firms are not working capital efficient. For examining this proposition, one sample t-test has been applied to test the null hypothesis that the mean efficiency scores of the sample firms are less than unity against the alternative hypothesis that the mean efficiency scores of the sample firms are not less than or equal to unity. This analysis has been carried out individually for all the industries and also for the combined sample. The value of t-statistic, obtained from the analysis, was found to be insignificant for all the nine industries. Moreover, the test statistic was also insignificant for the overall sample analysis. Therefore, the null hypothesis that the mean final efficiency score of the sample firms is less than unity stands accepted and it can be statistically concluded that the Indian manufacturing BSE-500 listed firms are inefficient in their working capital management. The empirical findings of this analysis are in line with the previous studies like Ghosh and Maji, 2003; Ramachandran and Janakiraman, 2009; Gill, Biger and Mathur, 2010 and Sharma and Kumar, 2011.

Table 5.1 provides the results of the study for the corporate governance practices and working capital efficiency of the sample firms. As discussed, the corporate governance practices have improved over the time period of the study and variations have been found across the various industry sectors. The sample companies are also found to be inefficient, as compared to the industry average, because the final efficiency score of more than 50 percent of the firms is found to be less than unity and the value of t-statistic for all the nine industries, along with the overall sample, is
found to be statistically insignificant. Thus, the first hypothesis, \( H_0^1 \), stands rejected and the second hypothesis, \( H_0^2 \), stands accepted.

**Table 5.1: Results at a Glance**

<table>
<thead>
<tr>
<th>Hyp.No.</th>
<th>Null Hypothesis</th>
<th>Technique</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>( H_0^1 )</td>
<td><em>There is no significant change in the corporate governance variables over the study period.</em></td>
<td>Paired t-test and Wilcoxon Sign-Rank Test</td>
<td>Rejected</td>
</tr>
<tr>
<td>( H_0^2 )</td>
<td><em>The sample firms donot have an efficient working capital management.</em></td>
<td>Working Capital Efficiency Index developed by Bhattacharya, 1997 and t-test</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

### 6.3.3 Impact of Corporate Governance Mechanisms On Working Capital Efficiency

The core objective of the study has been to investigate the impact of corporate governance mechanisms on the working capital efficiency in selected Indian companies, using a sample of 262 firms listed on Bombay Stock Exchange, for the period of six financial years i.e., from FY 2010 to FY 2015, taken as a panel dataset of 1572 company year observations. The six governance measures taken into analysis were board size, board independence, CEO-Duality, CEO-tenure, audit committee size and audit committee independence. However, the six working capital efficiency variables were represented as average collection period, average payment period, inventory conversion period, cash conversion cycle, size of the cash holdings and current ratio.

The results indicate that the mean board size was about ten with a maximum value of 24. About fifty percent of the board, of the sample firms, was found to be independent as the mean of Board independence was coming out to be 5.13. It was also found that 65 percent of the sample firms maintained a division between the roles of the board Chairperson and the CEO/Managing Director. The average time period for which the CEO/Managing Director served the firm was found to be nine and a half years, with a very high standard deviation of 10.035. All the sample companies have established an
audit committee, as mandated by the listing agreement, with a mean size of four members. The percentage of independent directors, forming a part of audit committee, was about 75 percent as the mean of audit committee independence was calculated to be 3.25.

Further, it was revealed that the mean of sales growth, measured as the difference between the current year sales and the previous year sales, divided by the previous year sales, was found to be 22 years, with a maximum value of 59 years. The company size, as measured by the natural log of book value of total assets, was found to be 3.29 on an average. The results were also controlled for firm performance, which is implemented by one of the most widely used accounting based measures called Return on Assets (ROA). It depicted a mean value of 0.511, however, most of the firms had a ROA around 0.078.

The results of the correlation analysis indicated that board size was positively correlated with all the working capital efficiency variables, but, the level of association was low for all the measures except size of the firm cash holdings. Board independence also had a positive but weak correlation with all the working capital efficiency measures. CEO-Duality showed a positive and weak correlation with the average payment period, inventory conversion period and current ratio, and a positive but strong correlation with average collection period and size of the firm cash holdings. It was not found to be correlated with cash conversion cycles of the sample firms.

Furthermore, CEO-Tenure showed a positive and low correlation with inventory conversion period, cash conversion cycle and current ratio and a negative but low correlation with average collection period, average payment period and size of the firm cash holdings. The audit committee characteristics also showed a weak association with the working capital efficiency variables. Audit committee size was found to be positively correlated with all the working capital efficiency variables. However, audit committee independence did show a negative and weak association with cash conversion cycle. With all the other efficiency variables, it was found to be positively associated. All the three control variables viz., sales growth, firm size and firm performance were found to be feebly related to the working capital efficiency variables.
Since the study used data that had both cross-section and time variations, panel data methodology has been, therefore, employed to control for unobservable company heterogeneity and obtain consistent estimates of the coefficients. The Breusch-Pagan-Godfrey (BPG) test was also conducted to confirm the presence of heteroskedasticity among the sample data. The BPG test value was found to be significant for all the six equations at 5 percent level of significance which implied that there is cross-section dependence among the residuals. Therefore, panel data regression analysis is most appropriate for the variables instead of simple OLS/Multiple regression.

Using panel data regression models, an industry-wise analysis of the impact of corporate governance mechanisms on the working capital efficiency of the firms has been performed because the available literature on working capital management suggests that the requirement of working capital varies over industries, sectors and time. As the first step in regression, tests were carried out to examine if the variables violated the basic assumptions of normality. Based on the results of the skewness and kurtosis, it was found that the data does not conform to the normal distribution as the skewness values for majority variables were more than zero and kurtosis values for majority variables was more than 3. However, the sample size is sufficiently large (N=1572). Therefore, the regression tests that have been conducted will be considered to be robust and valid despite not confirming to normal distribution.

A set of six regression equations have been used to identify the impact of corporate governance measures on the working capital efficiency of the firms, divided into nine industries viz., Automobiles, Capital Goods, Fast Moving Consumer Goods (FMCG), Food And Agro-Based Products, Infrastructure Developers, Mining And Mineral Products, Pharmaceuticals, Textile and Miscellaneous Manufacturing, along with the overall sample analysis. Thereafter, a Hausman test was applied in order to check whether a fixed or random effects model should be used on the data. The resultant p-values so obtained, were all found to be insignificant at 5 percent level of significance, thereby, implying that random effect models are to be used for further analysis.

A test of multicollinearity was also performed in order to obtain information about the relationship between the explanatory variables. This test generates Variance Inflation Factor (VIF) values and the Collinearity Tolerance Statistic which indicate whether
the predictors had a strong linear relationship with the other predictors or not. The analysis highlighted that all the VIF and the Tolerance Statistic values that had been generated were in the acceptable limits i.e., none of the VIF values were equal to or more than 10 and none of the Tolerance Statistic was less than 0.1. Therefore, multicollinearity was not a problem in the study.

The results of the multivariate analysis revealed that all the six governance measures significantly impacted at least one of six working capital efficiency variables in all the nine industries. Board size positively and significantly impacted average collection period and current ratio, but negatively and significantly impacted the size of the firm cash holdings. Board independence was found to be positively and significantly impacting inventory conversion cycle and significantly but negatively impacting the size of the firm cash holdings. On the other hand, CEO-Duality was found to be positively and significantly impacting size of the firm cash holdings. CEO-Tenure also depicted a positive and significant relationship with cash conversion cycle. With regards to audit committee characteristics, audit committee size was found to have a significant and positive relationship with size of the firm cash holdings, whereas, audit committee independence depicted a mixed relationship with all the six working capital efficiency variables, which was not even very strong.

The overall analysis also provided results which were similar to the industry-wise analysis, but with an additional evidence in support of this relationship. Board size was found to be significantly and positively impacting inventory conversion cycle and current ratio, and significantly but negatively impacting average payment period. CEO-Duality showed a positive and significant relationship with average collection period and average payment period. A negative but significant impact of CEO-Tenure was found over the average collection period and current ratio of the firms. Audit Committee Independence was found to be positively and significantly impacting the average collection period and current ratio, but significantly and negatively impacting the cash conversion cycle.

As far as the industry wise analysis is concerned, Fast Moving Consumer Goods (FMCG) was the only industry in which all the six corporate governance measures significantly impacted the six working capital efficiency variables. The capital goods industry and mining and mineral products industry had five governance variables,
each impacting the six regression equations. The Automobile and the Pharmaceuticals Industry showed the weakest impact with barely two governance measures showing a significant impact on the working capital efficiency models. The model specification values like Adjusted $R^2$ and The Wald Statistic of the regression models used in the study, have been found to be low because the efficiency in working capital management of the sample firms is also impacted by many other factors other than corporate governance.

The regression results provide some evidence to support the core hypothesis presented in the study. Although, not all the corporate governance attributes are found to be impacting all the working capital efficiency measures and completely supporting the stated hypothesis, but the study has achieved its objective by identifying the attributes which solve the research problem. Table 5.2 presents summary of the results for the hypothesis of this study.

**Table 5.2: Summarisation of the results for the Hypothesis of the Study**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Level of Significance</th>
<th>Rejected or not</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H0_{3a}$ - There is no significant relationship between corporate governance and average collection period of the sample firms.</td>
<td>Positive</td>
<td>5%</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H0_{3b}$ - There is no significant relationship between corporate governance and average payment period of the sample firms.</td>
<td>Neutral</td>
<td>5%</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H0_{3c}$ - There is no significant relationship between corporate governance and inventory conversion period of the sample firms.</td>
<td>Negative</td>
<td>5%</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H0_{3d}$ - There is no significant relationship between corporate governance and cash conversion cycle of the sample firms.</td>
<td>Positive</td>
<td>5%</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H0_{3e}$ - There is no significant relationship</td>
<td>Negative</td>
<td>5%</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
The overall results show that corporate governance mechanisms have a positive impact on the working capital efficiency of the organisations. Thus, the null hypothesis predicting insignificant relationship between corporate governance and working capital efficiency stands rejected.

6.4 CONCLUSIONS

This section concludes the main findings of the study:

1. The results, in terms of examining and measuring corporate governance variables, indicated that all the six measures, except for CEO-Duality, have undergone a change during the period of analysis i.e., FY 2010 to FY 2015. With regards to board size, approx. 58 percent of the sample firms have reduced the number of directors on their boards during this period. Consequentially, the percentage of independent directors on the board also decreased for 45 percent of the firms. As far as the tenure of the CEO/Managing Director of the firms is concerned, one hundred eighty four firms had emprised a decrease in the number of years a person served as the CEO/Managing Director of the firm, fifty two firms had experienced an overall increase in their CEO/Managing Director tenure and twenty three firms underwent no change. The analysis of the audit committee characteristics highlighted that the sample firms are showing a trend of reducing the size of their audit committee also as 47 percent of the firms reduced the number of directors forming a part of their audit committees during the period under
study. However, the percentage of independent directors on the audit committee stands almost constant for most of the firms.

2. The analysis of the corporate governance descriptives indicates that firms which were more efficient in working capital management had a comparatively smaller board size, with lesser amount of independent directors on the board, showed a lower degree of CEO-Duality amongst them and had a longer time period for which the CEO/Managing Director served the firm, as compared to less efficient firms as highlighted by Kieschnick et. al (2006). However, the firms did not differentiate much in their audit committee characteristics. In all the nine industries, both the less efficient firms and the more efficient firms, had an average board size of four members out of which three were observed to be independent, which is consistent with Kyereboah-Coleman (2007). Overall, the empirical evidence supports the conjecture that firms which are efficient in their working capital management have a relatively smaller board size, smaller proportion of independent directors on the board, don't promote duality in the chair of the Board Chairperson and the CEO/Managing Director and have their CEO/Managing Directors serving them for comparatively longer time durations. Overall, the results are found to be consistent with the prior research (e.g., Lipton and Lorsch, 1992; Shivdasani and Zenner, 2004; Collier and Zaman, 2005; Martínez and Fuentes, 2007; Monalisa, 2011).

3. The results pertaining to working capital efficiency, obtained by using the Working Capital Efficiency Index, highlighted the sorry state of Indian manufacturing firms in managing their working capital needs. More than majority i.e. approx. 55 percent of the sample firms have been categorized as less efficient than their peers in the industry. Furthermore, the industry-wise analysis highlighted that seven out of nine industries had more than majority of the firms in the less working capital efficient category. Infrastructure and the Fast Moving Consumer Goods (FMCG) industry were the best performers, as they had majority or at least equal number of firms in more working capital efficient and less working capital efficient categories. Food and Agro-Based Products and capital goods industries were the least scorers. The statistical
testing of the hypothesis also revealed that the Indian manufacturing BSE-500 listed firms are inefficient in their working capital management. The empirical findings of this analysis are in line with the previous studies like Ghosh and Maji, 2003; Ramachandran and Janakiraman, 2009; Gill, Biger and Mathur, 2010 and Sharma and Kumar, 2011.

4. With regards to the relationship between corporate governance measures and working capital efficiency variables, the panel data analysis has suggested that all the six corporate governance measures significantly impacted the six working capital efficiency variables. However, the types of association between them varied as average collection period, cash conversion cycle and current ratio of the firms was found to be positively impacted by the governance measures and inventory conversion period along with the size of the firm cash holdings was found to be negatively impacted by the governance measures. Furthermore, the six governance measures created a mixed impact i.e., they can cause a positive as well as negative impact, on the average payment period of the sample firms.

5. The control variables of the study viz., sales growth, firm size and firm performance, were also found to be significantly impacting atleast one out six working capital efficiency variables. However, a relatively stronger impact was created by these variables on the size of the firm cash holdings and the current ratio of the firms. Larger firms had larger amounts of cash holdings with them, but as their performance improved, the level of cash reserves held by them also declined. On the contrary, as the firms grow with respect to their size and performance, the current ratio of the firms declined due to the additional utilization of current assets and generation of additional liabilities. However, as stated by Jamalinesari and Soheili (2015), generation of additional sales by the firms actually lead to improvement in their current ratio.

6. Results reject the hypothesis that there is no significance relationship between corporate governance and working capital efficiency of the sample firms. Consistent with the prior studies (Afza and Adnan, 2007; Gill and Shah, 2012; Gill and Shah, 2013; Kamau, 2014; Aghajari et.al., 2015; Gill et. al., 2016;
2015; Goel et. al., 2015; Jamalinesari and Soheili, 2015), it was found that improved corporate governance practices followed by the firms actually improved their overall working capital efficiency.

6.5 LIMITATIONS OF THE STUDY

While this study has been successful in attaining it's objectives, it suffers from some limitations which require a mention. They are as follows:

1. This study examines only the internal corporate governance structures pertaining to board size, board independence, CEO-Duality, CEO-Tenure, audit committee size and audit committee independence. It does not take into consideration the external corporate governance measures such as takeovers, market for corporate control, which may also impact the managerial behaviour and consequentially impact their efficiency to manage their short-term decisions.

2. The efficiency in managing working capital requirements of the firms is difficult to measure. Although this study employs the two most common techniques of measuring the working capital efficiency of the firms i.e., working capital efficiency ratios and Working Capital Efficiency Index, the results may still suffer from potential measurements errors. For instance, the working capital efficiency Index only takes into consideration the performance and degree of utilization of current assets of the firm. The current liabilities, which are also one of the major aspects of working capital, have not been considered.

3. The working capital efficiency of the firms can be affected by a number of factors other than corporate governance like leverage, firms' growth opportunities, dividend payout policies, etc. The results have been controlled for certain factors only.

4. With regards to the research methodology, the sample of the study includes only BSE-500 listed manufacturing firms. Therefore, results can be concluded for only this set of population. However, a larger sample may yield to better
estimation of results. Moreover, the results are based on the data for the period 2010-2015 and may not be transportable to other time periods.

5. The PROWESS database has been used with due care for collecting the data related to governance and working capital efficiency variables. But limitations stand for those mistakes which have been inadvertently overlooked. Further, the corporate governance reports, which are a part of the annual reports of the firms, have also been utilized for data extraction. It has been assumed that the companies are reporting fairly to the regulators and the shareholders.

Despite these limitations, the study contributes to the current literature by highlighting the role of the corporate governance mechanisms in impacting the working capital management efficiency of the firms. By accentuating the attributes which contribute towards effectiveness of corporate governance measures, individually as well as jointly, in promoting the working capital management efficiency in an emerging economy like India, this study not only enhances the scant literature available on the role of corporate governance in financial decision making in emerging economies, but will also have some policy implications for them.

6.6 SUGGESTIONS

The findings of the study will hopefully provide the practitioners, regulators and researchers valuable insights into the impact of corporate governance on working capital management efficiency as well as short-term decision making. The following suggestions, based on the outcomes of the study, are made to the Regulators, the Corporate Managers and the Market Participants and the Educators.

I. REGULATORS

A cultural transformation which is required to be done in context of working capital management decision making. With regards to this, the first step that needs to be taken by the regulators is to implement such policies which encourage the firms to adopt the management of working capital as a priority and not a task which is to be undertaken only at the times of economic downturn.

Furthermore, as per the empirical findings of the study, the regulators should impose certain rulings on companies with regards to board size, board independence, CEO-
Duality and CEO-tenure as the benefits of implementing these outweighs the associated costs. Smaller boards with lesser number of independent directors should be promoted. Firms should be discouraged to foster the trend of sharing the roles of the Board Chairman and the CEO/Managing Director by one person. Moreover, regulations should be put in place to avoid frequent changes in the management of the firms as this will promote long-term interest of the managers in firm performance.

Last but not the least, any initiative to harmonize corporate governance practices all over the world would require ascertaining whether corporate governance systems in India are effective. The results of the study provide evidence to the fact that corporate governance mechanisms have improved over a period of time and are effective in enhancing the decision-making efficiency of the firms.

II. CORPORATE MANAGER AND MARKET PARTICIPANTS

In order to optimize the working capital efficiencies, the first step which the corporate managers need to undertake is making working capital a strategic priority. There are various ways in which this can be done like setting up a small core team to manage the working capital requirements of the firm, getting employees and managers 'on board' with the working capital programmes, etc.

One of the primary concern of the corporate managers is to deal with the situation of shortage of funds, specially at the time of financial crisis. Identifying the corporate governance measures, which positively impact the short-term decision making efficiency of the firms, will help the corporate managers identify the loopholes in their governance policies and take corrective action wherever required. This will provide them with a stronger backup to face the crisis like situations without being exposed to the risk of financial insolvency.

The results of the study would also aid market participants like the shareholders, the venture capitalists, etc, who are involved in the firm's valuation process, by highlighting the factors that matter the most while evaluating the short-term solvency of the firms.
III. EDUCATORS

Recent global financial crisis have resulted in enhancing the importance of short-term funds management in the companies and in this context, the role which the management and the board of directors need to play has been highlighted in this study. Therefore, these issues with regards to effective corporate governance need to be addressed as an important aspect in the management courses. The subject of working capital efficiency has been discussed in the books on financial management. However, the snags related to working capital mismanagement are of paramount importance and thus, should be given more emphasis in the financial curriculum.

It has been observed that the world is exposed to a financial crisis after almost every decade (Crotty, 2009). In the wake of such financial failures, professionals related to the field of finance like the managers, the academicians, the regulators, the accounting professionals, etc, can address the issues related to corporate governance and working capital efficiency through training and continuous education. The study is thus, timely, given the recent corporate failures.

6.7 DIRECTIONS FOR FUTURE RESEARCH

The present study aimed to examine the relationship between corporate governance and working capital efficiency for the BSE-500 listed manufacturing firms for a six year time period from 2010 to 2015. However, the study has not covered the following areas, which can be investigated by researchers in future. They have been stated herewith.

1. The variables which have been used as a proxy for corporate governance and working capital efficiency can be refined for future studies. For instance, corporate governance measures like board diversity, board diligence, CEO-Age, audit committee meetings, etc can be included as a measure of corporate governance.

2. A more comprehensive research can be conducted by taking a longer time duration and a larger sample size, which can include even the financial sector undertaking, in order to obtain more accurate results.
3. A time series analysis can be done to examine the impact of the changes in governance practices, pre and post the implementation of the new Companies Act, 2013 on working capital management efficiency of the firms.

4. A survey analysis can be done in order to ascertain the factors which are considered by the corporate managers in formulating their policies regarding working capital management. This will help to gather first hand information about the corporate governance elements which impact the efficiency of working capital management in the firms.