

Study on Working Capital management methodology in different Small Scale Industries

Sandhya Tiwari, Dr. Mini Amit Arrawatia

Abstract— The term working capital means the funds required for financing the duration of the operating cycle in an accounting year. Working capitals are used for regular business operations including purchase of raw materials, maintaining the production, investment in stocks and stores, payment of direct and indirect expenses and amount to be maintained in the form of cash. It represents funds with which business is carried on. The working capital is not necessarily refers to the cash available. It may be a form of near cash assets, or little further from cash.

The analytical approach of working capital management occupies an important place in financial management. Working capital management is very important part of overall financial management. The management of working capital is analogous with the management of short term financial liquidity.

In this paper a survey on Working Capital management for small scale Industries has been carried out. Importance of working capital management and its planning and organization for industries has been elaborated. Risk Return implication and Regulation of Bank credit for working capital management has been discussed. Various working capital management technique is studied based on literature survey.

Index Terms— working capital, liquidity, hypothesis, uncertainty, risk management, enterprises

I. INTRODUCTION

The term working capital means the funds required for financing the duration of the operating cycle in an accounting year. Working capitals are used for regular business operations including purchase of raw materials, maintaining the production, investment in stocks and stores, payment of direct and indirect expenses and amount to be maintained in the form of cash. It represents funds with which business is carried on. The working capital is not necessarily refers to the cash available. It may be a form of near cash assets, or little further from cash.

Manuscript received Jan 02, 2017

Sandhya Tiwari, Department of Management & Commerce, Faculty of Management and Humanities, Jayoti Vidyapeeth Womens University, Jaipur, India, 07389359270

Dr. Mini Amit Arrawatia, Department of Management & Commerce, Faculty of Management and Humanities, Jayoti Vidyapeeth Womens University, Jaipur, India

The analytical approach of working capital management occupies an important place in financial management. Working capital management is very important part of overall financial management. The management of working capital is analogous with the management of short term financial liquidity. A lack of liquidity implies a lack of freedom of choice as well as constraints on management's freedom of movement. If lack of liquidity continues to be a problem, it may ultimately lead to insolvency and bankruptcy. Thus, working capital management is linked with the continuous existence of an enterprise. Regardless of excellent products, effective marketing, efficient production, and wise fixed assets management.

II. CONCEPT OF WORKING CAPITAL MANAGEMENT

An enterprise demands fixed capital as well as working capital. The working capital is the capital necessary to conduct everyday operations of a business. Working capital is, therefore, a broader term and there are chances of misunderstanding it. Broadly speaking, it is taken either as the total assets or as the excess of current assets over current liabilities.

Working capital is defined in the Annual Survey of Industries to include "stock of materials, stores, by-products, fuels, amount available in hand and bank and the algebraic sum of sundry creditors as represented by:

- (a) Outstanding payment e.g. rent, interest, dividend and wages.
- (b) Purchases of goods and services;
- (c) Short term loans and advances and sundry debtors comprising amounts due to factory on account of sales of goods and services and advances towards purchase and tax payment."

In fact, there are two concept of working capital, viz., gross and net. Gross working capital refers to the sum of current assets represented by inventories, cash, receivables and marketable securities. Net working capital can be defined as the available current assets over current liabilities. Gross working capital and total current assets are thus synonymous. The need for the net concept of working capital arises due to the fact that the gross concept fails to consider current liabilities.

It is to be noted that both the concepts are of equal importance. The gross concept emphasizes that excessive investment in current assets affects profitability, as idle investment yields nothing. Similarly inadequate investment in

current assets makes it difficult to carry out the day to day operations of the business smoothly.

The criterion to choose a concept depends on the purpose for opting that. Thus, of the two concepts, the net concept is more useful, if the purpose is to find out the liquidity position of an enterprise. On the other hand if the purpose is to find out whether the total current assets of an enterprise are being put to maximum use, the gross concept is preferable. It is suggested by Husband and Dockray, in order to do away with this difficulty of terminology is that the net concept of working capital may be referred to as a "qualitative" aspect and the total current assets concept as the 'quantitative' aspect.

Current assets have a short life span. For a lumbering or winemaking business, however a period longer than one year should be the currentness standard. Thus, currentness varies with the nature of business. In addition to all these, the fixed assets of one company may be the current assets of another, e.g. electric company, but part of the fixed assets of a refrigerating and cold storage company. However, the current assets are used to indicate cash, inventories and other assets which are expected to be realized, sold or consumed during the operating cycle of a business generally in a year.

Working capital management is not only concerned with the management of total current assets and the excess of current assets over current liabilities but it is concerned with all kinds of problems that arise in attempting to manage the current assets, current liabilities and the inter-relationship that exists between time. The meaning of „working capital“ should not be allowed to limit either the gross or net concept of working capital only.

Working capital management is concerned with all decisions and acts that influence the size and effectiveness of working capital. It can also be defined as that aspect of financial management which is concerned with "the safeguarding and controlling of the firm's current assets and the planning for sufficient funds to pay current bills. In simple terms, working capital management may be defined as the management of current assets and the sources of their financing.

III. IMPORTANCE OF WORKING CAPITAL MANAGEMENT

One can probably attribute a large number of business failures in recent years to the inability of financial managers to plan properly and control current assets and current liabilities of their respective firms. Shortage of funds for working capital as well as uncontrolled over-expansion of working capital has caused many businesses to fail and in less severe cases, have stunted their growth. Specially, in small firms, working capital management may be the factor that decides success or failure in larger firms. An efficient working capital management can significantly affect the firm's risk, return and share price.

Working capital in an enterprise is like blood in life. An enterprise cannot be run without appropriate working capital. Not only working capital is enough, but also there should be

proper management of working capital, because it is very important for the success of an enterprise and for maximizing the value. Cash and financial budgets, are the major tools for management of working capital.

The inefficient working capital management will lead to loss of profits in the short run but it will ultimately lead to the downfall of the enterprise in the long run. A deeper understanding of the importance of working capital can lead not only to material savings in the economical use of capital but can also assert in furthering the ultimate aim of business. An excessive investment in working capital will lower the rate of return while inadequate investment will hamper the solvency position and growth, thereby affecting the smooth operation of business.

However, stock of the importance of working capital for a business enterprise can be taken only when certain criteria of business efficiency are evolved and the role of working capital vis-à-vis fixed capital is adjudged in relation to them. A reasonable rate of return on investment and a good reputation in the business world can be suggested as the two meaningful criteria for viewing the efficiency of a business enterprise. In earning a reasonable rate of return the functional, complementary, proportional and technical roles of working capital play a great part.

IV. PLANNING AND ORGANIZATION OF WORKING CAPITAL MANAGEMENT

Management of working capital efficiently involves careful determination of working capital requirements and formulation of methods for meeting them. A large number of factors influence the working capital needs of firms. The most important of these are: the nature and size of the business, manufacturing cycle, business fluctuations, production policy, dividend policy, credit policy, credit availability, growth and expansion activities, profit level changes and operating efficiency. It is the consonance with these factors that the working capital requirements are planned. An effective device for working capital planning is the preparation of working capital forecast, the main objective of which is to secure an effective utilization of the proposed investment there in. a working capital forecast is prepared to determine the amount of working capital required to finance a particular level of business operations. The exercise involves complicated calculations embracing every aspect of business activity.

The item usually taken into consideration while preparing a working capital forecast designed to estimate the requirements of working capital are: costs to be incurred on material, wages and overheads obtained from cost records; duration for which raw materials are to remain in stock before they are issued for production purpose; length of the production sale cycles; period of credit allowed to debtors and period of credit availed from creditors, and time lag involved in the payment of wages and overhead expenses. The budgetary approach in determining the working capital requirements include planning of cash budget which is an integral part of the overall budgetary process in any firm.

Working capital requirements are planned keeping in view the operating cycles.

V. WORKING CAPITAL MANAGEMENT: RISK-RETURN IMPLICATION

There is some sort of risk return trade off in financial decision. But this is more so in the working capital decisions. To take an example, the lower the cash balances held on hand, the higher would be the expected return. But at the same time the enterprise will have to assume the greater risk of running out of cash. The higher return is due to the less money tied up in non-income earning assets and the higher risk is due to the possibility of shortage of cash in the event of urgency.

Thus, a low liquidity is associated with high rates of return. However, it does not mean that low liquidity is in the best interest of shareholders. No doubt, profitability has to do with the overall goal of shareholder's wealth maximization but liquidity has to do with ensuring that the enterprise is able to satisfy all of its current financial obligations. The liquidity goal is, therefore, closely connected with management of working capital, that is, decisions concerning short term assets and liabilities, while the profitability goal reflects both short term and long term decisions-making.

The extremely high and low liquidity policies are not at all favorable as the required rate of return or cost of capital is higher than the expected rate of return. Hence, only those liquidity policies are favorable where the expected rate of return is higher than required rate of return or cost of capital.

VI. REGULATION OF BANK CREDIT FOR WORKING MANAGEMENT

Traditionally the banking sector has been a ready source of finance for meeting working capital requirements of industry. The cash credit mechanism has been the principal device of financing working capital needs. Ready availability of finance in a convenient form led to over-borrowing by industry and deprivation of other sectors.

The RBI has issued guidelines and directives from the banking sectors on the basis of recommendations given by the Tandon committee and the Chore committee in order to bring a measure of discipline among industrial borrowers and redirect credit to other sources.

TANDON COMMITTEE Recommendations

The Reserve Bank of India set up in 1974 a study group to frame guide lines for follow up of bank credit under the chairmanship of P. L. Tandon.

The study group reviewed the system of working capital financing and identified its major shortcoming as follows:

1. The cash credit system of lending wherein the borrower can draw freely within limits decided by the banker hinders sound credit planning on the part of the banker.

2. The security-oriented approach to lending favored borrowers with strong financial resources it lead to diversion of funds, borrowed against the security of current assets, for financing fixed assets.
3. Relatively simple access to working capital finance methodology led to large inventory levels with industry.
4. Working capital finance provided by banks supposed to be short term in nature, tended to be, in practice, a long-term source of finance.

For the regulating bank credit, the study group made comprehensive recommendations which have been made by and large accepted by the Reserve Bank of India. These recommendations relate to:-

(A). Norms for inventories and receivables:

It is suggested for major industries. These norms have been based, inter alia, on company finance studies made by the Reserve Bank of India, process period in different industries, discussions with industry experts and feedback received on the interim report.

1. For raw materials (including stores and other materials used in process of manufacture):- maximum stock should not be more than by 2-3/4 times consumption of raw material in the industry in a month.
2. For stock in process (work-in-process):- should not be more than by half of the cost of production of a month.
3. For finished goods: - it should not be more than by the two times of cost of goods sold of a month.
4. For receivable: - it should not be more than by 1-1/4 times of a month sales.

The norms suggested may not be viewed as rigid or inflexible. Under certain circumstances like bunched receipt of raw materials, this may be permitted.

(B) Quantum of permissible bank finance:

Three methods have been suggested for determining the maximum permissible amount of bank finance:-

1. 75 percent of excess of current assets over non-bank current liabilities.
2. 75 percent of current assets as reduced by non-bank current liabilities.
3. 75 percent of excess of current assets over core current assets as reduced by non-bank current liabilities.

In method 3 the core current assets means a part of current assets which should be permanent component of working capital. The study group suggested that borrowings in excess of what is permissible under the first method should be converted into a working capital term loan repaid over a period of time. The borrowers should gradually move to the third method.

(C) Style of leading

The study group suggested that overall credit limit may be bifurcated into a loan component, which would represent the minimum level of borrowing through the year and a demand

cash credit, which would take care of the fluctuating requirements, both to be reviewed annually. The demand cash credit should be charged a slightly higher interest rate than the loan component. This approach will give the borrower an incentive for good planning.

(D) Information and reporting system

The study group suggested comprehensive information and reporting system which seeks to:

1. Induce the borrower to plan his credit need carefully and maintain a greater discipline in its use.
2. Promote free flow of information between the borrower and the banker so that latter can monitor the credit situation better.
3. Ensure that credit is used for intended purposes.

The study group suggested submitting quarterly information regarding profit or loss, current assets and current liabilities.

CHORE COMMITTEE

The Reserve Bank of India constituted in April, 1979 a six member working group under the chairmanship of K. B. Chore to review the system of cash credit and credit management policy by banks. The committee report as considered by the R.B.I. is as follows:-

1. The net surplus cash generation of established industrial unit should be utilized partly at least for reducing borrowing for working capital purpose. In assessing maximum permissible bank finance, bank should adopt the second method of lending, recommended by the Tandon study group, according to which the borrower's contribution from owned funds and term finance to meet the working capital requirements should be equal to at least 25 percent of the total current assets..
2. The existing system of lending (cash credit, loan and bill) should continue but wherever possible the use of cash credit should be supplemented by loans and bills. However, there should be scrutiny of the operation of the cash credit accounts at least once in a year.
3. Bifurcation of cash credit in demand loan for corporation and fluctuation cash credit component and to maintain a differential interest rate between these two components is withdrawn.
4. Banks should appraise and fix separate limits for the "normal nonpeak level" and for the "peak level" credit requirements for all borrowers in excess of Rs. Ten lakhs indicating the relevant periods.
5. Drawl of funds to be regulated through quarterly statements within the sanctioned limit, borrower should intimate his need of funds in advance.
6. Borrowers should be discouraged from frequent seeking ad-hoc or temporary limits in excess of sanctioned limits to meet unforeseen contingencies. Additional interest of one percent should normally be charged for such limits.
7. Advances against the book-debts should be converted to bills wherever possible and at least 50 percent of the cash credit limit utilized for financing purchase

of raw material inventory should also be changed to this bill system

VII. DETERMINING THE FINANCIAL MIX

A study of determining the financing mix also gives an idea of risk-return trade off to be achieved in working capital management. Deciding how current liabilities should be used to finance current assets is one of the most important decisions concerning working capital management. It is necessary to understand here, that short term funds are not available to finance fixed assets. Short term lenders generally do not lend funds for financing long term assets. The problem is, therefore, whether to limit the use of long term funds to finance long term assets only or they should be used to finance current assets in addition to long term assets. Determining an appropriate financing mix is again a matter of risk-return trade off. A number of financing mixes is available to a financial manager ranging from low-liquidity, high-liquidity policies to high-liquidity, low liquidity policies and his job is to pick the one that properly balances profitability and liquidity. Out of them, three approaches to financing mixes of different extremes are described in the following manners:

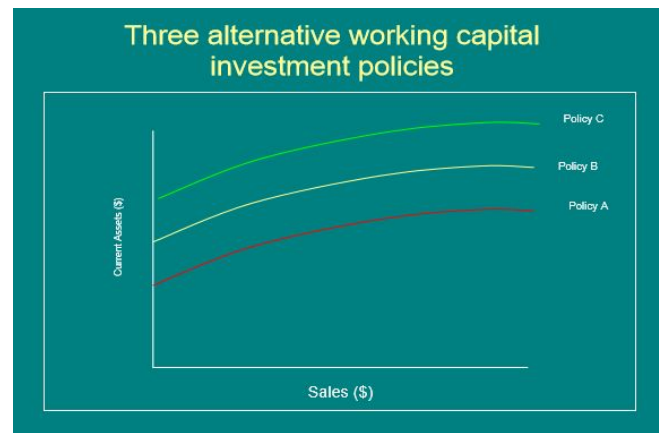


Figure 1: Three alternative working capital investment policies

- Policy C represents conservative approach
- Policy A represents aggressive approach
- Policy B represents a moderate approach
- Optimal level of working capital investment
- Risk of long-term versus short-term debt

Aggressive approach

The first approach refers to the aggressive financing mix which is quite risky leading to high profitability and low liquidity. The approach would be to finance seasonal requirements by long term sources. Under this approach, the risk of technical insolvency would be high as the net working capital is at a lower level as compared to second and third approaches. The profitability in this approach would be high as the cost of funds is low.

Conservative approach

The second approach refers to a financing mix which is less risky leading to low profitability and high liquidity. The

approach would be to finance all funds required from long term funds. The risk is considered low here because even if the total requirement of funds actually turns out to be more, the enterprise can expect to meet it from short term sources easily as it has not been using them.

Moderate approach

This third approach refers to a financing mix which is neither too risky (as in the first approach) nor least risky (as in the second approach). It lies in between a low-liquidity, high-liquidity case and a high-liquidity low liquidity case. In other words, the third approach aims at achieving a trade-off between profitability and liquidity. The actual trade off in real life would, however, depend on management's capability to take risk. Most enterprises try to achieve some kind of liquidity – profitability trade off in determining the financing mix.

From the above discussion, it is clear that higher the liquidity, lower the risk, leading to lower profitability and vice versa. Working capital management, therefore, ultimately aims at achieving some sort of a risk-return trade off. Moreover, this kind of trade off would fundamentally be a matter of management's attitude towards risk.

VIII. SOURCES OF WORKING CAPITAL

The conventional generalizations relating to the financing of working capital suggest that an amount equal to the basic lowest of current assets required should be financed from long term sources and that only seasonal needs of working capital should be financed from short term sources. It is obvious that such an arrangement helps to keep the cost of working finance to the lowest for an enterprise and gives a rise to its rate of return on the total funds employed. Viewed this, the source of working finance can be classified into the following two categories:

1. Permanent sources of working finance
2. Current sources of working finance

1. Permanent sources of working finance

Permanent sources of working finance are both external and internal. Among the internal ones, the most important are accumulated surplus and depreciation funds. Accumulated surplus represent the industrial profits of a business enterprise. Such surplus violently fluctuates with the changes in the rate of corporate taxation and dividend policy. So far depreciation is concerned; it constitutes a part of the cost of business operations and consequently represents an expense that is chargeable against earnings. Unlike most expenses, however, it does not represent a cash outlay and is referred to as the non-cash expense. As a result of this, an enterprise gathers capital in an amount equal to the depreciation provision charged against the earnings. The purpose of this accumulation is to provide for the ultimate replacement of the depreciating asset.

2. Current sources of working finance

The current sources of working finance may be external or internal. Among the internal sources, a reference may be made to tax provisions and unpaid dividends. Taxes are payable at stated intervals subsequent to the receipt of income on which they are assessed. An enterprise, therefore, has the chances of using the funds kept under tax provision during the interval. Similarly, the payment of dividends may be so timed as to suit the requirements of the working finance, particularly when they are enhanced by seasonal factors. But these sources can be tapped at only occasional times and that too with the limitation in regard of their inflexibility and their non-availability in the initial stages of the operation of an enterprise.

IX. EXCESS OR INEQUATE WORKING CAPITAL

The concern should maintain a sound working capital position. It should have adequate working capital to run its business operations smoothly & efficiently. Both excessive as well as inadequate working capital positions are dangerous from the concerns point of view. Excessive working capital means idle funds lying in the concern which earn no profits for the concern.

X. ADEQUATE OF WORKING CAPITAL

Working capital should be adequate because of the following reasons:

- (a) It protects the business from the adverse effects of shrinkage in the values of current assets.
- (b) It is possible to pay all the current obligations promptly and to take advantage of cash discounts.
- (c) It ensures to a greater extent the maintenance of a company's credit standing and make available for such emergencies, as strikes, floods, fires etc.
- (d) It permits the carrying of inventories at a level that will enable a business to function satisfactorily the needs of its customers.
- (e) It enables a company to extend favorable credit terms to customers.
- (f) It enables a company to operate its business more efficiently because there is delay less obtaining the materials, etc. because of credit difficulties.
- (g) It enables a business to win short periods of depression smoothly.
- (h) There may be operating losses or decreased retained earnings.
- (i) There may be excessive non-operating or extraordinary losses.
- (j) The management may fail to obtain funds from other sources for purpose of expansion.
- (k) There may be an unwise dividend policy.
- (l) The management may fail to accumulate necessary funds for meeting debentures on maturity.
- (m) There may be bigger investment in inventories and fixed assets due to increased prices.

The dangers of excessive working capital are as follows:

- (a) It results in unnecessary accumulation of inventories, thus inventory mishandling, waste, theft and losses increase.

- (b) Excessive working capital makes management complacent which degenerates into managerial inefficiency.
- (c) It is a hint of defective credit policy and slack collection period. Consequently, higher incidence of bad debts results, which adversely affects profits.
- (d) Tendencies of accumulating inventories make speculative profits grow. This may tend to make dividend policy liberal and difficult to cope with in future when the firm is unable to get speculative profits.

Inadequate working capital has the following dangers:

- (a) It indicates growth. It becomes difficult for the concern to undertake profitable projects because of non-availability of the working capital funds.
- (b) It becomes difficult to implement operating plans and to achieve the concern's profit target.
- (c) The concern loses its reputation when it is not in a good position to honour its short term obligations. As a result, the firm faces tight credit terms.
- (d) Operating inefficiencies creep in when it becomes difficult even to meet day-to-day commitments.
- (e) Fixed assets are not efficiently utilized for the lack of working capital funds. Thus, the rate of return on investment slumps.
- (f) Paucity of working capital funds renders the firm unable to avail attractive credit opportunities.

The management should maintain a right amount of working capital on a continuous basis. Only after a proper functioning of the business operations will be ensured. Sound financial, statistical and quantitative techniques, supported by judgment of working capital needed at different time periods.

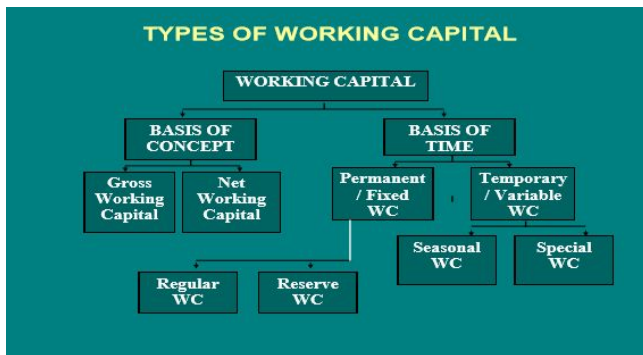


Figure 2: Types of working capital

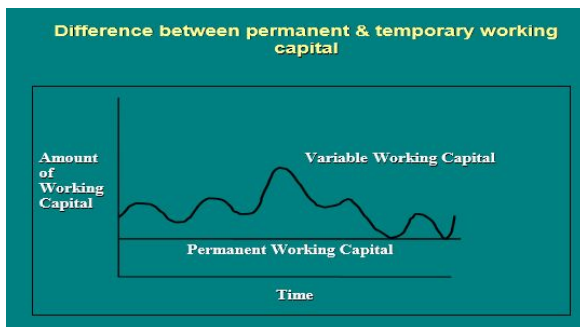


Figure 3: Difference between permanent & temporary working capital

XI. FINANCING WORKING CAPITAL: A NEW APPROACH

The distinction between variable and permanent components of current assets may be difficult to make in practice but it is neither illusory nor unimportant. Short-term financing for long term needs is dangerous. A profitable firm may not be in a position to meet its current obligations if funds borrowed on a short-term basis have become tied up in permanent assets.

A hedging method to financing discusses that apart from current assets/investments or long term debts, a firm would show no current borrowings. Short term borrowing would be paid off with surplus cash. As the variable current assets of a firm would go up, it would borrow on a short term basis, again paying the borrowings off as surplus cash generated. Permanent funds requirements would be financed by long term debt and equity (externally raised or internally generated).

XII. TECHNIQUE OF WORKING CAPITAL ANALYSIS

Working capital balance is measured from the financial data of corporate balance sheet. Usually, the working capital balance of a spending concern has a positive value but often uses of working capital exceed the sources of working capital in certain periods. A study of cause of changes that takes place in the balances from time to time is necessary. The following techniques are generally used in the analysis of working capital.

1. Working capital trend analysis
2. Working capital ratios
 - Current ratio
 - Acid test ratio or quick ratio
 - Ratio of funded debt to working capital
 - Ratio of current liabilities to tangible net worth
 - Turnover of working capital
3. Operating cycle approach
4. Fund flow analysis
5. Other techniques

Working capital trend analysis

It involves the analysis of percentage relationship that each item bears to the same in the base year. Trend percentage of working capital discloses changes in working capital data between specific periods and it make possible for the analyst to form an opinion as to whether favorable tendencies are reflected by the data.

Working capital ratios

The working capital ratio analysis can be used by management as a means of checking the efficiency with which working capital is being used in an enterprise. The most important ratios for working capital management which

are generally used for the analysis of working capital are as follows:

- **Current ratio:** It is also called as working capital ratio. The current ratio knows the relationship between total current assets and total current liabilities, i.e. cash or those expected to be converted into cash within a year and those to be paid within the same period. The year in each case is naturally the maximum period, many of the current assets and liabilities being considered at any one time may change their form frequently during the course of single period.

Current assets normally include cash in hand or at bank, securities related to market, short-term high quality investments, bills receivable, prepaid expenses, etc. while current liabilities are composed of sundry creditors, bills payable etc.

The current ratio is computed by dividing current assets by current liabilities. While interpreting this ratio, consideration should be given to the proportion of the various components of current assets. A current ratio of 2:1 has long been considered generally satisfactory but indiscriminate use of this standard is unsound. This ratio varies from industry to industry and within the same industry from firm to firm and within the same company from season to season. One should be careful to determine acceptable standards within the industry in which the company operates.

- **Acid test ratio or quick ratio**

Current ratio was developed many decades ago as a means of deriving a rough idea of the liquidity of a firm therefore a second testing device for the working capital position has been evolved by the name of quick ratio or acid test ratio.

Quick ratio, as it is sometimes called, is concerned with the relationship between liquid assets and liquid liabilities to assist the information given by the current ratio. In many times of business, a concern whose current assets consists of large inventory, can easily become technically, if not actually, insolvent within a very short period of time.

- **Ratio of funded debt to working capital**

The ratio shows the relationship between the long term liabilities and working capital. It is computed to measure the financial soundness of business enterprise. A funded debt means all debts which will become due for repayment after a year from the date of balance sheet.

This ratio is calculated by dividing the long term debts by the amount of net working capital. It helps in examining creditor's contribution to the liquid assets of the firm. Funded debt does not exceed working capital in most industrial concerns. If net

working capital is less than funded debt, difficulty in meeting financial obligations is likely to arise over the long run. A lower ratio represents a high coverage of funded debt in the form of working capital and that means greater security of funds.

- **Ratio of current liabilities to tangible net worth**

The ratio shows the relationship between the current liabilities and funds invested by the owner. The funds permanently invested by the owners serve as caution for credit temporarily extended to the business. Accordingly higher the ratio, greater is the risk of short term creditors, so from the point of view of creditors, it is in their interest if this ratio is lower, as it ensure that the debts will be paid off as and when they become due.

- **Turnover of working capital**

The turnover of working capital indicates the rate of working capital utilization. It shows how efficiently the working capital is being utilized. A high turnover of working capital indicates better utilization of working capital while the low ratio shows the reverse position. But sometimes a high ratio may be on account of the existence of inadequate working capital. As such it is difficult to establish a norm but working capital turnover should neither be very high nor very low. This ratio is obtained by dividing sales by working capital. But in case of financial institutions, in place of sales the figures of loan disbursed should be taken.

Operating cycle approach

The operating cycle of an organization begins with the acquisition of raw materials and ends with the collection of receivables. It can be divided into four stages:

1. Raw materials and stores storage stage
2. Work-in-process stage
3. Finished goods inventory stage
4. Debtors/receivables collection stage

The duration of the operating cycle is equal to the sum of the time interval of each of these stages less the credit period allowed by the suppliers of the firm. This period can be calculated by following formula:

$$O = R + W + F + D - C \quad (1)$$

Where, O = Duration of operating cycle

R = Raw materials and stores storage period

W = Work-in-process period

F = Finished goods storage period

D = Debtors collection period

C = Creditors payment period

The component of the operating cycle may be calculated as follows:

$$R = \frac{\text{Average stock of raw materials and stores}}{\text{Average consumption of raw materials and stock per day}}$$

$$W = \frac{\text{Average inventory of work - in - process}}{\text{Average consumption of raw materials and stock per day}}$$

$$F = \frac{\text{Average finished goods inventories}}{\text{Average cost of goods sold per day}}$$

$$D = \frac{\text{Average books – debt/ receivables}}{\text{Average credit sales per day}}$$

$$C = \frac{\text{Average trade creditors}}{\text{Average Credit purchases per day}}$$

The operating cycle is helpful to determine the requirement of working capital and control over it. The following formula may be used to forecast the working capital requirements for the next year:

working capital requirements =

$$\text{Estimated cost of goods sold} \times \frac{\text{Operating cycle}}{360} + \text{Desired Cash}$$

Fund flow analysis

By this technique we analyze the changes in working capital components between two balance sheet dates. This analysis shows the movement of funds into the firm's current accounts from external sources such as stock holders, creditors and customers. It shows the flow of funds to meet firm's obligations, to retire stock, to pay dividends.

Fund flow analysis helps in answering questions like:-

- Have capital investments been supported by long term financing?
- Have short-term sources of financing been used to support capital investments?
- How much funds have been generated from the operations of the business?
- How much the firm has relied on external sources of financing?
- What major components of funds have been made during the year?
- Has the liquidity position of the firm improved?

Other techniques

Some other techniques like cash flow analysis and statistical methods mean, range, moving averages, index numbers, co-relation, and regression analysis of time series can also be used for analyzing working capital.

XIII. CONCLUSION

In this paper a survey on working capital management for small scale industries has been studied. Importance of working capital management and its planning and organization for industries has been elaborated. Risk Return implication and Regulation of Bank credit for working capital management has been discussed. Various working capital management techniques is studied based on literature survey.

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