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Working Capital Management

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WORKING CAPITAL MANAGEMENT

INTRODUCTION

Financial Management is that managerial activity which is concerned with the planning and controlling of the firms financial resources.

Financial management focuses on finance manager performing various tasks as **Budgeting, Financial Forecasting, Cash Management, Credit Administration, Investment Analysis, Funds Management**, etc. which help in the process of decision making.

Financial management includes management of assets and liabilities in the long run and the short run.

The management of fixed and current assets, however, differs in three important ways: Firstly, in managing fixed assets, **time** is very important; consequently discounting and compounding aspects of time element play an important role in capital budgeting and a minor one in the management of current assets. Secondly, the large holdings of current assets, especially **cash**, strengthen firm's liquidity position but it also reduces its overall profitability. Thirdly, the level of fixed as well as current assets depends upon the expected **sales**, but it is only the current assets, which can be adjusted with sales fluctuation in the short run.

Here, we will be focusing mainly on management of current assets and current liabilities.

Management of current assets needs to seek an answer to the following question:

1. **Why should you invest in current assets?**
2. **How much should be invested in each type of current assets?**
3. **What should be the proportion of short term and long-term funds to finance the current assets?**
4. **What sources of funds should be used to finance current assets?**

CONCEPT OF WORKING CAPITAL

Working Capital Management is the process of **planning** and **controlling** the level and mix of current assets of the firm as well as financing these assets. Specifically, Working Capital Management

requires financial managers to decide what quantities of cash, other liquid assets, accounts receivables and inventories the firm will hold at any point of time.

Working capital is the capital you require for the working i.e. functioning of your business in the short run.

Gross working capital refers to the firm's investment in the current assets and includes cash, short term securities, debtors, bills receivables and inventories.

It is necessary to concentrate on the fact that the investment in the current assets should be neither excessive nor inadequate.

Working Capital requirement of a firm keeps changing with the change in the business activity and hence the firm must be in a position to strike a balance between them. The financial manager should know where to source the funds from, in case the need arise and where to invest in case of excess funds.

The dangers of excessive working capital are as follows:

1. It results in unnecessary accumulation of inventories. Thus the chances of inventory mishandling, waste, theft and losses increase
2. It is an indication of defective credit policy and slack collection period. Consequently higher incidences of bad debts occur which adversely affects the profits.
3. It makes the management complacent which degenerates into managerial inefficiency
4. Tendencies of accumulating inventories to make speculative profits grow. This may tend to make the dividend policy liberal and difficult to cope with in future when the firm is unable to make speculative profits.

The dangers of inadequate working capital are as follows:

1. It stagnates growth .It becomes difficult for the firms to undertake profitable projects for non-availability of the WC funds.
2. It becomes difficult to implement operating plans and achieve the firms profit targets
3. Operating inefficiencies creep in when it becomes difficult even to meet day-to-day commitments.
4. Fixed assets are not efficiently utilized. Thus the rate of return on investment slumps.
5. It renders the firm unable to avail attractive credit opportunities etc.

6. The firm loses its reputation when it is not in position to honor its short-term obligations. As a result the firm faces a tight credit terms.

Net working capital refers to the difference between the current assets and the current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year and include creditors, bills payable, bank overdraft and outstanding expenses.

When current assets exceed current liabilities it is called **Positive WC** and when current liabilities exceed current assets it is called **Negative WC**.

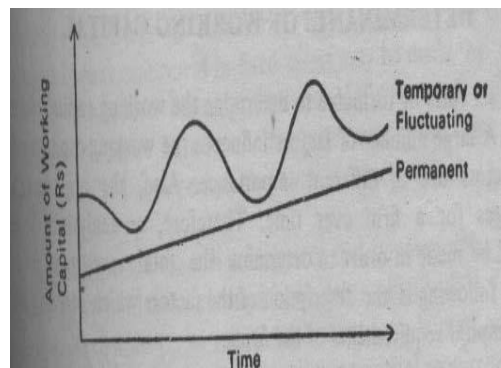
The Net WC being the difference between the current assets and current liabilities is a qualitative concept. It indicates:

- **The liquidity position of the firm**
- **Suggests the extent to which the WC needs may be financed by permanent sources of funds**

It is a normal practice to maintain a current ratio of 2:1. Also, the quality of current assets is to be considered while determining the current ratio. On the other hand a weak liquidity position poses a threat to the solvency of the company and implies that it is unsafe and unsound. The Net WC concept also covers the question of judicious mix of long term and short-term funds for financing the current assets.

Permanent and variable working capital:

The minimum level of current assets required is referred to as permanent working capital and extra working capital needed to adapt to changing production and sales activity is called temporary working capital.



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NEED AND IMPORTANCE OF WORKING CAPITAL MANAGEMENT

The **importance** of working capital management stems from the following reasons:

1. Investment in current assets represents a substantial portion of the total investment.
2. Investments in current asset and the level of current liabilities have to be geared quickly to change in sales, which helps to expand volume of business.
3. Gives a company the ability to meet its current liabilities
4. Take advantage of financial opportunities as they arise.

A firm needs WC because the production, sales and cash flows are not instantaneous. The firm needs cash to purchase raw materials and pay expenses, as there may not be perfect matching between cash inflows and outflows. Cash may also be held up to meet future exigencies. The stocks of raw materials are kept in order to ensure smooth production and to protect against the risk of non-availability of raw materials. Also stock of finished goods has to be maintained to meet the demand of customers on continuous basis and sudden demand of some customers. Businessmen today try to keep minimum possible stock as it leads to blockage of capital. Goods are sold on credit for competitive reasons. Thus, an adequate amount of funds has to be invested in current assets for a smooth and uninterrupted production and sales process. Because of the circulating nature of current assets it is sometimes called **circulating capital**.

FACTORS INFLUENCING THE WORKING CAPITAL REQUIREMENT

All firms do not have the same WC needs .The following are the factors that affect the WC needs:

1. **Nature and size of business:** The WC requirement of a firm is closely related to the nature of the business. We can say that trading and financial firms have very less investment in fixed assets but require a large sum of money to be invested in WC. On the other hand Retail stores, for example, have to carry large stock of variety of goods little investment in the fixed assets.

Also a firm with a large scale of operations will obviously require more WC than the smaller firm.

The following table shows the relative proportion of investment in current assets and fixed assets for certain industries:

Current assets (%)	Fixed assets (%)	Industries
10-20	80-90	Hotel and restaurants
20-30	70-80	Electricity generation and Distribution
30-40	60-70	Aluminum, Shipping
40-50	50-60	Iron and Steel, basic industrial chemical
50-60	40-30	Tea plantation
60-70	30-40	Cotton textiles and Sugar
70-80	20-30	Edible oils, Tobacco
80-90	10-20	Trading, Construction

2. **Manufacturing cycle:** It starts with the purchase and use of raw materials and completes with the production of finished goods. Longer the manufacturing cycle larger will be the WC requirement; this is seen mostly in the industrial products.
3. **Business fluctuation:** When there is an upward swing in the economy, sales will increase also the firm's investment in inventories and book debts will also increase, thus it will increase the WC requirement of the firm and vice-versa.
4. **Production policy:** To maintain an efficient level of production the firm's may resort to normal production even during the slack season. This will lead to excess production and hence the funds will be blocked in form of inventories for a long time, hence provisions should be made accordingly. Since the cost and risk of maintaining a constant production is high during the slack season some firm's may resort to producing various products to solve their capital problems. If they do not, then they require high WC.

5. **Firm's Credit Policy:** If the firm has a liberal credit policy its funds will remain blocked for a long time in form of debtors and vice-versa. Normally industrial goods manufacturing will have a liberal credit policy, whereas dealers of consumer goods will a tight credit policy.
6. **Availability of Credit:** If the firm gets credit on liberal terms it will require less WC since it can always pay its creditors later and vice-versa.
7. **Growth and Expansion Activities:** It is difficult precisely to determine the relationship between volume of sales and need for WC. The need for WC does not follow the growth but precedes it. Hence, if the firm is planning to increase its business activities, it needs to plan its WC requirements during the growth period.
8. **Conditions of Supply of Raw Material:** If the supply of RM is scarce the firm may need to stock it in advance and hence need more WC and vice-versa.
9. **Profit Margin and Profit Appropriation:** A high net profit margin contributes towards the WC pool. Also, tax liability is unavoidable and hence provision for its payment must be made in the WC plan, otherwise it may impose a strain on the WC.

Also if the firm's policy is to **retain the profits** it will increase their WC, and if they decide to pay their dividends it will weaken their WC position, as the cash will flow out. However this can be avoided by declaring bonus shares out of past profits. This will help the firm to maintain a good image and also not part with the money immediately, thus not affecting the WC position.

Depreciation policy of the firm, through its effect on tax liability and retained earning, has an influence on the WC. The firm may charge a high rate of depreciation, which will reduce the tax payable and also retain more cash, as the cash does not flow out. If the dividend policy is linked with net profits, the firm can pay fewer dividends by providing more depreciation. Thus depreciation is an indirect way of retaining profits and preserving the firms WC position.

OPERATING CYCLE AND CASH CYCLE

All business firms aim at maximizing the wealth of the shareholder for which they need to earn sufficient return on their operations. To earn sufficient profits they need to do enough sales, which

further necessitates investment in current assets like raw material etc. There is always an operating cycle involved in the conversion of sales into cash.

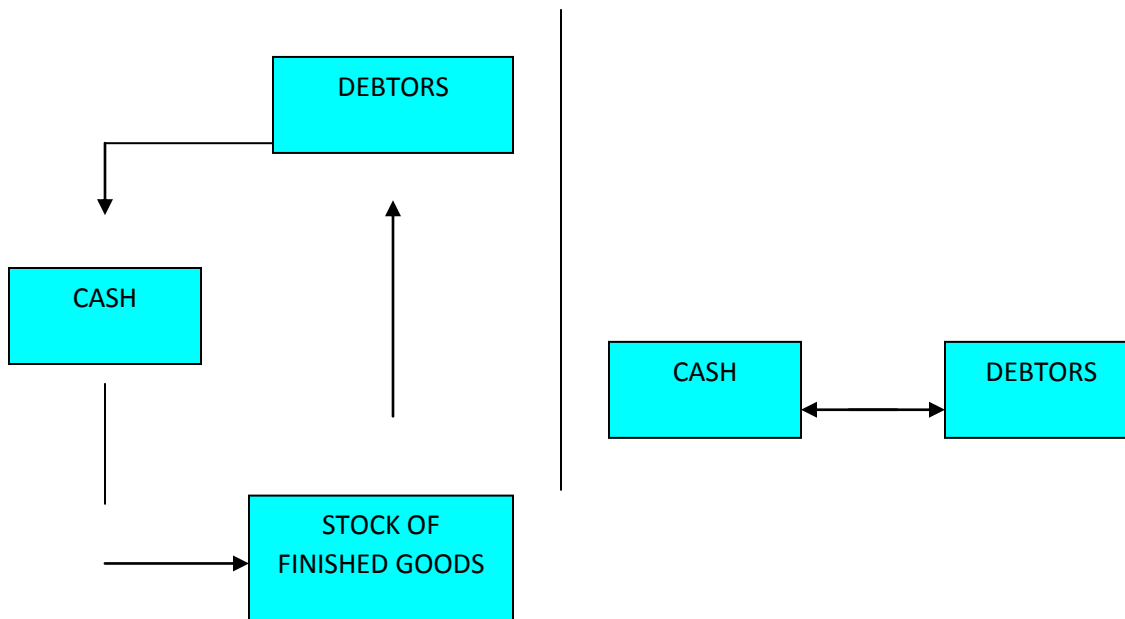
The duration of time required to complete the following sequences of events in case of a manufacturing firm is called the operating cycle:-

1. **Conversion of cash into raw material**
2. **Conversion of raw material into WIP**
3. **Conversion of WIP into FG**
4. **Conversion of FG into debtors and bills receivable through sales**
5. **Conversion of debtors and bills receivable into cash**

Each component of working capital namely inventory, receivables and payables has two dimensions time and money. When it comes to managing working capital - **Time Is Money**. Therefore, if cash is tight, consider other ways of financing capital investment - loans, equity, leasing etc. Similarly, if you pay dividends or increase drawings, these are cash outflows remove liquidity from the business.

If you	Then
<ul style="list-style-type: none"> • Collect receivables (debtors) faster 	You release cash from the cycle
<ul style="list-style-type: none"> • Collect receivables (debtors) slower 	Your receivables soak up cash
<ul style="list-style-type: none"> • Get better credit from suppliers 	You increase your cash resources
<ul style="list-style-type: none"> • Shift inventory (stocks) faster 	You free up cash
<ul style="list-style-type: none"> • Move inventory (stocks) slower 	You consume more cash

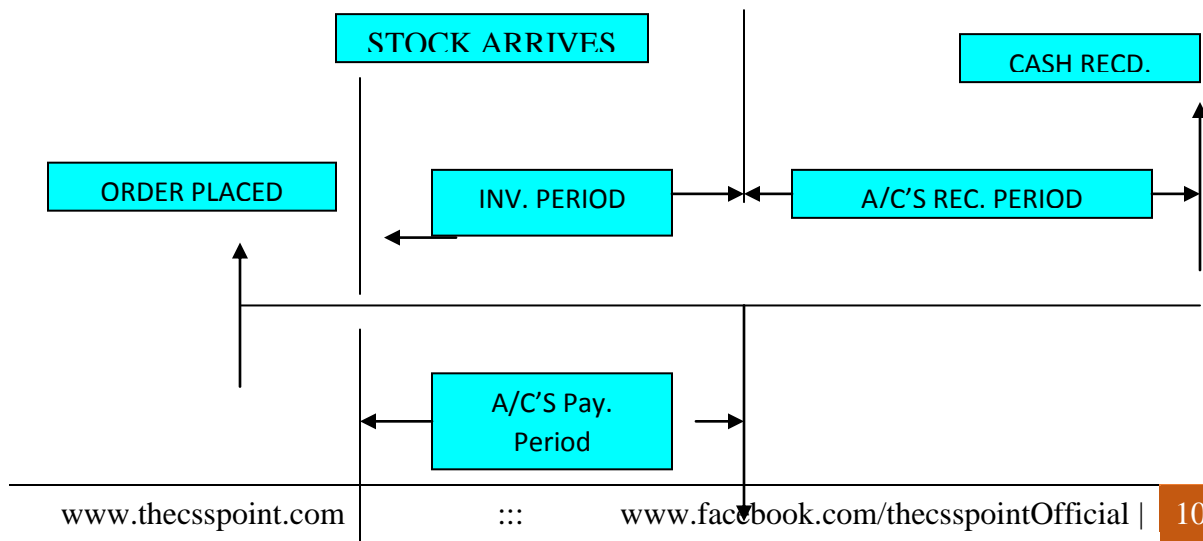
Operating Cycle Of Non Manufacturing Firms / Operating Cycle Of Service And Financial Firms

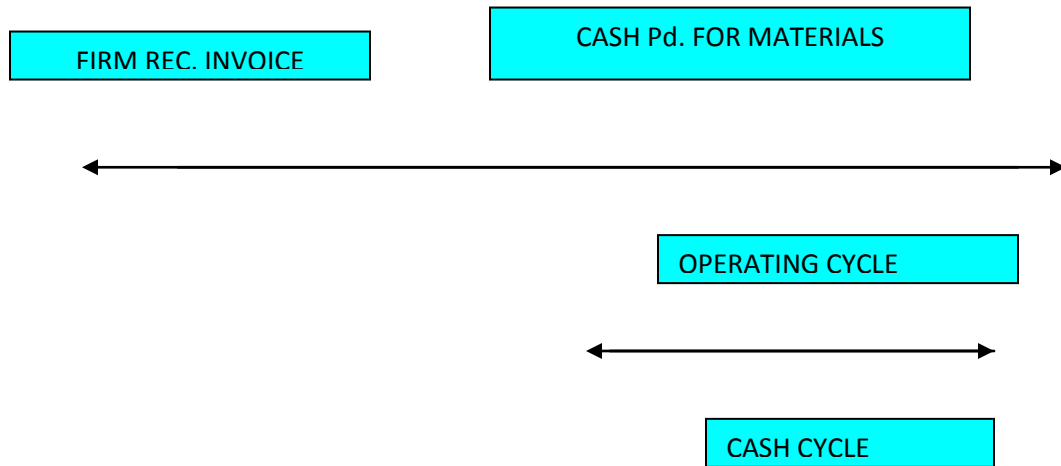


Operating cycle of non-manufacturing firm like the wholesaler and retail includes conversion of cash into stock of finished goods, stock of finished goods into debtors and debtors into cash. Also the

operating cycle of financial and service firms involves conversion of cash into debtors and debtors into cash.

Thus we can say that the time that elapses between the purchase of raw material and collection of cash for sales is called operating cycle whereas time length between the payment for raw material purchases and the collection of cash for sales is referred to as cash cycle. The operating cycle is the sum of the inventory period and the accounts receivables period, whereas the cash cycle is equal to the operating cycle less the accounts payable period.





Cash cycle

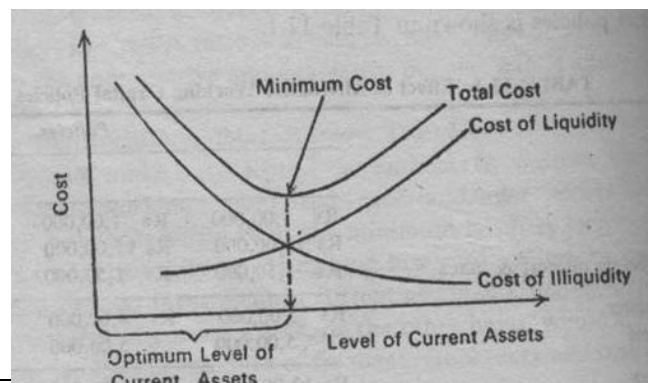
FINANCING CURRENT ASSETS

LEVEL OF CURRENT ASSETS REQUIRED

An important WC policy decision is concerned with the level of investment in current assets. Under a **flexible policy or conservative policy** the investments in current assets is high. This means that the firm maintains a huge balance of cash and marketable securities carries a large amount of inventories and grants generous amount of credit to customers, which leads to high level of debtors.

Under a **restrictive policy or aggressive policy** the investment in current assets is low.

Determining the optimum level of current assets involves a trade off between costs that rise and fall with current assets. The former are referred as **carrying costs** and the latter as **shortage costs**. Carrying costs are mainly in the nature of cost of financing a higher level of



current assets. Shortage costs are mainly in the form of disruption in production schedule, loss of sale, and loss of customer goodwill, etc. Normally the total cost curve is flatter around the optimal level. Hence it is difficult to precisely find the optimal level.

CURRENT ASSETS FINANCING POLICY

After establishing the level of current assets, we further need to decide what mix of long-term capital and short-term debt should the firm employ to support its current assets. Three kinds of financing can be distinguished; **long term financing, short term financing and spontaneous financing.**

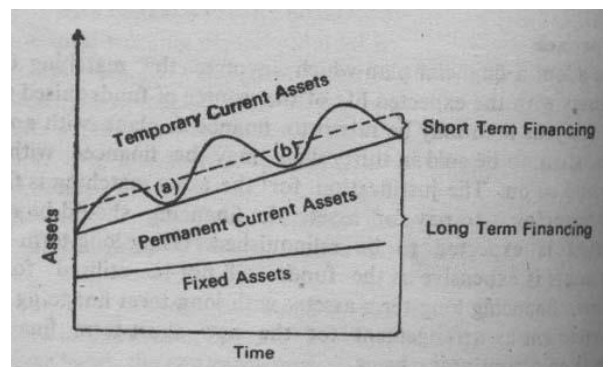
Sources of long term financing are shares, debentures, preference share, retained earnings and debt from financial institution, sources of short term finance include bank loans, commercial papers and factoring receivables, whereas, spontaneous source of finance refers to the automatic sources of short term funds like creditors, bills payable and other outstanding expenses.

The firms to finance its WC requirements may use one of the following three strategies:

- **Strategy A:** Only long-term sources are used to finance its entire WC requirements. When the WC requirements are less than the peak level the balance is invested in liquid assets like cash and marketable securities.

However it leads to inefficient management of funds as you may have to pay high interest or you could invest it in other places where you could earn good returns.

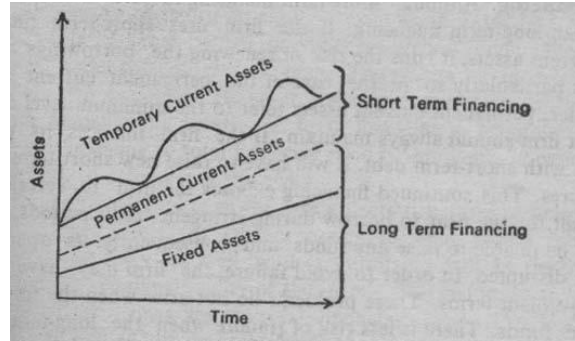
- **Strategy B:** Long-term financing is used to meet the fixed asset requirements, permanent WC requirement and a portion of fluctuating WC requirement. During seasonal upswings, short-term financing is used, during seasonal downswings surplus is invested in liquid assets.



This is also called the **conservative approach.**

This is the middle route, where at least you know that you normally wouldn't fall short of WC. However you could still make better use of your funds.

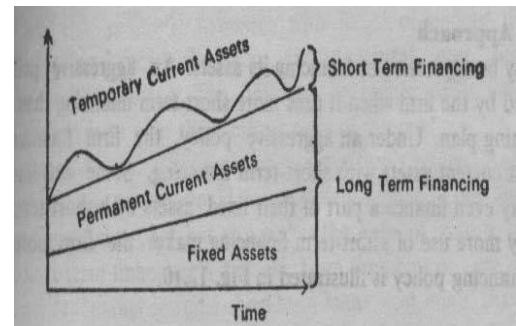
- **Strategy C:** Long-term financing is used to meet the fixed asset requirements and permanent WC requirement while short term financing is used to finance the fluctuating needs.



This is a little riskier strategy, as you may not always be able to arrange for WC finance as and when you need and hence may cause a considerable loss in terms of money, reputation, etc.

Under the **aggressive approach**, the firm finances a part of its permanent current assets with short term financing. Sometimes they may even finance a part of their fixed assets with short-term sources.

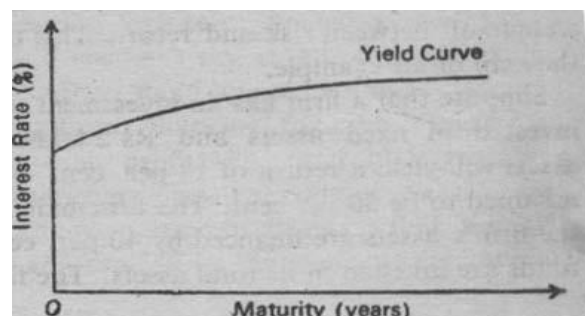
Matching Approach / Hedging Approach: It involves matching the expected life of assets with the expected life of the source of funds raised to finance assets ex: a ten year loan may be used to finance machinery with an expected life of ten years.



Using long-term finance for short-term assets is expensive, as the funds will not be fully utilized. Similarly, financing long term assets with short term financing is costly as well as inconvenient as arrangement for the new short term financing will have to be made on a continuing basis. However, it should be noted that exact matching is not possible because of the uncertainty about the expected life of assets.

COST OF FINANCING:

In developed countries it has been observed that the rate of interest is related to the maturity of the debt. This relationship between the maturity of debt and its cost is called the term **structure of interest rates**. The



curve related to it is called the **yield curve**, which is generally upward sloping. Longer the maturity period, higher is the rate of interest. However it is opposite in India.

The **liquidity preference theory** justifies the high rate of interest on debt with long maturity period. No moneylender would want to take high risk of giving loan, which will be paid after a long period of time, and hence, the only way to induce him or her to give loan would be to pay high interest rate, thus, short term financing is desirable from the point of view of return.

Flexibility: It is easier to repay short-term loans and hence if the firm were of the opinion that it would require lesser funds in near future, it would be better to go in for short-term sources.

Risk Of Financing: Long- term sources though expensive are less risky as you are always assured of at least the minimum funds required by you, on the other hand you may not always be able to get finance from short-term sources which in turn could hamper the functioning of your business. Also though the return on equity is always higher in case of aggressive policy, it is much more costly.

CONCLUSION

The relative liquidity of a firm's assets structure is measured by the current ratio. The greater this ratio the less risky as well a less profitable the firm will be and vice-versa. Also the **relative liquidity** of a firm's financial structure can be measured by short- term financing to total financing ratio. The lower this ratio, less risky as well a less profitable the firm will be and vice-versa.

Thus, in shaping its WC policy, the firm should keep in mind these two dimensions; **relative assets liquidity (level of current assets) and relative finance liquidity (level of short- term financing)**.

CASH REQUIRED FOR WORKING CAPITAL

For estimating the actual cash requirement you may follow the following two-step procedure:

1. **Estimate the cash cost of various current assets requirement:** The cash cost of a current asset is:

Value of current asset

- (-) Profit element, if any, included in the value.
- (-) Non-cash charges like depreciation, if any, included in the value.

2. **Deduct the spontaneous current liabilities from the cash cost of current assets:** A portion of the cash cost of current assets is supported by trade credit and accruals of wages on expense, which may be referred to as spontaneous current liabilities. The balance left after such deduction has to be arranged from other sources

In 1997, the RBI permitted banks to evolve their own norms for assessment of the Working Capital requirements of their clients.

CASH FLOW BASED COMPUTATION OF WORKING CAPITAL

- Drawing up cash flow statements (monthly or quarterly) for the past few years clearly indicate the seasonal and secular trend in utilization of working capital.
- The projections drawn up by the entrepreneur may then be jointly discussed with the banker as modified in light of the past performance and the banker's opinions.
- The peak cash deficit is ascertained from the cash budgets.
- The promoter's share for such requirement maybe mutually arrived at by the banker and the borrower with the balance requirement forming the Bank financed part of Working Capital.

Cash flow based computation of working capital requirement has been recommended by the RBI for assessment of working capital requirement permitting the banks to evolve their own norms for such assessment

However the reluctance to provide the **cash budgets** thereby revealing additional information to the banks, has led to even larger companies shying away from Cash Budget method of assessing Working Capital. Consequently Cash Budget method is currently prevalent mainly in case of **seasonal industries, construction sector as well as other entities whose operations are linked to projects.**

MEANING AND IMPORTANCE

Cash is the money, which the firm can disburse immediately without any restriction. Near- cash items like marketable securities or bank time deposits are also included in cash.

Cash management is concerned with the managing of:

- i. Cash flows into and out of the firm
- ii. Cash flows within the firm and
- iii. Cash balances held by a firm at a point of time.

Cash management is important because:

- i. Cash is used for paying the firms obligation
- ii. Cash is an unproductive asset, you need to invest it somewhere
- iii. It is difficult to predict cash flows accurately as there can not be perfect coincidence between the inflows and outflows of cash
- iv. Though cash constitutes the smallest portion of total current assets, management's considerable time is devoted in managing it.

The obvious aim of the firm these days is to keep its cash balance minimum and to **invest** the released cash funds in profitable opportunities.

In order to overcome the uncertainty about predictability of cash flow, the firms should evolve strategies regarding the following four facets of cash management:

- i. **Cash planning:** Cash surplus or deficit for each period should be planned; this can be done by preparing the cash budget.
- ii. **Managing the cash flows:** The firm should try to accelerate the inflows of cash flow while trying to minimize the outflows.
- iii. **Optimum cash level:** The cost of excess cash and the dangers of cash deficit should be matched to determine the optimum level.
- iv. **Investing idle cash:** The firm should about the division of such cash balances between bank deposits and marketable securities.

In order to manage cash you need to manage the sources of additional working capital, which includes the following:

- Existing cash reserves
- Profits (when you secure it as cash!)
- Payables (credit from suppliers)
- New equity or loans from shareholders
- Bank overdrafts or lines of credit
- Long-term loans
- If you have insufficient working capital and try to increase sales, you can easily overstretch the financial resources of the business. This is called **overtrading**.

WHY DOES A FIRM NEED CASH?

- Transaction motive:** firm needs cash for transaction purpose.
- Precautionary motive:** The magnitude and time of cash inflows and outflows is always uncertain and hence the firms need to have some cash balances as a buffer.
- Speculative motive:** All firms want to make profits from fluctuations in commodity prices, security prices, interest rates and foreign exchange rates .A cash rich firm is in a better position to exploit such bargains. Hence, the firm with such speculative leanings may carry additional liquidity.

The firm must decide the **quantum of transactions and precautionary balances** to be held, which depends upon the following factors:

- The expected cash inflows and outflows based on the cash budget and forecasts, encompassing long/short range cash needs of the firm.
- The degree of deviation between the expected and actual net cash flow.
- The maturity structure of the firm's liabilities.
- The firm's ability to borrow at a short notice, in case of emergency.
- The philosophy of management regarding liquidity and risk of insolvency
- The efficient planning and control of cash.

CASH PLANNING

Cash planning is a technique to plan for and control the use of cash. The forecast may be based on the present operations or the anticipated future operations.

Normally large, professionally managed firms do it on a daily or weekly basis, whereas, medium size firms do it on a monthly basis. Small firms normally do not do formal cash planning, in case they do it; it's on a monthly basis.

As the firm grows and its operation becomes complex, cash planning becomes inevitable for them.

CASH FORECASTING AND BUDGETING:

A cash budget is a summary statement of the firms expected cash inflows and outflows over a projected time period.

It helps the financial manager to determine the future cash needs, to arrange for it and to maintain a control over the cash and liquidity of the firm. If the cash flows are stable, budgets can be prepared monthly or quarterly, if they are unstable they can be prepared daily or weekly.

Cash budgets are helpful in:

- Estimating cash requirements
- Planning short term financing
- Scheduling payments in connection with capital expenditure
- Planning purchases of materials
- Developing credit policies
- Checking the accuracy of long- term forecasts.

Short Term Forecasting Methods

Two most commonly used methods of short- term forecasting are:

- i. The receipt and payment method
- ii. The adjusted net income method

The receipt and payment method is used for forecasting limited periods, like a week or a month, where as, the adjusted net income method is used for longer durations. The cash flows can be

compared with budgeted income and expense items if the receipts and payment approach is followed. On the other hand the adjusted net income method is appropriate in showing the company's working capital and future financing needs.

- i. **Receipts and Payment Method:** It simply shows the timing and magnitude of expected cash receipts and payments over the forecast receipts.

ITEMS	BASIS OF ESTIMATION
Cash sales	Estimated sales and its division between cash/credit sales
Collection of a/c's receivables	Estimated sales, its division between cash and credit sales, and collection pattern
Interest and dividend receipts	Firms portfolio of securities and return expected from the portfolio
Increase in loans/deposits and issue of securities	Financing plan
Sale of assets	Proposed disposal of assets
Cash purchases	Estimated purchases, its division between cash/credit purchases, and terms of credit purchases.
Payment for purchases	Estimated purchases and its division between cash/credit purchases.
Wages and salaries	Manpower employed and wages and salaries structure
Manufacturing expense	Production plan
General, administration and selling expenses	Administration and sales personnel and proposed sales promotion and distribution expenditure.
Capital equipment purchases	Capital expenditure budget and payment pattern associated with capital equipment purchases
Repayment of loans and retirement of securities	Financing plan

The most difficult part is to anticipate the amounts as well as the time when the receipts will be collected, the reason being that the projection of cash receipts relies heavily on sales forecasts and the guesses regarding the time of payment by the customer.

Evaluation of the method: I

Its main **advantages** are:

- ✓ Provides a complete picture of expected cash flows
- ✓ Helps to keep a check over day-to-day transactions

Its main **drawbacks** are:

- ✗ Its reliability is impaired by delays in collection or sudden demand for large payments and other similar factors.
- ✗ It fails to provide a clear picture regarding the changes in the movement of working capital, especially those related to the inventories and receivables.

ii. **Adjusted net income method:** It involves the tracing of working capital flows. It is also called the sources and use approach. Its two objectives are:

- ✓ To project company's need for cash at some future date.
- ✓ To show if the company can generate this money internally, and if not, how much will have to be either borrowed or raised in the capital market.

It generally has three sections; sources of cash, uses of cash and adjusted net balance .In preparing the adjusted net income forecasts items like net income, depreciation, taxes dividends etc can be easily determined from the company's annual operating budget. Normally it is difficult to find WC changes, especially since the inventories and receivable pose a problem.

Its main **advantages** are:

- ✓ Helps to keep a control on working capital
- ✓ Helps anticipate financial requirements.

Its main **disadvantages** are:

- ✗ It fails to trace the flow of cash.
- ✗ Not useful in controlling day-to-day transaction

Long-Term Cash Forecasting

They are generally prepared for a period of two to five years and hence provide a broad picture of firms financing needs and availability of investible surplus in future .Its major uses are:

- Indicate future financial needs

- Helps evaluate proposed capital projects
- Improve corporate planning

Long-Term Forecasting Methods

The adjusted net income method can be used here also. Long term forecasting not only reflects more accurately the impact of any recent acquisitions but also foreshadows financial problems that new additions may pose for the firm.

To enhance the efficiency of cash management, collection and payment must be properly monitored. In this respect the following will be helpful.

- **Prompt Billing:** It ensures early remittances. Also the firm has high control in this area and hence there is a sizeable opportunity to free up the cash. To tap this opportunity the treasurer should work with the controller and others in:
 - Accelerating invoice data
 - Mailing bills promptly
 - Identifying payment locations
- **Expeditious Collection Of Cheques:** Two important methods for expediting the collection process are:
 1. Concentration banking: The important features of concentration banking are:
 - A major bank account of the company is set up with a concentration bank, generally situated at the same place where the company is headquartered.
 - Customers are advised to mail their remittances to collection center closest to them.
 - Payments received in different collection centers are deposited in local banks, which in turn transfer them to the concentration bank.

Thus this helps saving mailing and processing time, reducing financial requirements. This system leads to potential savings, which should be compared to the cost of maintaining the system.

1. Lock box system: It functions as follows:

- A number of post boxes are rented by the company in different locations.
- Customers send their remittances to the lock box.
- Banks are instructed and authorized to pick up the cheques from the local boxes and deposit them in the company's account.

The main advantages of this system are, firstly, the bank handles the remittances prior to deposit at a lower cost. Secondly the cheques are deposited immediately upon receipt of remittances and their collection process starts sooner than if a firm would have processed them for internal accounting purposes prior to their deposits.

➤ **Control of Payables:** Payments arise due to trade credit, which is a source of funds, and hence, the firm should try to slow them down as much as possible. By proper control of payables a firm can conserve its cash resources. Following are some of the ways of doing it:

- Payments should be made only as and when they fall due.
- Payments must be centralized. This helps in consolidating funds at the head office, and investing surplus funds more effectively.
- Arrangements may be made with the suppliers to set due dates of their bills to match the firm's period of peak receipts, thus helping the firm to get a better mileage.

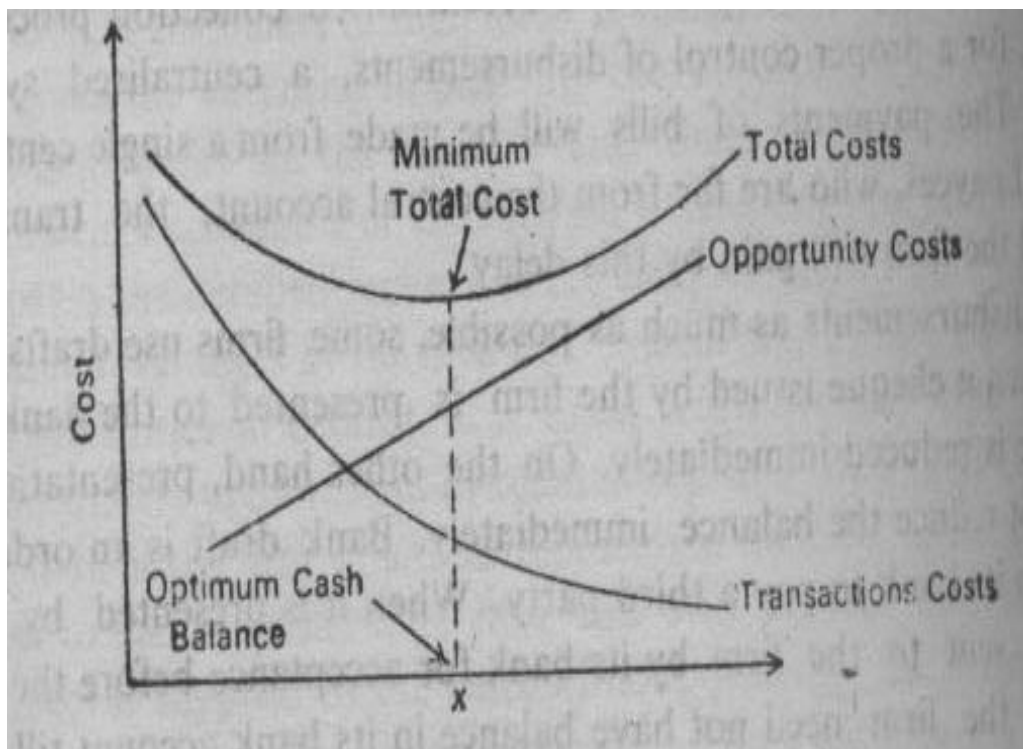
➤ **Playing the Float:** The amount of cheques issued by the firm but not paid for by the bank is referred to as **payment float**. At the same time the amount of cheques deposited but not cleared is referred to as **collection float**.

The difference between the payment float and the collection float is referred to as the net float. So if a firm enjoys a positive net float, it can still issue cheques, even if it means overdrawn bank accounts in its books. This action is referred to as 'playing of float'. Though risky the firm may choose to play it safely and get a higher mileage from its cash resource.

OPTIMAL CASH BALANCE

Cash balance is maintained for transaction purposes and an additional amount may be maintained as a buffer or safety stock. It involves a trade off between the costs and the risk.

If a firm maintains a small cash balance, it has to sell its marketable securities and probably buy them later more often, than if it holds a large cash balance. More the number of transactions more will be the trading cost and vice-versa; also, lesser the cash balance, less will be the number of transaction and vice-versa. However the opportunity cost of maintaining the cash rises, as the cash balance increases.



INVESTMENT OF SURPLUS FUNDS

INVESTMENT IN MARKETABLE SECURITIES

The excess amount of cash held by the firm to meet its variable cash requirements and future contingencies should be temporarily invested in marketable securities for **earning returns**. In choosing among the alternative securities the firm should examine three basic features of security:

- **Safety:** The firm has to invest in a security, which has a low default risk. However it should be noted that, higher the default risk, higher the return on security and vice-versa.
- **Maturity:** Maturity refers to the time period over which interest and principle are to be paid. The price of long-term securities fluctuates more widely with the change in interest rates, then the price of short-term security. Over a period of time interest rates have a tendency to change, and hence, long-term securities are considered to be riskier, thus less preferred.
- **Marketability:** If the security can be sold quickly and at a high price it is considered to be a highly liquid or marketable. Since the firm would need the invested money in near future for meeting its WC requirements, it would invest in security, which is readily marketable. Normally securities with low marketability have high yields and vice-versa.

TYPE OF MARKETABLE SECURITIES

The choice in this case is restricted to the govt. treasury bills and commercial bank deposits.

- **Treasury bills:** It represents short-term obligations of govt. that have maturities like 91 days, 182 days and 364 days. They are instead sold at a discount and redeemed at par value. Though the return on them is low they appeal for the following reasons:
 - I. Can be transacted easily as they are issued in bearer form.
 - II. There is a very active secondary market for treasury bills and the Discount and Finance House Of India is a major market maker.
 - III. They are virtually risk- free.

- **Commercial bank deposits:** The firm can deposit its excess cash with commercial banks for a fixed interest rate, which further depends on the period of maturity. Longer the period, higher the rate. It is the safest short run investment option for the investors. If the firm wishes to withdraw its funds before maturities, it will lose on some interest.

OTHER OPTIONS FOR INVESTING SURPLUS FUNDS

- **Ready Forwards:** A commercial bank or some other organization may do a ready forward deal with a firm interested in deploying surplus funds on short-term basis. Here, the bank sells and repurchases the same securities (this means that the company, in turn, buys and sells securities) at prices determined before hand. Hence, the name ready forward. The return in ready forward deal is closely linked to money market conditions, which is tight during the peak season as well as the time of year closing.
- **Commercial paper:** It represents short term unsecured promissory notes issued by firms that are generally considered to be financially strong. It has a maturity period of 90 or 180 days. It is sold at a discount and redeemed at par. It is either directly placed with the investor or sold through dealers. Its main benefit is that it offers high interest rate, while its main drawback is that it does not have a developed secondary market.
- **Inter-corporate deposits:** A deposit made by a company with another, normally up to a period of six months is referred to as an inter-corporate deposit. They are usually of three types:
 - i. **Call deposits:** It is withdrawable by lender on giving a day's notice. However in practice, the lender has to wait for at least three days.
 - ii. **Three-month deposits:** These deposits are taken by the borrowers to tide over a short-term inadequacy.
 - iii. **Six-month deposits:** Normally lending companies do not extend deposits beyond this time frame. Such deposits are usually made with first class borrowers.

The lending company has to assured about the credit worthiness of the borrowing company, as it is an unsecured loan. In addition it must fulfill the following requirements as stipulated by section 370 of the COMPANY'S ACT:

1. Company can not lend more than **10 %** of its net worth to any single company
 2. The total lending of a company cannot exceed **30%** of its net worth without the prior approval of the central govt. and a special resolution permitting such excess lending.
- **Bill discounting:** A company may also deploy its surplus funds to discount/purchase the bills the way a bank does. As bills are self-liquidating instruments, bill discounting may be considered superior to lending in the inter-corporate deposit market. While participating in bill discounting a company should:
 - i. Ensure that the bills are trade bills
 - ii. Try to go for bills backed by letter of credit rather than open bills as the former are more secure because of the guarantee provided by the buyer's bank..

MANAGEMENT OF DEBTORS

Cash flow can be significantly enhanced if the amounts owing to a business are collected faster. Slow payment has a crippling effect on business, in particular on small businesses that can least afford it. **If you don't manage debtors, they will begin to manage your business** as you will gradually lose control due to reduced cash flow and, of course, you could experience an increased incidence of bad debt.

The following **measures** will help manage your debtors:

- Make sure that the control of credit gets the priority it deserves.

- Establish clear credit practices as a matter of company policy.
- Make sure that these practices are clearly understood by staff, suppliers and customers.
- Be **professional** when accepting new accounts, and especially larger ones.
- Check out each customer thoroughly before you offer credit. Use credit agencies, bank references, industry sources etc.
- Establish **credit limits** for each customer... and stick to them.
- Continuously review these limits when you suspect tough times are coming or if operating in a volatile sector.
- Keep very close to your **larger customers**.
- Invoice promptly and clearly.
- Consider charging penalties on overdue accounts.
- Consider accepting **credit /debit cards** as a payment option.
- Monitor your debtor balances and ageing schedules, and don't let any debts get too large or too old.

Debtors due **over 90 days** unless within agreed credit terms should generally demand immediate attention.

A customer who does not pay is not a customer. Here are a few ideas that may help you in collecting money from debtors:

- Develop appropriate procedures for handling late payments.
- Track and pursue late payers.
- Get external help if your own efforts fail. .
- In difficult circumstances, take what you can now and agree terms for the remainder. It lessens the problem.
- When asking for your money, be **hard on the issue - but soft on the person**. Don't give the debtor any excuses for not paying.

Goal Of Credit Management

To manage the credit in such a way that sales are expanded to an extent to which the risk remains within an acceptable limit. Hence for maximizing the value, the firm should manage its credit to:

- **Obtain optimum not maximum value of sales.**
- **Control the cost of credit and keep it at minimum.**
- **Maintain investment in debtors at optimum level.**

OPTIMUM CREDIT POLICY

The term credit policy refers to those decision variables that influence the amount of trade credit; i.e. the investment in receivables. Main factors that affect the credit policy are general economic conditions, industry norms, pace of technological change, competition, etc.

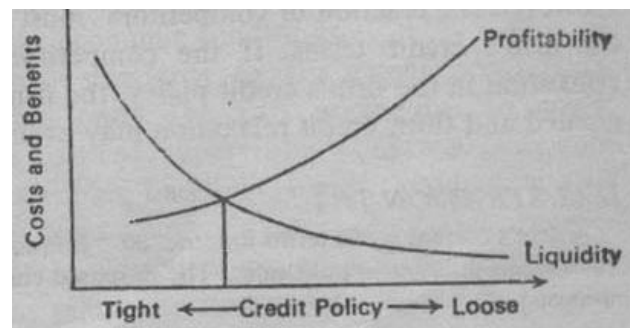
Lenient or stringent credit policy: Firms following lenient credit policy tend to sell on credit very liberally, even to those customers whose creditworthiness is doubtful, whereas, the firm following stringent credit policy; will give credit only to those customers who have proven their creditworthiness.

Firms having liberal credit policy, attract more sales, and also enjoy more profits. However at the same time, they suffer from **high bad debt losses** and from problem of **liquidity**.

The concept of probability can be used to make the sales forecast. Different economic conditions; good bad and average, can be anticipated and accordingly sales forecast under different credit policies can be made.

You also need to consider the **cost of credit**

extension, which mainly involves increased bad debts, production cost, selling cost, administration cost, cash discount and opportunity cost. Credit policy should be relaxed if the increase in profits from additional sales is greater than the corresponding cost. The optimum



credit policy should occur at a point where there is a trade off between **liquidity** and **profitability**.

The important variables you need to consider before deciding the credit policy are:

- **Credit terms**: Two important components of credit terms are credit period and cash discounts. Credit period is generally stated in terms of net period, for e.g., net 30'.it means that the payment has to be made within 30 days from day of credit sale.

Cash discount is normally given to get faster payments from the debtors. The complete credit terms indicate the rate of cash discount, the period of credit and the discount period. For ex: '3/10, net 30' this implies that 3 % discount will be granted if the payment is made by the tenth day, if the offer is not availed the payment has to be made by the thirtieth day.

The firm also needs to consider the competitors action, if the competitors also relax their policy, when you relax your policy, the sales may not go up as expected.

- **Credit standards**: Liberal credit standard tend to put up sales and vice-versa. The firms credit standards are influenced by the five C's:
 - i. **Character**- the willingness of the customer to pay
 - ii. **Capacity**- the ability of the customer to pay
 - iii. **Conditions**- the prevailing economic conditions
 - iv. **Capital**- the financial reserves of a customer. If the customer has difficulty in paying from operating cash flow, the focus shifts to its capital.
 - v. **Collateral**- The security offered by the customers.

The effect of liberalizing credit standards on profit may be estimated by:

$$\Delta P = \Delta S (1-V) - k \Delta I - b \Delta S$$

ΔP = change in profit

ΔS = change in sales

V = ratio of variable cost to sales

K = cost of capital

▲ I = increase in receivables investment

b = bad debts loss ratio on new sales

- **Collection policy:** A collection policy is needed so as to induce the customer to pay his bills on time and to remind him of payment if the credit period is over and he has still not paid the bill.

CREDIT PROCEDURE FOR INDIVIDUAL ACCOUNTS

Collection procedure will differ from customer to customer. The credit evaluation procedure of the individual accounts should involve the following steps:

- Credit information:** The firm should ensure the capacity and willingness of the customer to pay before granting credit to him. Following sources may be employed to get the information:
 - Financial statements:** Financial statements like the **balance sheet** and the **P&L a/c** can be easily obtained except in the cases of individuals or partnership firms. If possible additional information should be sought from firms having seasonal **sales**. The credit-granting firm should always insist on the audited financial statements.
 - Bank references:** A firm can get the credit information from the bank where his customer has its account; he can do so, through its bank, since obtaining direct information is difficult. Here the problem is that the customer may provide reference of only those banks with which it has good relations.
 - Trade references:** The firm can ask the customer to give trade references of people with whom he has or is doing trade. The trade referee may be contacted to get the necessary information. The problem here is that the customer may provide misleading references.

d) Credit bureau reports: Advanced countries have credit bureau organizations, which specialize in providing **credit information**. There is a strong need to develop such an organization in our country.

e) Price and yields on securities: For listed companies, valuable inferences can be obtained from the stock market data. Higher the price earnings multiple and lower the yield on bonds, other things being equal, lower will be the credit risk.

f) Experience of the firm: Trading of the company with others or with same Co. done before can be examined so as to get the necessary information and take further decision.

ii. **Credit investigation**: The factors that affect the extent and nature of credit investigation are:

- The type of customer, whether new or old.
- The customer's business line, background and related trade risks.
- The nature of the product-durable or perishable.
- Size of order and expected future volumes of business with him.
- Company's credit policies and practices.

A performance report of each trade customer should be maintained and up dated regularly. Whenever the firm experiences a change in the customers paying habit, his file can be thoroughly checked. The intensity or the depth of credit review will depend on the **quality** of customer account and the **credit** involved. Though credit investigation involves cost, credit decision without adequate investigation can be more expensive in terms of collection cost or loss due to bad debt.

iii. **Credit analysis**: The credit information supplied should be properly analyzed. The ratios should be calculated to find out the liquidity position and should be compared with the industry average. This will tell us whether the downfall if any is because of general industrial environment or due to internal inefficiencies of the firm.

For judging the customer the credit analyst may use quantitative measure like the financial ratios and qualitative assessments like trustworthiness etc.

Credit analyst may use the following numerical credit scoring system:

- Identify factors relevant for credit evaluation.
- Assign weights to these factors that reflect their relative importance.
- Rate the customers on various factors, using the suitable rating scale.
- For each factor multiply the factor rating with the factor weight to get the factor score.
- Add all the factor score to get the over all customer rating index
- Based on the rating index, classify the customer.

On basis of this the credit granting decision is taken. If p is the probability that the customer will pay, $(1-p)$ the probability that he defaults, REV the revenue from sales, $(COST)$ the cost of goods sold, the expected profit for the action offer credit is:

$$p (REV-COST) - (1-p) COST$$

The expected profit for the action 'refuse credit' is 0, if the expected profit of the course of action 'offer credit' is positive; it is desirable to extend credit, otherwise not.

For ex: if the probability that a customer would pay is 0.7 and the probability that a customer would default is 0.3, the revenue from sales is Rs 1400 and the cost of sales is Rs 600; the expected profit of offering credit is

$$0.7(1400-600) - 0.3(600) = \text{Rs. } 380$$

- iv. **Credit limits:** The next logical step is to determine the amount and duration of credit. It depends upon the customer's creditability and the financial position of the firm. A line credit is the maximum amount of credit, which the firm will extend at a point of time. A customer may sometimes demand a credit higher than his credit line, which may be granted to him if the product has a high margin or the additional sales help to use the unutilized capacity of the firm. The normal collection period should be determined keeping in mind the industry norm.

- v. **Collection procedure:** The firm should clearly lay down the collection procedures for the individual accounts, and the actions it will resort to if the payments are not made on time. Permanent customers need too be handled carefully; else the firm may lose them to the competitors. In order to study correctly the changes in the payment behavior of customers, it is necessary to look at the pattern of collections associated with credit sales.

MEANING AND OBJECTIVES

Inventories are the stock of the products a company is manufacturing for sale and the components that make up the product. They exist in three forms; **raw materials, work-in-process and finished goods**. A fourth kind of inventory the firms also maintain i.e. the inventories of supplies. It includes office and plant cleaning material, oil, fuel, light bulbs, etc.

Inventories constitute the most significant part of current assets of a large majority of companies in India. For e.g., on an average, 60 % of the current assets in the public limited companies are, inventories.

INDUSTRY	% OF INVENTORY TO CURRENT ASSETS
Tea plantation, edible vegetables, hydrogenated oils, sugar, cotton, jute and woolen textiles, non-ferrous metals, transport equipments, engineering workshops etc	60 %
Printing and publishing, electricity generation and supply, trading and shipping industries.	30 %
Tobacco	76 %

Need to hold inventory: Though maintaining inventories holds up companies cost, yet holding inventories is unavoidable.

Process or movement inventories are required because it takes time to complete a process/operation and to move products from one stage to another. The average qty of such inventory would be equal to:

Avg. o/p of the process (avg. usage at the end of the movement) * time require for the process.
(Or time required in movement.)

For Ex1: if the avg. output of the process is 300 units per day and the process time is 5 days, the avg. process inventory would be 1500 units.

‘**Organization**’ inventories are maintained to widen their latitude in planning and scheduling successive operations.

Raw material inventories help to maintain flexibility in purchasing; you need to have raw material stock so that it can be used for production as and when required. WIP inventories help to maintain production flexibility. Where as finished goods inventory help to maintain marketing and selling flexibility. It helps them to meet the customer demand as and when it comes, since it is not possible to instantaneously produce the goods on demand.

OBJECTIVES OF INVENTORY MANAGEMENT

The firms are required to maintain enough inventories for smooth production and selling process, also at the same time they need to keep the investment in them minimum. The investment in the inventories should be justified at the **optimum level**. The major dangers of over investment include blockage of funds leading to reduced profits, excessive carrying cost and the risk of liquidity. On the other hand major dangers of inadequate inventories include production hold ups, failure to meet delivery commitments further leading to loss of firm’s image, losing customers to competitors etc. Hence an effective inventory management should:

- Ensure continuous supply of materials.
- Maintain sufficient stock of RM in periods of short supply and anticipate price changes.
- Maintain sufficient FG inventory for smooth sales operation and efficient customer service

- Minimize the carrying cost and time.
- Control investment in inventory, and keep it at an optimum level.

Average stock-holding periods will be influenced by the nature of the business. For example, a fresh vegetable shop might turn over its entire stock every few days while a motor factor would be much slower as it may carry a wide range of rarely-used spare parts in case somebody needs them.

The key issue for a business is to identify the fast and slow stock movers with the objectives of establishing optimum stock levels for each category and, thereby, minimize the cash tied up in stocks. Factors to be considered when determining optimum stock levels include:

- What are the projected sales of each product?
- How widely available are raw materials, components etc.?
- How long does it take for delivery by suppliers?
- Can you remove slow movers from your product range without compromising best sellers?

For better stock control, the following steps can be undertaken:

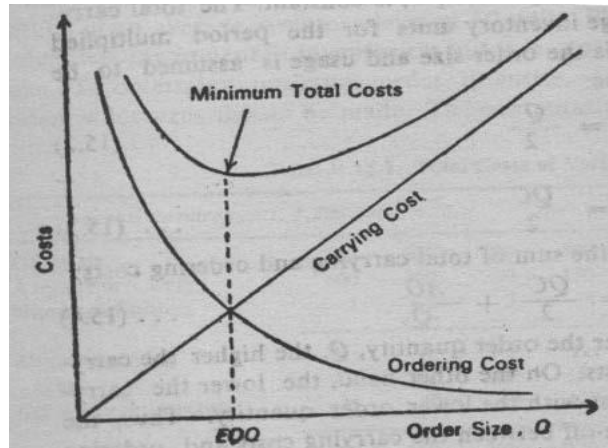
- Review the effectiveness of existing purchasing and inventory systems.
- Know the stock turn for all major items of inventory.
- Apply tight controls to the significant few items and simplify controls for the trivial many.
- Sell off outdated or slow moving merchandise - it gets more difficult to sell the longer you keep it.
- Consider having part of your product outsourced to another manufacturer rather than make it yourself.

INVENTORY MANAGEMENT TECHNIQUES

The two basic questioning related to inventory management are:

- 1) What should be the size of the order?
- 2) At what level the order should be placed?

The answer to the first question is the **Economic Order Quantity (EOQ)** model, which talks about three types of costs in relation



to inventory management i.e. ordering cost, carrying cost and shortage cost.

ORDERING COSTS	CARRYING COSTS	SHORTAGE COSTS
<ul style="list-style-type: none"> • Preparation of purchase order. • Expediting. • Transport. • Receiving and placing in storage. 	<ul style="list-style-type: none"> • Interest on capital locked in inventory. • Storage. • Insurance. • Obsolescence. • Taxes. 	<ul style="list-style-type: none"> • Purchase at a high cost due to shortage. • Extra cost incurred to meet the customers demand due to existing shortage. • Losing the customer.

When a firm orders a large quantity, with the aim of reducing the total ordering cost, the average inventory, other things being equal, tends to be high thereby increasing the carrying cost. Also, when a firm carries a larger safety stock to reduce the shortage costs its carrying costs tends to be high. Hence the minimization of the overall costs of inventory would require considerable trade off between these costs.

Assumptions of the EOQ model:

- The forecast/demand for a given period, usually a year, is known.
- The usage/demand is even throughout the year.
- Inventory orders can be replenished immediately.
- Ordering costs and carrying costs can be easily differentiated.
- Cost per order is constant, irrespective of the size of the order.

Carrying cost is a fixed percentage of the average value of inventory.

EOQ formula:

$$TC = \frac{U * F}{Q} + \frac{Q * P * C}{2}$$

$$TC = (\text{Ordering Cost} * \text{Cost Per Order}) + (\text{Avg. Value of Inventory} * \% \text{ Carrying Cost})$$

- U = Annual usage/demand
- Q = Quantity ordered
- F = Cost per order.
- C = % carrying cost
- P = Price per unit
- TC = total of ordering and carrying costs.

Quantity Discounts And Order Quantity: When quantity discounts are available, the price per unit is influenced by the order quantity. Hence total cost should be calculated for various order quantity offered at discounted rates, and the one with the least cost should be adapted.

Order Point: It is the quantity level on the attainment of which the next order has to be placed. This is done in order to ensure continuous and smooth flow of materials for production. If the usage rate of material and the lead-time for procurement were known then the reorder level would be: **lead time for procurement (days) * average daily usage**. However in real life due to uncertainties in lead-time and usage rate, an extra level of stock i.e. safety stock is also maintained.

Therefore, **Reorder Level = Normal Consumption + Safety Stock**

Here, **Safety Stock = (Maximum Usage Rate – Average Usage Rate) * Lead Time**

$$\text{Reorder point} = S(L) + \sqrt{SR(L)}$$

S = Usage; L = lead time for obtaining additional inventory;

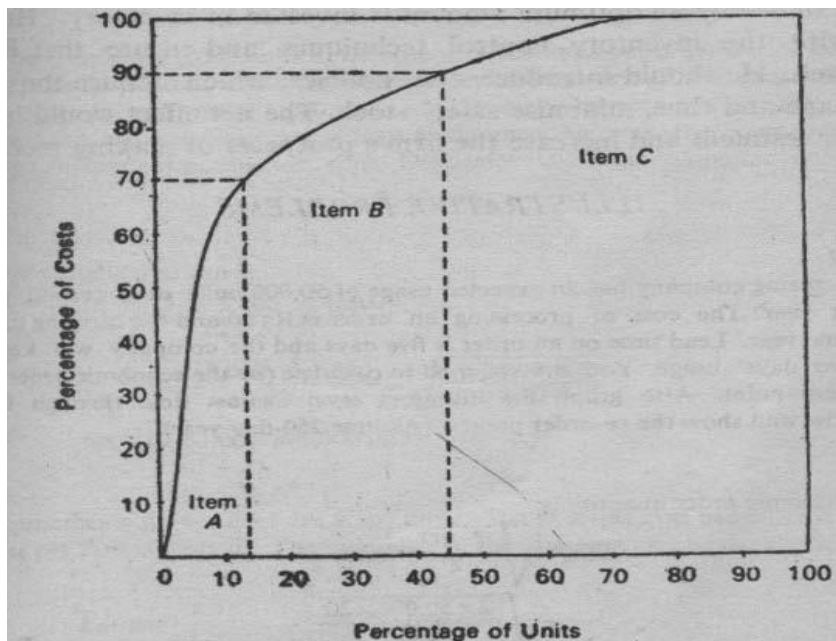
R = avg. qty ordered; F = stock out acceptance factor.

Other factors you need to consider before deciding the reorder level include:

- Expected price change: An expected increase in price may warrant an increase in the level of inventory and vice-versa
- Obsolescence risk: The presence of obsolescence risk suggests a level of reduction in inventory carried and vice-versa
- Government restriction: Government may impose restrictions on the level of inventory that can be maintained (may be through policies of commercial banks)
- Marketing considerations: If the demand is unexpected and there is heavy competition, high level of inventory may be maintained to meet the demand.

MONITORING AND CONTROL OF INVENTORIES

ABC analysis can be used for the control of inventories.



Firms need to maintain various types of inventories .In most inventory a large portion of the inventories account for only small amount of cost whereas small portion of inventory contribute to a large value (in monetary terms). ABC analysis concentrates on this fact, thus requires us to put in more efforts to **control inventory** that leads to the maximum cost. This approach classifies the inventories in three broad categories A, B, and C.

CATEGORY	IMPORTANCE	% OF INVENTORY ITEMS	%VALUE IN MONEY TERMS
A	Most important	15 to 25 %	60 TO 75 %
B	Moderate importance	20 to 30 %	20 to 30 %
C	Least important	40 to 60 %	10 to 15 %

The following procedure may be used for determining the three categories:

- Rank the items of inventory in **descending order**, on the basis of their annual consumption value and number them 1 through n.
- Record the running cumulative totals of annual consumption values and express them as percentages of the total value of consumption
- Express each number in this list, 1 through n, as a percentage of n (these percentages are actually cumulative percentages)
- Look at the cumulative percentages of consumption value against the cumulative percentage of numbers and **classify** them into three broad categories: A, B and C.

JUST IN TIME INVENTORY CONTROL

Taichi Okno of Japan originally developed it. It simply implies that the firm should carry minimum level of inventory and depends on suppliers to get it' just-in-time.' Normally the firm wants to keep more inventories so that they do not have shortage problems leading to production and sales delays.

It however is very difficult to implement since:

- It requires a strong and dependable relationships with suppliers who are geographically not very remote from the manufacturing plant
- A reliable transportation system.
- Proper storage facility at a place, which can be easily accessed as and when, required.

However many believe that the just in time concept is not about getting the material just in time but reducing the lead time of the process, that is, shortening the production cycle.

The following steps will help to achieve this goal:

- Exercise of vigilance against imbalances of raw material and work in progress to limit the utility of stock
- Efforts to finish the job faster
- Active disposal of goods that are surplus, obsolete or unusable
- Change of design to maximize the use of standard parts and components that are of the shelf
- Strict adherence to the production schedules
- Special pricing to dispose unusually slow moving items
- Evening out of seasonal sales fluctuation to the extent possible.

SHORT TERM SOURCES OF FINANCE

Two most important sources of working capital finance are trade credit and bank credit. Over the period of years the amount of trade credit has gone up significantly, at the same time obtaining the trade credit from banks for large-scale industries has become increasingly difficult. A combination of short and long term finances is used to finance to working capital requirements. Current assets are normally financed by the **short-term sources**, which include the following:

- **Accruals:** This includes what the firm owes to the employees. Its main components are wages and taxes. Since they are payable at a future date, they have been accrued but not shown as paid in the balance sheet. Till that time they serve as source of finance. They are a source of spontaneous financing. Since the firm pays no interest, they are regarded as a '**free**' source of finance.

Trade Credit: It is a spontaneous source of financing, which constitutes 25 to 50 % of short term financing. Obtaining trade credit depends on:

- Earnings record over a period of time
- Liquidity position of a firm over a period of time
- Record of payment.

Cultivating Good Supplier Relationships: The confidence of the suppliers can be earned by discussing the financial situation, by showing realistic plans, and more importantly by honoring commitments.

Cost of Trade Credit: If the supplier offers discount for prompt payment, there is a cost associated with trade credit availed beyond the discount period. If the terms of payment are say 2/10, net 30, then the cost of credit during the discount period is nil, whereas the cost during non-discount period is:

$$\frac{\text{Discount \%} * 360}{1 - \text{Discount \%} \quad \text{Credit Period} - \text{Discount Period}}$$

In our case it would be: $\frac{0.02 * 360}{(1 - 0.02) (30 - 10)} = 36.7 \%$

Cost of trade credit for various credit terms is shown here

1) Unless the firm is hard pressed financially it should not forgo the discount for prompt payment

<i>CREDIT TERMS</i>	<i>COST OF TRADE CREDIT</i>
<i>1/10,net 20</i>	<i>36.4 %</i>
<i>2/10,net 45</i>	<i>21.0%</i>
<i>3/10,net 60</i>	<i>22.3%</i>
<i>2/15,net 45</i>	<i>24.5%</i>

2) If the firm is unable to avail the discount, it should try to postpone the payment up till the last date, to save on the interest part.

➤ **Forms Of Bank Finance:** The banks give working capital advances in the following ways:

- **Cash Credits / Overdrafts:** Under this arrangement the borrower can borrow upto a fixed limit and repay it as and when he desires. Interest is charged only on the running balance and not on the sanctioned amount. A minimal charge is payable for availing this facility.
- **Loans:** They are either credited to the current account of the borrower or given to him in cash. A fixed rate of interest is charged and the loan amount is repayable on demand or in periodical installments.
- **Purchase/Discount of Bills:** A bill may be discounted with the bank and when it matures on a future date the bank collects the amount from the party who had accepted the bill. When a bank is short of funds it can sell or rediscount the bill on the other hand the bank with surplus funds would invest in bills. However, with discount rates at 13-14 per cent for 90-day paper, bill discounting is an expensive source of short-term funds.
- **Letter Of Credit:** When an L/C is opened by the bank in favour of the customer it takes the responsibility of honoring the obligation in case the customer fails to do so. In this case though the customer provides the credit the risk is borne by the bank. Hence we can say that it is an indirect form of financing.

Some other sources of finance are explained below:

➤ **Short-Term Loans from Financial Institutions:** The LIC, GIC and UTI provide short-term loans to manufacturing companies that have a good track record. The following are the eligibility conditions if obtaining the loans:

- Declared an annual dividend of 6 % for the past 5 years, in some cases it is 10 % over last 3 years
- The debt equity ratio should not exceed 2:1
- The current ratio should be at least 1:1

- The average of the interest cover ratios for the past three years should be at least 2:1.
- **Public Deposits:** Unsecured deposits are taken from the public to finance the working capital requirements. They are an important source of short and medium term finances. A Co. can accept public deposits subject to the stipulations of RBI from time to time maximum up to 35% of its paid up capital and reserves, from the public and shareholders. These deposits may be accepted for a period of 6 months to 3 years.

Advantages

- Method of financing is simple and easy as it does not require much formality.
- Cheaper method of raising short term finance.
- Does not require any security.

Disadvantages

- Only for Co.s enjoying good reputation in the market.
- The public depositors may put pressure on the Co. to refund the deposits if there is a rumour that Co. is not doing well.
- **Right Debentures for working capital:** In order to get long term resources for working capital, the public limited companies can issue 'rights' debentures to their shareholders. The key guidelines to be followed include:
 - The amount of debenture issue should not exceed 20 % of the gross current assets, loans and advances minus the long term loans presently available for financing working capital OR 20 % of paid up share capital, including preference capital and free reserves, whichever is the lower of the two
 - The debt – equity ratio including the proposed dividend issue should not exceed 1:1
 - They shall be first offered to Indian resident shareholders of the company on a pro rata basis.

REGULATION OF BANK FINANCE

The RBI issues guidelines to the banks in this respect. Recommendations of the Tondon Committee and the Chore Committee have been incorporated in the guidelines. Tondon committee was appointed by the RBI in 1974 to suggest guidelines for the rational allocation and the optimum use of the bank credit. The major weaknesses in the working capital finance as pointed out by the Dehejia committee and again identified by the Tondon committee are:

- Borrower decides how much to borrow, hence the banker is in no position to do any credit planning
- Bank credit is treated as the first source of finance and not the supplementary source
- Credit given is based on security available and not on the basis of operations of the borrower
- Security given alone is not enough; safety lies in the efficient follow up of the industrial operations of the borrower.

Recommendations of the Tondon Committee:

They are based on the following notions:

- The borrower should indicate the likely demand for credit
- The banker should finance only the genuine production needs
- The banker will finance only the reasonable part of it; the borrower himself will bring in the remaining part.

Inventory And Receivables Norms: Only the normal inventory, based on a production plan, lead time of supplies, economic order levels and reasonable factor of safety, should be financed by the banker. Flabby, profit making or excessive inventory should not be permitted under any circumstances. Norms should be laid down to bring uniformity in banks approach in assessing the working capital requirement.

The committee has suggested norms for fifteen industries. The norms were applicable to all borrowing industries, including the small-scale industries, with aggregate limits from the banking

system in excess of Rs. 10 lacs. The norms laid down the maximum limit upto which credit could be granted. The central committee of direction, constituted by the RBI has been empowered to make the on-going review of the bank.

Lending Norms: Most firms face problems of inadequate working capital due to credit indiscipline (diversion of working capital to meet long term requirements or to acquire other assets).The banker is required to finance only a part of the working capital gap. The working capital gap is defined as ‘ **current assets – current liabilities excluding bank borrowings.**’

The committee had suggested the following three methods for determining the **maximum permissible bank finance (MPBF):**

- In the first method the borrower will contribute **25 %** of the working capital gap; the remaining **75 %** can be financed from bank borrowings. This method will give a minimum current ratio of 1:1.
- In the second method the borrower will constitute 75 % of the total current assets. The remaining will be financed by the bank. $MPBF = 0.75(CA) - CL$ = this method will give a current ratio of 1.3:1. In this case current liability including MPBF will be $30+45 = 75$. Therefore the current ratio will be $100/75 = 1.33$
- In the third method the borrower will finance 100 percent of core assets (permanent component of the working capital), as defined and 25 % of the balance of the current assets. The remaining can be met from the bank borrowing $0.75 (CA - CCA) - CL = 0.75(100-20) - 30 = 30$ (assuming that CCA is 20).

CA = current assets

CL = non bank current liabilities

CCA = core current assets.

	First method	Second method
(a) Current assets	Rs. 100	Rs. 100

(b) Current liabilities, excluding bank borrowings.	30	30
(c) Working capital gap (a-b)	70	70
(d) Borrower's contribution	17.5 (25 % of c)	25 (25 % of a)
(e) Permissible bank finance	52.5	45

Style Of Credit: The committee has suggested a bifurcation of the total credit limit into fixed and fluctuating parts. The fixed part will be treated as a **demand loan** for the representing the minimum level of borrowing. The fluctuating part will be taken care of by the **demand cash credit**. The cash credit part may be partly be used as bills.

The committee also suggested that interest rate on the loan component be charged lower than that on cash credit. The RBI has stipulated the differential at 1 %.

Information System: Information is to be provided in three forms – operating statement, quarterly budget and funds flow statement. Borrowers with credit limit of more than Rs 1 crore are required to submit quarterly information. This information should be used to see if the desired results have been achieved. A variance of about 10 % is considered to be normal.

This report has helped in bringing a financial discipline through a balanced and integrated scheme for bank lending.

Also the key components of the **Chore Committee** recommendations, which highly influence the existing reporting system, are as follows:

- **Quarterly information system-form 1:** It gives estimation of production and sales for the current year and the ensuing quarter, and the estimates of current assets and liabilities for the ensuing year.
- **Quarterly information system-form 2:** This gives the actual production and sales in the current year and for the latest completed year and the actual current assets and liabilities for the latest completed year.
- **Half yearly operating statements- form 3:** It gives the actual operating performance for the half year ended.

- **Half yearly funds flow statement**-form 3b: It gives the sources and uses of funds for the half year ended.

Credit monitoring: Based on the recommendations of the **Marathe Committee**, the RBI replaced its Credit Authorization Scheme by its Credit Monitoring Arrangement in 1988. The issues examined are:

- Whether the minimum current ratio is 1.33?
- Whether the sales, production, etc estimates match with the actual? If not, what are the reasons for deviations?
- Are the information system requirements complied with?
- Are the renewals of the limits in time?
- Is the bank following the norms for inventory and receivables prescribed by the RBI standing committee, if they are different, are they justified?

Financial information, specific industry analysis and financial models are used to determine the credit worthiness of the borrower.

RESEARCH DESIGN

TITLE OF STUDY

“COMPARTIVE ANALYSIS OF WORKING CAPITAL REQUIREMENT OF SELECTED SMALL SCALE INDUSTRIES”

STATEMENT OF PROBLEM

Working Capital requirement of a firm keeps changing with the change in the business activity and hence the firm must be in a position to strike a balance between them. The financial manager should know where to source the funds from, in case the need arise and where to invest in case of excess funds.

- The firm loses its reputation when it is not in position to honor its short-term obligations. As a result the firm faces a tight credit terms.
- It results in unnecessary accumulation of inventories. Thus the chances of inventory mishandling, waste, theft and losses increase.

- It stagnates growth .It becomes difficult for the firms to undertake profitable projects for non-availability of the WC funds.
- It becomes difficult to implement operating plans and achieve the firms profit targets.

OBJECTIVES OF THE STUDY

- To study in detail the various aspect of Working Capital Requirement.
- To plan the Working Capital at the time of contingency.
- To study the working capital management of the concern so as to analyze and interpret the inventory position

In the accomplishment of these two objectives, the management has to consider the composition of current assets pool. The working capital position sets the various policies in the business with respect to general operations like purchasing, financing, expansion and dividend etc.

SCOPE OF THE STUDY

- Investment in current assets represents a substantial portion of the total investment.
- Investments in current asset and the level of current liabilities have to be geared quickly to change in sales, which helps to expand level of business.
- Gives a company the ability to meet its current liabilities.
- Take advantages of financial opportunities as they arises.

RESEARCH METHODOLOGY

Research Methodology is a systematically solve the research problem. It has many dimensions and research methods constitute a part of the research Methodology.

Thus when we talk about research methodology, we do not only talk of the research methods but also consider the logic behind the methods. We use in context of our research study, so that research results are capable of being evaluated either by researcher himself or by others.

To effectively carry out in research, I would use the following research process, which consists of series of actions or steps.

RESEARCH DESIGN

For the proper analysis of data simple statistical techniques such as percentage were use. It helped in making more accurate generalization from the data available.

TOOLS FOR ANALYSIS

The major tools used for analysis are

- 1) **Ratio Analysis**
- 2) **Contribution percentage analysis**

The collection of data considered for study is both primary and secondary data has been used.

CHAPTER SCHEME

The project report would consist of following chapters

Chapter1:

General introduction, history and characteristics.

Chapter2:

Research design, objective of study, sources of data, sampling, plan of analysis, methodology of research and type of research

Chapter3:

Industry profile

Chapter4:

Data analysis and interpretation of data, data analysis tools used

Chapter5:

Findings, conclusion and recommendations

COMPANY PROFILE

SMALL SCALE INDUSTRIES VIEW OF MANAGING WORKING CAPITAL

As we all know that working capital management is more important to small firms as compared to large firms because they may have little investment in fixed assts but high investment in current assets. Here we will look at working capital management in the small scale-manufacturing units and how it affects them.

The small-scale sector has emerged as a dynamic and vibrant sector of the Indian economy. The sector accounts for 40% of the industrial production, 35% of the total exports. There are about 30 lacs Small Scale Industries in the country and about 90% of employment in the country is in this sector.

We will now look at the management of working capital in SSI's. For the purpose of this project the details about various SSI's are given below:

1. GIRNAR PACKAGING [Vapi (Gujarat)]

The main unit under the name of Girnar Packaging is situated at Vapi (Gujarat) approximately 150Kms from Mumbai. It was started in 1980.

- **Sources of finance**

The long-term finance, if required, is raised from **commercial banks**. The banks provide loans to them to an extent of four times the money contributed by the partners.

The short-term finance is raised by hundis. The company makes purchases of raw materials with a credit period of 30 days. Similarly, they sell the goods also at 30 days credit period. The amount to be paid to the suppliers is normally paid after the credit period of 30 days. Hence they efficiently manage their funds and reduce their WC requirements.

As soon as the goods are sold, they draw a bill on the customer and then discount the bill with the bank for funds. Also, the customer and the company share the interest charged equally. Thus this provides a good source of short-term finance.

- **Inventory, Receivables**

Formerly, they used to keep inventory of four weeks. But now they are practicing **JIT**. They now maintain a stock for only 3 days. The value of the 3-day inventory is around Rs 20 lakhs. They have realized the importance of funds and hence are trying to avoid blocking of too much money in the inventory and hence are resorting to modern inventory management practices.

- **Capacity utilization**

The entire plant capacity is utilized, as Girnar gets enough orders. In fact, they receive and accept 20 % more orders than their actual capacity. They do so to earn more profits and because they expect a

few cancellations or postponement of some orders that they receive. If they cannot complete the orders, they give out the job to other small firms and then they send it to their customers.

2. ON-LINE PACKAGING LIMITED (GOA)

On – Line Packaging Ltd, situated in Goa, was established in the year 1998.

- **Sources of Finance**

The owner's meet the company's Short term and Long-term finance needs. The company does not have to depend on Banks or any other financial institutions.

- Working capital of the plant is 30 lacs, which is contributed by the partners.
- **Inventory** The planning and production of the packaging material is done as per the client's policy of **Just In Time (JIT)**. The company usually gets four weeks for planning and production. The finished products are kept ready one week prior to the actual delivery date. They simply keep the inventory to minimum and procure it as and when necessary.

3. JANAK ENTERPRISES (DAHANU)

Janak Enterprises is an ancillary unit situated at Dahanu. The company was established in 1973 and used to produce hinges since the year of commencement. Later on, in 1977, they started manufacturing 2-wheeler parts for Kinetic Engineering Limited. But since 1979 till date, they are producing Scooter horns for Bajaj Auto Limited.

- Long term and short term requirements of Janak Enterprises are covered by Co - operative Banks like Saraswati & Kapol Co - operative Bank and Nationalised Banks like State Bank of India and Bank of Baroda. Nationalized banks also give loans for R & D projects. They pay a comparatively high rate of bank interest.

- Loans are given on the basis of past performance of the unit. But according to them, bank financing depends to a considerable extent on **Bank - Agent relationships** and facts of a proposal.
- Working Capital is given on basis of production, sales price, material cost, content of raw material, salary structure, wage bills and wage structure and other expenditures.
- **Their cash is mainly stuck in debts and inventory.**

4. SHIVAM PACKAGING (KHOPOLI):

Shivam packaging commenced production from February 1999.

- **Sources of Finance**

- Long Term Finance:

- Shivam Packaging Industries Pvt. Ltd. has taken a term loan of Rs. 36,00,000 from the Union Bank of India. They had to give 200% collateral for getting this loan. The plant and machinery, land and building are also pledged with the Union Bank of India. The tenure of this loan is 5 years at the rate of 16.5%.

- Short Term Finance:

- The working capital (the Stock and Debtors) loan limit provided by the Union Bank of India to Shivam Packaging Ltd. is Rs. 25,00,000. This is also known as the Cash Credit account.

- **Working Capital:**

Inventory

Rs. 15, 00,000

Sundry Debtors	Rs. 20, 00,000
Cash & Bank Balance	Rs. 20,000
Less: Liabilities	Rs. 15, 00,000

Working Capital	Rs. 20, 20,000

- They maintain a raw material inventory of about 45-50 tons, which is Rs. 14-15 Lakhs in money value.
- The Economic Ordering Quantity for him is 10 tons of Paper, which is 1 truckload. The minimum time taken for the raw material to reach the factory is one week, since all his suppliers are located at Vapi.
- They maintain a maximum of 10-day inventory of finished goods, depending on the consignment, or if the delivery is deferred.

OBSERVATIONS REGARDING WORKING CAPITAL MANAGEMENT IN SMALL SCALE INDUSTRIES

Since it was a matter relating to finance, not everybody revealed all the aspects of working capital management. However an effort was put in to get the maximum out of them .The following conclusion can be made on the basis of information gathered:

Most of them are not very professionally managed and hence they are really not aware of their working capital policy as to whether it is **aggressive** or **conservative**. Basically they are not very conscious about it. However now they have started realizing the importance of cost of money and have started planning their cash.

Cash management:

They are facing problems managing their cash as their cash is mainly stuck in **debts and inventory**, to overcome this they try and discount the bill with the bank as soon as possible, deal only on cash basis and keep the credit period to the minimum.

Receivables management:

- They try to match the credit they get with the credit period they give, for efficient management, as is in the case of Girnar packaging. (Matching approach)
- Debtors take unusually long time to repay and hence most of their funds are blocked in there. They need efficient receivable management system. Since they are SSI's it is practically difficult for them to have contract for payment period over which they can charge interest, also there is more personal relation with their customers and they normally wouldn't take immediate action if the payment is not made on time.

Inventory management:

- Though most of them are not very professionally managed, some of them are now practicing JIT and are aware of the EOQ concept. They have realized the need to reduce blockage of funds in inventory and are working towards it.
- Trying to reduce the lead time and servicing the orders as fast as possible is the only way out for them.

Financing for WC:

- Their main source of their cash has been bank loans. Many of them have taken bank loans at very high interest rates. At times they give 200% collateral as is in the case of Shivam packaging. Thus they are paying a high cost of cash and hence need better cash management.
- Many of them take cash credit to finance their fluctuating WC needs
- Cash credit limit is fixed on the basis of sundry debtors and stock hypothecated. Hence collateral is very important for obtaining bank loans.
- Obtaining bank finance is not only about past performance and future projections but also about developing trust-based relationship with the bankers. This makes obtaining loans easier.

KEY WORKING CAPITAL RATIOS

Below are those ratios which are important measures of working capital utilization. They are explained with its formulae and its interpretation:-

Ratios	Formulae	Result	Interpretation
Stock Turnover (in days)	Average Stock * 365/ Cost of Goods Sold	= X days	On average, you turn over the value of your entire stock every x days. You may need to break this down into product groups for effective stock management. Obsolete stock, slow moving lines will extend overall stock turnover days. Faster production, fewer product lines, just in time ordering will reduce average days.
Receivables Ratio (in days)	Debtors * 365/ Credit Sales	= X days	It takes you on average x days to collect money due to you. If your official credit terms are 45 day and it takes you 65 days, it's a problem One or more large or slow debts can drag out the average days. Effective debtor management will minimize the days.

<p>Payables Ratio (in days)</p>	<p>Creditors * 365/ Credit Purchases</p>	<p>= X days</p>	<p>On average, you pay your suppliers every x days. If you negotiate better credit terms this will increase. If you pay earlier, say, to get a discount this will decline. If you simply defer paying your suppliers (without agreement) this will also increase - but your reputation, the quality of service and any flexibility provided by your suppliers may suffer.</p>
<p>Current Ratio</p>	<p>Total Current Assets/ Total Current Liabilities</p>	<p>= X times</p>	<p>For example, 1.5 times means that you should be able to lay your hands on Rs 1.50 for every Rs 1.00 you owe. Less than 1 times e.g. 0.75 means that you could have liquidity problems and be under pressure to generate sufficient cash to meet oncoming demands.</p>
<p>Quick Ratio</p>	<p>(Total Current Assets - Inventory)/ Total Current Liabilities</p>	<p>= X times</p>	<p>Similar to the Current Ratio but takes account of the fact that it may take time to convert inventory into cash.</p>

Working Capital turnover	Net Sales/ Working Capital	As % Sales	A high percentage means that working capital needs are high relative to your sales.
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Other working capital measures include the following:

- Bad debts expressed as a percentage of sales.
- Cost of bank loans, lines of credit, invoice discounting etc.
- Debtor concentration - degree of dependency on a limited number of customers. Once ratios have been established for your business, it is important to track them over time and to compare them with ratios for other comparable businesses or industry sectors.
- Stock to Working Capital.

ANALYSIS OF DATA
AND
INTERPRETATION

CALCULATION OF RATIOS RELATING TO WORKING CAPITAL OF HLL

HINDUSTAN LEVER LTD.

BALANCESHEET

Particulars	----- in Rs. Cr. -----
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	<u>Dec '01</u>	<u>Dec '02</u>	<u>Dec '03</u>	<u>Dec '04</u>	<u>Dec '05</u>
	12 mths	12 mths	12 mths	12 mths	12 mths
<u>Sources Of Funds</u>					
Total Share Capital	220.12	220.12	220.12	220.12	220.12
Equity Share Capital	220.12	220.12	220.12	220.12	220.12
Preference Share Capital	0.00	0.00	0.00	0.00	0.00
Reserves	2,822.90	3,438.08	1,917.93	1,871.92	2,084.83
Revaluation Reserves	0.67	0.67	0.67	0.67	0.67
Net worth	3,043.69	3,658.87	2,138.72	2,092.71	2,305.62
Secured Loans	43.04	19.62	1,603.70	1,453.06	24.50
Unsecured Loans	40.70	38.68	100.61	18.06	32.44
Total Debt	83.74	58.30	1,704.31	1,471.12	56.94
Total Funds Available	3,127.43	3,717.17	3,843.03	3,563.83	2,362.56
<u>Application Of Funds</u>					
Gross Block	1,935.88	1,994.36	2,141.72	2,314.22	2,375.11
Less: Accum. Depreciation	726.34	778.90	846.09	891.08	989.61
Net Block	1,209.54	1,215.46	1,295.63	1,423.14	1,385.50
Capital Work in Progress	110.52	106.87	73.84	94.42	98.03
Total Fixed Assets	1320.06	1322.33	1369.47	1517.56	1483.53
Investments	1,635.93	2,364.74	2,574.93	2,229.56	2,014.20

Inventories	1,240.04	1,278.74	1,402.45	1,479.58	1,324.97
Sundry Debtors	424.78	367.85	470.85	489.27	522.83
Cash and Bank Balance	913.16	942.63	806.48	698.05	355.03
Total Current Assets	2,577.98	2,589.22	2,679.78	2,666.90	2,202.83
Loans and Advances	1,198.41	1,229.16	1,199.10	1,003.91	898.84
Total CA, Loans & Advances	3,776.39	3,818.38	3,878.88	3,670.81	3,101.67
Differed Credit	18.34	11.92	6.15	0.00	0.00
Fixed Deposits	0.00	0.00	0.00	0.00	0.00
Current Liabilities	2,513.55	2,582.72	2,669.14	2,730.64	3,077.97
Provisions	1,091.40	1,205.56	1,311.11	1,123.46	1,158.87
Total CL & Provisions	3,604.95	3,788.28	3,980.25	3,854.10	4,236.84
Net Current Assets	171.44	30.10	-101.37	-183.29	-1,135.17
Miscellaneous Expenses	0.00	0.00	0.00	0.00	0.00
Total Funds Applied	3,127.43	3,717.17	3,843.03	3,563.83	2,362.56

PROFIT & LOSS A/C

Particulars	----- in Rs. Cr. -----				
	Dec '01	Dec '02	Dec '03	Dec '04	Dec '05
	12 mths	12 mths	12 mths	12 mths	12 mths
<u>Income</u>					
Sales Turnover	11,755.04	10,928.36	11,082.10	10,871.12	11,962.54
Excise Duty	1,121.34	976.18	973.73	939.61	882.23
Net Sales	10,633.70	9,952.18	10,108.37	9,931.51	11,080.31
Other Income	522.52	475.69	519.09	440.24	389.77
Stock Adjustments	-4.63	3.84	120.20	-76.69	-80.87
Total Income	11,151.59	10,431.71	10,747.66	10,295.06	11,389.21
<u>Expenditure</u>					
Raw Materials	5,398.23	4,533.42	4,652.62	4,598.97	5,168.67
Power & Fuel Cost	152.77	166.41	167.84	164.77	168.74
Employee Cost	585.55	591.85	570.85	568.32	585.51
Other Manufacturing Expenses	895.40	927.05	995.58	1,031.04	1,211.53
Selling and Admin Expenses	1,646.75	1,553.47	1,558.92	1,721.78	2,013.81
Miscellaneous Expenses	276.76	280.69	397.91	455.92	439.24
Total Expenses	8,955.46	8,052.89	8,343.72	8,540.80	9,587.50
Operating Profit	1,673.61	1,903.13	1,884.85	1,314.02	1,411.94
PBDIT	2,196.13	2,378.82	2,403.94	1,754.26	1,801.71

Interest	7.74	9.18	66.76	129.98	19.20
PBDT	2188.39	2369.64	2337.18	1624.28	1782.51
Depreciation	144.66	134.10	124.78	120.90	124.45
Profit Before Tax	2043.73	2235.54	2212.40	1503.38	1658.06
Extra-ordinary items	-1.01	56.13	0.00	0.00	0.00
PBT (Post Extra-ord. Items)	2044.74	2179.41	2212.4	1503.38	1658.06
Tax	402.42	465.80	440.61	306.04	249.96
Net Profit	1,641.31	1,769.74	1,771.79	1,197.34	1,408.10
Total Value Addition	3,557.23	3,519.47	3,691.10	3,941.83	4,418.83
Preference Dividend	0.00	0.00	0.00	0.00	0.00
Equity Dividend	1,100.62	1,210.69	1,599.20	1,100.62	1,100.62
Corporate Dividend Tax	57.69	0.00	374.14	145.53	159.62
Per share data (annualized)					
Shares in issue (lacs)	22,012.00	22,012.00	22,012.00	22,012.00	22,012.00
Earning Per Share (Rs)	7.19	8.04	6.35	4.78	5.67
Equity Dividend (%)	500.00	550.00	550.00	500.00	500.00
Book Value (Rs)	13.82	16.62	9.71	9.50	10.47

CALCULATION OF RATIOS

<u>Ratios</u>					
	<u>Dec '01</u>	<u>Dec '02</u>	<u>Dec '03</u>	<u>Dec '04</u>	<u>Dec '05</u>
	12 mths	12 mths	12 mths	12 mths	12 mths
Stock Turnover Ratio = COGS / Avg. Stock (times)	5.19854	4.40033	4.41705	3.91650	4.94270
Receivables Ratio = Debtors * 365 /	14.58050	13.49103	17.00177	17.98151	17.22270

Sales (days)					
Payables Ratio = Creditors * 365 / Sales (days)	169.95306	207.94296	209..39515	216.71887	217.35940
Current Ratio = Total CA / Total CL (times)	1.02563	1.00251	1.00398	0.97665	0.71567
Quick Ratio = (Total CA – Stock) / Total CL (times)	0.53229	0.50740	0.52490	0.43481	0.28520
Working Capital Turnover Ratio = Net Sales / Working Capital	62.3896	330.637	99.7156	54.1846	21.1929

(% sales)					
Stock to Working Capital Ratio = Stock * 100 / Working Capital (%)	723.3084	4248.305	1383.496	807.234	116.719

ESTIMATION OF WORKING CAPITAL REQUIREMENT

(AN EXAMPLE)

ELEMENTS	AVERAGE PERIOD OF CREDIT	ESTIMATE FOR COMING YEAR
Purchase of materials	6 weeks	2,60,000
Wages	1.5 weeks	1,95,000
<u>Admin.o/h</u>		
Rent	2 months	48,000
Salaries	1 month	36,000
Office expense	2 weeks	45,500
Factory o/h (Includes depreciation 20%)	2 months	60,000
<u>Sales</u>		
Cash		14,000

Credit	7 weeks	6,50,000
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- Raw materials are in stock for 4 weeks
- FG are in stock for 1 month
- Process time 15 days
- Factory overheads and wages accrue evenly
- FG are valued at cost of production
- Minimum cash balance required is 40,000

Assumptions:

- 1) Production and sales are evenly distributed throughout the year
 - 2) Raw materials are issued to production right in the beginning, whereas wages and overheads are incurred evenly.
 - 3) 15 days is taken as 2 weeks
- 1year = 52 weeks

SOLUTION:-

Budgeted P/L

ELEMENT	YEARLY	WEEKLY
Raw Material	2,60,000	5,000
Wages	1,95,000	3,750
Prime Cost	4,55,000	8,750
Overheads	60,000	1,154
Cost Of Goods Sold	5,15,000	9,904

Calculation of Working Capital Requirement

<u>CURRENT ASSETS</u>	RS.	RS.
(A) Stock		
Raw Material (2,60,000/52 *4)	20,000	
Finished Goods (515,000/52*4)	39,616	59,616
(B) WIP		
Raw Material (2,60,000/52*2)	10,000	
Wages (1,95,000/52*2*0.5)	3,750	
Overheads (60,000/52 *2*0.5)	1,154	14904
(C) Debtors (6,50,000/52*7)		87,500
(D) Cash		40,000
TOTAL C.A.		2,02,020
(-)CURRENT LIABILITIES		
(A) Creditors		

Raw materials (2,60,000/52*6)		30,000
(B) Wages (1,95,000/52*1.5)		5,625
(C) Administration overheads		
Rent (48,000/52*8)	7,385	
Salary (36,000/52*4)	2,769	
Office expense (45,500/52*2)	1,780	11,904
(D) Factory overheads 60,00/52*8)		9,235
TOTAL C.L.		56,570
WC reqd.(CA-CL)		1,45,260