CHAPTER-II

REVIEW OF LITERATURE
2.1. INTRODUCTION

Systematic research works carrying structure of companies based on their geographical location are not yet available. However there are regular research works on profitability and working capital management. The researcher had scrutinized such research works carried out in India and few works done in abroad and the tips from these research works have helped the researcher to channelize in the proper perspective. The gist of some of the relevant research studies and research papers on profitability and working capital management are presented in the ensuing pages.

2.2. STUDIES ON WORKING CAPITAL

Charles Marwin (1942) in his study on “Financing Small Corporation to five manufacturing industries (1926 – 1936)” concluded that the working capital ratios are successful predictors of business failure. He used the data of five years just prior to their discontinuance. He proved that the ratios like net working capital to total debt are found to be the most significant predictors among them. Van Horne (1969), in his study on, “A risk return analysis of a firm’s working capital position” examined separately the level of firms’
liquid assets and maturity composition of its debts in order to illustrate
the respective trade off between risk and return. Lower the level of
liquid assets greater the risk of inability to meet the current
obligations. The risk of technical insolvency can be minimised by
maintaining a high proportion of liquid assets. The longer the
maturity schedule, the more costly is likely to be financing and vice versa.

Johnson (1970) used various ratios to examine the firm failures
in 1970. He found that the liquidity ratios are powerful predictors of
the failures of firm.

Chakravarthy et al., (1973), made a study on the use of operating
cycle concept for a better management of working capital. They
examined the working capital as a segment of capital employed. They
found that excessive working capital employed not only impairs the
firms' profitability but also result in production interruptions and
inefficiencies. The study also proved that though a very small
working capital would yield immediate higher return it would reduce
the earning capacity of the fixed capital employed.

Bierman Chopra and Thomas (1975) made an attempt to inter-
relate the working capital and capital structure decisions. They found
that the use of working capital is not only a cushion to avoid run – off
but also to offset sales. They concluded that working capital
influenced the earnings of firms.
Nunn (1981) used the PIMS database to examine why some product lines have low working capital requirements, while other product lines have high working capital requirements. In addition, Nunn was interested in "permanent" rather than temporary working capital investment as he used data averaged over four years. Using factor analysis, he identified factors associated with the production, sales, competitive position, and industry reinforcing the role of industry practices on firm practices.

Carpenter & Johnson (1983), in their study on "The association between working capital policy and operating risk" that there was no linear relationship between the level of current assets and revenue.

Srivastav & Yadav (1986) developed a multiple discriminant model in determining the effectiveness of working capital management using four ratios and a sample test of 40 textile companies, of which 20 were 'not effective' (sick) and 20 were 'effective' (healthy). They empirically found that their model correctly classified 95 percent of the companies in the sample.

Soenen (1993) investigated the relationship between the net trade cycle as a measure of working capital and return on investment in U.S. firms. The results of chi-square test indicated a negative relationship between the length of net trade cycle and return on assets. Furthermore, this inverse relationship between net trade cycle and return on assets was found different across industries depending on the type of industry. In order to validate the results found by Soenen on large sample and with longer time period, Jose et al examined the
relationship between aggressive working capital management and profitability of US firms using Cash Conversion Cycle (CCC) as a measure of working capital management where a shorter CCC represents the aggressiveness of working capital management. The results indicated a significant negative relationship between the cash conversion cycle and profitability indicating that more aggressive working capital management is associated with higher profitability.

Lamberson (1995) studied how the working capital position of small firms responded to changes in the level of economic activity. Fifty small firms were studied for the time period 1980-1991. The findings from this study showed that liquidity increased slightly for these firms during economic expansion with no noticeable change in liquidity during economic slowdowns. Their investment in working capital, as measured by the inventory to total assets and current assets to total assets ratios, were relatively stable over the time period of this study. He suggested that working capital management practices of small firms in response to changes in economic activity did not follow commonly held expectations.

Peel and Wilson (1996) in their study on WC and FM practices in the small firm sector concluded efficient working capital management influenced both profitability and liquidity. They suggested that smaller firms should adopt formal working capital management routines in order to reduce the probability of business closure, as well as to enhance business performance.
Pandey and Parera (1997) provided an empirical evidence of working capital management policies and practices of the private sector manufacturing companies in Sri Lanka. The information and data for the study were gathered through questionnaires and interviews with chief financial officers of a sample of manufacturing companies' lists on the Colombo Stock Exchange. They found that most companies in Sri Lanka have informal working capital policy and company size has an influence on the overall working capital policy (formal or informal) and approach (conservative, moderate or aggressive). Moreover, company profitability has an influence on the methods of working capital planning and control.

In the same year Smith and Begemann (1997) emphasized that those who promoted working capital theory shared that profitability and liquidity comprised the salient goals of working capital management. The problem arose because the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute returns. He further evaluated the association between traditional and alternative working capital measures and return on investment (ROI), specifically in industrial firms listed on the Johannesburg Stock Exchange (JSE). The problem under investigation was to establish whether the more recently developed alternative working capital concepts showed improved association with return on investment to that of traditional working capital ratios or not. Results indicated that there were no significant differences amongst the years with respect to the independent variables. The results of their stepwise regression corroborated that total current liabilities divided by funds flow accounted for most of
the variability in Return on Investment (ROI). The statistical test results showed that a traditional working capital leverage ratio and current liabilities divided by funds flow displayed the greatest associations with return on investment. Well-known liquidity ratios such as the current and quick ratios registered insignificant associations. The comprehensive liquidity index indicated significant associations with return on investment.

Shin and Soenen (1998) highlighted that efficient Working Capital Management was very important for creating value for the shareholders. The way working capital was managed had a significant impact on both profitability and liquidity. The relationship between the length of Net Trading Cycle, corporate profitability and risk adjusted stock return was examined using correlation and regression analysis, by industry and capital intensity. They found a strong negative relationship between lengths of the firm’s net-trading Cycle and its profitability. In addition, shorter net trade cycles were associated with higher risk adjusted returns.

Chundawat & Bhanwat (2000) analysed the working capital management practices in IDBI assisted tube and tyre companies for the period 1994 – 1998 by using some relevant ratios and concluded that working capital management of IDBI assisted companies were more effective than the industry as a whole.

Narasimhan and Murty (2001) stressed on the need for many to improve their return on capital employed (ROCE) by focusing on
some critical areas such as cost containment, reducing investment in working capital and improving working capital efficiency.

Saravanan (2001) made a study on working capital management in ten selected non-banking financial companies. For this he employed several statistical tools on different ratios to examine the effective management of working capital. He concluded that the sample firms had placed more importance upon the liquidity aspect compared to that of the profitability.

Prasad (2001) conducted a research study on the working capital management in paper industry. His sample consisted of 21 paper mills from large, medium and small scale for a period of 10 years. He reported that the chief executives properly recognised the role of efficient use of working capital on liquidity and profitability, but in practice they could not achieve it. The study also revealed that fifty percent of the executives followed budgetary method in planning working capital and working capital management was inefficient due to sub-optimum utilisation of working capital.

Dulta (2001) observed in his study that the various components of working capital position had worsened continuously during the period of study (1991 to 1998). In the same year Deloof (2001) discussed that most firms had a large amount of cash invested in working capital. It could therefore be expected that the way in which working capital was managed would have a significant impact on profitability of those firms. Using correlation and regression tests he found a significant negative relationship between gross operating
income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. On the basis of these results, he suggested that managers could create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability was consistent with the view that less profitable firms waited longer to pay their bills.

Ghosh and Maji (2003) made an attempt to examine the efficiency of working capital management of the Indian cement companies during the period 1992/93 – 2001/02. They concluded that the Indian Cement Industry as a whole did not perform remarkable well during this period.

Eljelly (2004) elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminated the risk of inability to meet short-term obligations and avoid excessive investment in these assets. The relation between profitability and liquidity was examined. He study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affected profitability. The size variable was found to have significant effect on profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in the Saudi sample examined. Secondly the study also revealed that
there was great variation among industries with respect to the significant measure of liquidity.

Filbeck and Krueger (2005) highlighted the importance of efficient working capital management by analysing the working capital management policies of 32 non-financial companies in USA. They found that working capital practices were significantly different over time.

Bardia (2006) presented a comparative study on liquidity trends of SAIL and TISCO. The statistical methods such as index number, time series analysis, regression and chi-square test had been employed in this study to examine the liquidity position of both the companies. He analyzed the working capital and sales relationship based on working capital turnover ratio using regression.

In the Pakistani context, Rehman (2006) investigated the impact of working capital management on the profitability of 94 Pakistani firms listed at Islamabad Stock Exchange (ISE) during the period 1999 – 2004. He studied the impact of the different variables of working capital management including average collection period, inventory turnover in day, and average payment period and cash conversion cycle on the net operating profitability of firms. He concluded that there was a strong negative relationship between working capital ratios and profitability of firms.

Afza and Nazir (2007) investigated the relationship between the aggressive and conservative working capital policies for seventeen industrial groups with a large sample of 263 public limited companies
listed at Karachi Stock Exchange during the period of 1998 – 2003. Using ANOVA and LSD test, the study found significant differences among their working capital investment and financing policies across different industries. Moreover, rank order correlation confirmed that these significant differences were remarkably stable over the period of six years of study. They found a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies using regression. They further investigated the impact of the degree of aggressiveness of working capital policies on profitability.

Teruel and Solano (2007) studied the effects of working capital management on the profitability of a sample of small and medium-sized Spanish firms. They collected data of 8,872 small to medium-sized enterprises (SMEs) covering the period 1996 – 2002. They tested the effects of working capital management on the profitability. They concluded that the profitability of firms will be improved by reducing inventories by decreasing the collection period. Shortening the cash conversion cycle.

Singh and Shishir Pandey (2008) attempted to study the working capital components and the impact of working capital management on profitability of Hindalco Industries Limited. They made an attempt to study the correlation between liquidity, profitability and profit before tax (PBT) of Hindalco. The study was based on secondary data collected from annual reports of Hindalco for the study period 1990 to 2007. The accounting ratio, percentage and coefficient of correlation and regression were used to analyze the data.
Pradeep Singh (2008) argued that a firm which neglected the management of inventories would have to face serious problems relating to long-term profitability and may fail to survive. With the help of better inventory management, a firm could reduce the levels of inventories to a considerable degree without any adverse effect on production and sales. He evaluated the impact of the size of inventory on working capital through inventory turnover ratio and working capital turnover ratios. By using the data of Indian Farmers Fertilizer Cooperative Limited (IFFCO) and national Fertilizer Ltd. (NFL). He concluded that the size of inventory directly affected the working capital of the firms under his study.

2.3. STUDIES ON PROFITABILITY

Kumar and Nagesh (1990) examined the determinants of profit margins in the case of affiliates of multinational enterprises and local firms in forty-three Indian manufacturing industries to seek explanations of the superior performance of the former. The empirical analysis found support for the proposition that multinational enterprises and local firms constituted different strategic groups in an industry and that the former as a group enjoyed greater protection from mobility barriers. Multinational enterprises appeared to enjoy persistent advantage over their local counterparts especially in knowledge (both technology and human skill) intensive industries. Agarwal (1991) evaluated the impact of policy changes since 1981–82 on profitability and growth of firms in the Indian automobile manufacturing industry using Tobin’s q as a measure of profitability.
The study found no evidence to show that firms had made supernormal profits. Profitability was found to be explained mainly by age of the firms, vertical integration, diversification and industry policy as dummy variables. Important determinants of the growth of firms were found as of industry policy dummy variable, gross retained profits and expansion of capacities.

Paul Geroski, et.al., (1993) examined two types of effect. They were 1. Innovations had a direct but transitory effect on profitability associated with the production of a new product or the use of a new process, and innovations had an indirect effect on how firms could generate profits because they signalled the transformation of a firm’s internal capabilities associated with the process of innovating. Positive direct effects on the order of ((sterling)) 2.1 million spread over seven years were observed for a sample of 721 large, quoted U.K. firms. More fundamentally, large indirect effects were also observed, not least because innovating firms seemed to be more able to benefit from pullovers and were relatively insensitive to adverse macroeconomic shocks. These indirect effects associated with the transformation of a firm’s internal capabilities may be as much as three times larger than the direct effects of innovation.

Krishnan (1995) examined the impact of productivity on profitability of the selected transport corporations in Tamil Nadu during the period 1982 to 1993. He found that the capital productivity and labour productivity influenced profitability in most of the transport corporations under his study.
Mukesh Chaudhry and Arjun Chatrath (1995) investigated the determinants of profitability of U.S. commercial banks in the 1970s and 1980s. They examined that the banks, depending on their size, may need to exercise greater control over a defined set of variables in order to maximize profits and/or minimize costs. Further, the study provided some indirect evidence of economies of scale/scope in certain aspects of the banks on loan and investment portfolios.

Loretta and Mitchell (1997) studied the relationship between costs and profitability of lending by commercial banks. They estimated cost and profit functions to examine how loan rate smoothing affects a bank’s costs and profits. They concluded that loan rate smoothing was associated with lower costs and lower profits.

McDonald and James Ted (1999) examined the determinants of the profitability of Australian manufacturing firms by analyzing a unique firm-level data set of firm performance over the period 1984 – 93. The panel nature of the data permitted the estimation of dynamic profitability models over the business cycle to test both the persistence and cyclicality of firm profitability. Econometric results suggested that lagged profitability was a significant determinant of current profit margins and that industry concentration was positively related to firm profit margins. Also, profit margins were found to be pro cyclical in concentrated industries but counter-cyclical in less concentrated industries.

Demirguc and Huizinga, (1999) in their article used bank-level data of 80 countries during the period 1988 – 95 and concluded
that bank characteristics, macroeconomic conditions, explicit and implicit bank taxation, deposit insurance regulation, overall financial structure, and institutional indicators factors were the main determinants of profitability.

Simon Fenny (2000) used a sample of 180,738 tax entities from the full Australian Tax Office (ATO) tax return data to investigate into the determinants of profitability. The sample of Australian tax entities were averaged over the period 1994/95 to 1996/97. The analysis was carried out at a 3 digit ANZSIC level of classification. Using simple regression techniques the analysis suggested that size of entity was positively related to profitability but industry characteristics have limited importance in explaining entity profitability. Concentration, defined at a 4 digit level, was positively and significantly related to entity profitability in 27 percent of Australian 3 digit industries, while a significant negative association was found in 18 percent of the industries. There was some evidence that barrier to entry had the positive relationship with entity profitability as dictated by theory when proxied by the industry capital intensity but not when proxied by the minimum efficient scale or industry trademark intensity. There was strong evidence that the market share of an entity has a U–shaped relationship with profitability.

Edward Nathan Wolff (2000) found that the profitability in the United States had been rising since the early 1980s and by 1997 it was at its highest level since its post-war peak in the mid 1960s and the profit share was at its highest point. He examined the role of the change in the profit share on capital intensity as well as structural
change on movements in the rate of profit between 1947 and 1997. Its recent recovery was traced to a rise in the profit share in national income, a slowdown in capital-labour growth on the industry level, and employment shifts to relatively labour-intensive industries.

Darko Tipuric (2002) examined the relationship between firm size and profitability, size is measured in terms of either total revenue or number of employees. He found that there was strong correlation between profit and size in terms of total revenue. Whereas a weak correlation existed between profit and size in terms of number of employees. He concluded that profit was directly related to the firm size. That is, the larger the firm, the larger the profits and vice versa.

Sujit (2003) concluded that market power and efficiency enhances profitability of Indian cement industry. He pointed out that efficiency through innovation reduces the cost and increases the profitability.

Ruchi Trehan and Niti Soni (2003) found that the significance of appraising the efficiency of banking industry became more of a necessity than a luxury in the modern world of financial services as it made possible to separate those banks that performed well from those that performed poorly. Their analysed the operating efficiency and its relationship with profitability in the public sector banking industry in India.

Chirwa (2003) investigated the relationship between market structure and profitability of commercial banks in Malawi using time series data between 1970 and 1994 in his study. He used time-series
techniques of co integration and error – correction mechanism to test the collusion hypothesis and determined whether a long-run relationship exists between profits of commercial banks and concentration in the banking industry. He found that positive relationship exists between concentration and performance.

Murekezi, Abdoul Karim (2003) analysed the profitability of processing and marketing of coffee in Ruwanda and concluded that strategic planning and high quality enhances the profitability.

Jacob Bikker and Bos (2003) examined the profitability of banking industry and concluded that market power and efficiency influenced profitability.

John Goddard and Philmolyneux (2005) in their study on “The profitability of European Banks – a cross section and dynamic panel analysis examined the determinates of profitability using variable such as size, market share, gearing ratio, and liquidity ratio. They concluded that liquidity ratio and market share enhanced the profitability, whereas the gearing ratio and size of firm did not enhance the profitability.

Athan and Delis (2005) examined the determinants of bank profitability using bank-specific factors, industry – specific factors and macro economic factors. They concluded that bank-specific factors except size as well as macro – economic factors like business cycle influence that bank profitability.
Ngo (2006) investigated the relation between bank capital and profitability and concluded that no significant exist relationship between capital and profitability.

Gour C. Saha and H. Paul (2006) examined some commonly hypothesised relationships between balance sheet composition and profitability, firm size and industry in the context of the Thai manufacturing corporate sector. These relationships were examined prior to, during, and after the 1997 economic crisis. Decomposition measures (DM) were used to represent balance sheet composition. It was found that average DM during the crisis were higher than the pre and post-crisis for all industries, because of the deterioration of the firms financial conditions during the period. Average DM was significantly higher for the less profitable firms in all three sub-periods, with more pronounced effect during-crisis. Larger average DM was also seen in the durable good industries in all three sub periods because the firms in those industries had more volatility in demand. Small firms were seemed to have larger average DM prior to and after the crisis. However, the effect of size was not significant during the crisis, indicating that firms of all sizes were similarly affected.

Christian Kalheofer, Rania Salem (2008) analyzed current problems of the Egyptian banking sector, which was dominated by public banks. The reported problems included a massive proportion of non-performing loans in the bank’s credit portfolios as well as significant profitability problems, especially in the public banks. Some empirical data is gathered using a bank-specific return on
equity-analysis. Results supported the reported problems and also showed some structural weaknesses of both public and private banks.

Siva Reddy Kalluru, Sham Bhat K.(2008) examined the determination of profitability determinants in Indian commercial banks. They measured bank profitability in terms of return on total assets (ROTA) and return on capital employed (ROCE). They concluded that the profitability of banks was affected not only by bank’s own characteristics but also by industry structural variables and macroeconomic variables. Bank ownership and political parties in power also played a vital role in determining bank profitability in India. However, the determinants of bank profitability varied significantly across the banks groups.

Corrado Di Guilmi (2008) examined a relationship between financial structure and profits. He concluded that relative proportions of debt and equity financing appeared to influence the profitability with a different degree for each nation.

2.4. CONCLUSION

The reviews of the those studies provide a solid base and give us ideas regarding working capital and its components as well as profitability and its variables. They also give us the results and conclusions of those researches already concluded on the same area for different countries and environment from different aspects. On the basis of these research done in different countries, we have developed our other methodology for research.
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