Adequate size of working capital is indispensable in every business concern. Keeping in view the requirements of the concern, the size of working capital should neither be more nor less than its financial requirements because both the situations are not only harmful but dangerous for a business concern. But while determining the adequacy of working capital, we have to keep into mind as what should be the optimum level of investment in current assets and for this investment, what should be the optimum mix of short terms and long term liabilities. To put it in other words, we have to determine as what should be the level of current assets and current liabilities (since the size of working capital is also determined by this). This sort of decision is very important for a business concern because the fundamental decision regarding liquidity and payment of loans is also part of this composition. In other words, we have to see the requirements of the liquidity position of the company, and the time of the payment of current liabilities. To what extent and at what rate the current assets of the company can be converted into cash would depend upon many factors i.e. how the cash and saleable securities are being managed, what is the credit policy of the concern, how the inventory is managed and controlled and how the fixed assets are being administered.

If the management of fixed assets of the concern is effective, the prudent decision is being taken on inventory, and the credit policy and its system is scientific, it can be concluded that lesser the ratio of liquid assets to total assets the larger will be the return on total investment of the company. On the other hand, when the finances are managed by current assets, the cost becomes lesser than the finances
managed by long term funds. Therefore to maximise the profits, the portion of current liabilities in total liabilities or debts should always be more. In addition to it, the firm can earn more profit by its short term funds so that sort of loans can be paid when there is no need of cash in the business.

On the above assumption of profitability it is evident, that the portion of current assets in total assets should be lesser and the portion of current liabilities should be larger in total liabilities. But on the basis of this principle the size of working capital will not only be low but it can also be negative. In this way there is a possibility of risk before the concern. With this reference the risk is another name of technical insolvency. From legal point of view, a firm becomes insolvent when the liabilities are more than assets. Technically speaking the insolvency is the position when a firm is unable to pay its liabilities so the appraisal of the risk is possible with the analysis of the liquidity and liquidity means the capacity of converting the assets into cash immediately. Thus if we want to keep the portion of current assets lesser, it becomes necessary to have more liquidity in current assets and in this way the element of risk can also be minimised. In fact, all the above mentioned aspects are to be considered very carefully to determine the size of working capital.

**ANALYSIS OF WORKING CAPITAL:**

Various reasons may make it essential to analyse the working capital position of a business enterprise. A business is always concerned about how the working capital portions of its balance sheet will appear to suppliers who sell to it on credit, to banks from which it may want to borrow, and to other lenders of short-term funds. One reason,
therefore, for analysing the working capital position of a company is to see what others will find when they examine its financial statements. A second reason is to enable the management to detect trends and take corrective steps when the analysis indicates need for them. A third reason is to see what changes have taken place in the company over a period of time so that this knowledge may be used in setting guide-posts for the future conduct of business.

It follows from the proceeding paragraphs that the analysis of working capital concerns itself with aspects such as its circulation, liquidity, level and the structural health in the enterprise. Stated in other words, the questions to be studied and answered in connection with the analysis of working capital include the following:

Is the management utilizing working capital effectively? Is the amount of working capital adequate, excessive or insufficient? Will the company be able to pay its current debt promptly? Does the company has a favourable credit rating? Is the current financial position improving?

For analysing the working capital position of an enterprise, the accounting theory provides the following techniques:

(a) Working Capital Budget;
(b) Cash Budget;
(c) Value Analysis;
(d) A.B.C. Analysis;
(e) Statement of Working Capital Changes
(f) Ratio Analysis
A. **Working Capital Budget**:

Efficient management of working capital involves careful measurement of future requirements and the formulation of plans for meeting them. The working capital budget is an important phase of an over-all financial budgeting. This budget should be distinguished from a cash budget that is designed to measure all the financial requirements of a business including funds for the fixed assets, repayment of long-term loans and similar items. On the other hand, the working capital budget measures permanent and variable working capital requirements and assures that they are duly provided for. The objective of working capital budget is to secure an effective utilisation of the investment. Such utilisation may be studied by the rate of turnover as measured against sales or cost of goods sold. This is the key to the method. Scatter charts are used to study the behaviour of working capital in relation to volume of sales or cost of goods sold. It is often found desirable to refine the relationship and establish separate standard for each element, particularly cash, debtors and inventory. This technique can then provide the necessary information for any volume of business.

B. **Cash Budget**:

The preparation of 'Cash budget' is the principal means of cash planning and working capital control in business concerns. "Ways and Means Statement" or "Cash Flow Estimate"
are the other names for cash budget. Such cash budget may be prepared for the entire operations and programmes other than construction. Cash budget is an integral part of the budgetary process and is prepared by borrowing the figures from various other budgets. Cash budgets provide the business concerns the means of planning, forecasting and keeping check on the working capital funds which are available to meet payments of the transactions of either capital or revenue nature.

C. **Value Analysis**:

Value analysis is a study of characterwise cost of an item such as quality, design, methods of manufacture, consumption aspect, etc., with a view to reducing the ultimate cost of the item. Value analysis also refers to the determination of the value of items proposed to be bought so as to examine the worth of money to be spent in buying those items.

Purchasing research helps in this direction by supplying requisite data directly for the purpose. Value analysis takes into consideration the quality of the material in relation to its functional values and price. Value analysis helps in taking decision about what is actually required and what should be paid so as to derive the maximum benefit but pay the maximum for the same function. This reduces the cost of purchases and enhances the profits of the organisation which is, of course, the goal of any value analysis system. The purposes for which value analysis is carried out are mentioned below:

(i) Elimination of an item altogether.
(ii) Utilisation of standard components for cost reduction.

(iii) Examination of all the features of an item.

(iv) Examination of cheaper quality materials for their advantageous use in the organisation.

(v) Examination of costlier quality in relation to its functional value and life, and nonpurchase of specified cheaper quality materials.

(vi) Examination of alternative source and price in relation to the money to be spent and realisation of its worth in due course.

D. ABC Analysis:

ABC Analysis is a basic analytical materials management tool. Fundamentally ABC Analysis may be applied to any branch of management with ease and success. It calls upon the top management to place its efforts where the results will be the greatest. It is the selective approach popularly known as Always (A) Better (B) Control (C). The ABC Analysis goes by its name. It always controls the best, then better and lastly the good. Its genesis lies in the characteristic distribution of anything which can be measured in monetary terms. Its importance lies in the determination of priority which enables the management to exercise control over the managed subjects according to the priority fixed for the purpose on selective basis since it is neither possible nor worthwhile to pay equal attention to all the managed subjects in any organisation.
In materials management as a tool ABC Analysis has gained considerable importance and can be applied to almost all the areas in the department needing selective control. If we go for an analysis of annual consumption of any organisation we can easily come to realise that 75 percent of total annual consumption-value accounts for hardly 10 percent of the total number of items. These items in any organisation are of vital importance and need close and careful attention of any materials managers. According to ABC Analysis method of inventory control, these items are classed as Item 'A'. Similarly, in the same organisation 10 percent of total annual consumption-value accounts for more than 70 percent of the total number of items which may need a casual attention and which then may be classed as 'bottom' items. These items under ABC Analysis method of inventory control are classed as Item 'C'. The items lying between these two extremes are classed as Item 'B' which may require less careful attention on the part of materials managers as compared to those of item 'A', but calls for more careful attention as compared to those of Item 'C'.

The advantage of ABC Method of inventory control are as follows:

(i) It becomes possible to concentrate all efforts in areas which need genuine efforts.

(ii) This method produces rewarding results, at the same time it involves minimum control.

(iii) In respect of 'A' category items careful attention is paid at every step, i.e. estimates of requirements, purchasing, safety stock, receipts, inspection, issues, etc. A tight and loose control is
exercised. A close watch on high consumption items and their progress of replenishment, use, etc., is maintained. But 'C' category items, which are numerous and at the same time inexpensive, are comparatively left loosely controlled.

(iv) Those items which fall under 'C' category may be dispensed with in the record-keeping system as well. Physical division of these items into two unequal sections may help in saving time, money and labour without endangering the production schedule.

(v) It is the most effective and economical method as it is based on selective approach.

(vi) It helps in placing the orders, deciding the quantity of purchase, safety stocks, etc., thus saving the enterprise from unnecessary stock-outs or surpluses and their resultant consequences.

E. **Statement of Working Capital Changes**:

Statement of working capital changes shows how funds have been procured for a business and how they have been employed. The statement of variations in working capital is based fundamentally on the same approach used for the preparation of funds-flow statement. This technique helps to analyse changes in working capital components between two dates. The comparison of current assets and current liabilities, as shown in the balance sheet at the beginning and end of a specific period, shows changes in each type of current assets, as well as the sources from which working capital has been obtained.
This technique of working capital analysis does not clarify the significance of movements in the working capital structure. Further, this tool can be used only by the 'internal management' in its control of working capital. Moreover, it does not throw light on the questions whether the working capital is being used most effectively; whether the current financial position of the enterprise has improved.

F. Ratio Analysis:

The relationship between the two figures expressed mathematically is called a ratio. Accounting ratios are relationship, expressed in mathematical terms between figures which have a cause and effect relationship or which are connected with each other in some manner or the other. Obviously no purpose will be served by working out ratios between two entirely unrelated figures. An absolute figure does not convey much meaning and it becomes meaningful when it is related to some other relevant information. In words of C.R.Kothari, "Just as the blood pressure, pulse and temperature are the measures of health of an individual, so does ratio analysis measures the economic and financial health of a business concern. Ratio analysis is such a powerful tool of financial analysis that through it economic and financial position of a business unit can be fully X-rayed." ¹

Though ratio analysis is used as an yardstick for evaluating profitability activity and the financial position, it may also be applied

to judge the adequacy of working capital. An attempt has been made below to indicate the various ratios which are included in analysing the various aspects of the working capital position of the enterprises selected for the study.

F.(i) **Inventory/Output Ratio:**

This ratio is very common in financial analysis for determining the sufficiency of inventory. It is expressed as the volume of inventory in terms of months' value of production symbolically:

\[
\text{Inventory/Output Ratio} = \frac{\text{Inventory}}{\text{Cost of output}} \times 12
\]

F.(ii) **Sales/Inventory Ratio:**

This ratio is also known as stock turnover ratio or inventory turnover. It helps to know the rate of turnover of stock. This will indicate as to how many times the stock has turned over. Thus this ratio is an indication of the adequacy and the managerial efficiency of a concern. This ratio is worked out as under:

\[
\text{Inventory turnover} = \frac{\text{Sales}}{\text{Year-end inventory}}
\]

A slow turnover results in over investments in inventory and a rapid turnover contributes to a higher capital turnover.

F.(iii) **Current Assets/Inventory Ratio:**

A third method of judging the adequacy and efficiency in use of inventory is current assets/inventory ratio which is calculated
by the following formula:

\[
\text{Current Assets/Inventory ratio} = \frac{\text{Current Assets}}{\text{Year-end Inventory}}
\]

A downward trend in the ratio will suggest that the units have gradually invested higher amount in inventory portfolio.

F.(iv) **Current Ratio**:

It may be defined as the ratio of current assets to current liabilities. This ratio explains the relationship between the current assets and current liabilities. It gives a general picture of the adequacy of the working capital of a company and it is an indication of the ability of a concern to meet its current liabilities or day to day payment obligations. It also measures the margin of safety provided for paying current debts in the event of a reduction in the value of current assets. The current ratio is generally recognised as the patriarch among ratios.

The current ratio of 2:1 is considered generally satisfactory and applicable to all industries. But there is no hard and fast rule about it. Sometimes a lower ratio of 1.5:1 is also accepted. But it should also be noted that the current ratio varies from industry to industry and within the same industry from company to company and within the same company from season to season. Blind reliance on a 2:1 standard for the current ratio is an indication of the constant groping for panaceas and easy solutions by businessmen who do not possess financial understanding. This sort of over simplification is very dangerous and often leads directly to financial disaster.
The current ratio tests quantity & not quality. It only measures total rupees worth of assets and total rupees worth of liabilities. This ratio can be calculated as under:

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}
\]

F. (v) **Quick Ratio**: 

This is the ratio of liquid assets to current liabilities. This ratio is also known as Acid test ratio. It explains the relationship between "Quick assets", i.e. cash, marketable investment and sundry debtors and current liabilities. Quick assets mean the current assets less inventory. It indicates the strength of the company to pay its current liabilities even if its stocks cannot be disposed off in the market. The standard ratio generally accepted for this is 1:1. Like current ratio, a reasonable standard for the acid test ratio varies from season to season in a company and from company to company in an industry. Sometimes, it is possible that there may exist a good current ratio but the firm may not have funds for meeting its immediate obligation leading to a situation of business failure. It is, therefore, the quick ratio which is used to X-ray the liquid position of an enterprise. This ratio reflects the credit and collection policy of the firm and the effectiveness of collection machinery.

F. (vi) **Ratio of Current Assets to Debtors**: 

The size of debtors can also be evaluated by the ratio of current assets to debtors. Lower the value of this ratio higher will
be the amount of debtors and vice-versa. The formula for calculating this ratio is:

\[
\text{Ratio of current assets to debtors} = \frac{\text{Current assets}}{\text{Debtors}}
\]

**F.(vii) Working Capital Turnover:**

The efficiency of money used as working capital is determined by computing how many times working capital is turned over in a given period. This is calculated as under:

\[
\text{Working Capital turnover} = \frac{\text{Cost of Sales}}{\text{Working Capital}}
\]

**F.(viii) Months Costs of Production Turnover:**

This ratio is used to judge the size of Working Capital (i.e., adequacy or inadequacy) and is calculated by dividing Working Capital by month's cost of production, i.e.,

\[
\text{Months Costs of Production Turnover} = \frac{\text{Working Capital}}{\text{Cost of Production}} \times 12
\]

**F.(ix) Months Average Sales Turnover:**

This ratio is also used to measure the adequacy or otherwise of the working capital and is ascertained by the following formula:

\[
\text{Months Average Sales Turnover} = \frac{\text{Working Capital}}{\text{Sales}} \times 12
\]
F.(x) Percentage of Fixed Deposits to Total Cash:

This ratio measures the ability of the concern to maximise the availability of cash and invest the short-term excess funds. This is calculated as under:

\[
\text{Percentage of Fixed Deposits to Total Cash} = \frac{\text{Fixed Deposits}}{\text{Total Cash volume}} \times 100
\]

F.(xi) Turnover of Accounts Receivables:

A concern sells goods on credit and cash basis. When the concern extends credit to its customers, book debts (debtors) are created in the concern's accounts. Debtors are expected to be converted into cash over a short period and therefore are included in current assets. The liquidity position of the firm depends on the quality of debtors to a great extent. The receivable turnover ratio is computed by dividing annual credit sales by total customers receivables. To put it in the formula:

\[
\text{Turnover of Accounts Receivable} = \frac{\text{Sales}}{\text{Debtors}}
\]

The receivable turnover ratio may be rising or declining. A rising turnover of accounts receivables indicates that the concern is either trying to tighten its credit policy or drive out the slow paying customers. On the other hand, a decline in the accounts receivables turnover means the congestion of funds in receivables.

F(xii) Average Collection Period:

In credit analysis, it is necessary to know actual period of credit that is allowed to the customers. Lesser the period of credit,
the faster will be the collection of receivables and thus the need for short terms credit will be lesser. The computation of average collection period is done two steps. In the first step, annual sales are divided by 365 to get the average daily sales; in the second stage, accounts receivables are divided by daily credit sales. This gives average collection period. We can express this ratio as under:

Average Collection period : \[
\frac{\text{Receivables}}{\text{Net Sales/No. of days in a year}}
\]

or \[
= \frac{\text{Receivables} \times \text{No. of days in a year}}{\text{Net sales}}
\]

F(xiii) Gross Profit as Percentage of Capital Employed:

Above ratio is used to judge the profitability of a concern and this is worked out as under :-

Gross Profit as Percentage of capital Employed = \[
\frac{\text{Gross Profit}}{\text{Capital employed}} \times 100
\]

F(xiv) Net Profit as a Percentage of Net Worth:

Another indicator of profitability of public undertaking is the ratio of net profit to net worth. This ratio is like a looking glass through which the efficiency and profitability of the concern are reflected. This ratio can be stated as under:

Net profit as a Percentage of Net Worth = \[
\frac{\text{Net profit after taxes}}{\text{Net worth}} \times 100
\]
F(xv) **Percentage of Bank Credit on Working Capital:**

This ratio reflects the dependence of the concern upon bank credit to finance the working capital. It is obtained by:

\[
\text{Percentage of Bank Credit on Working Capital} = \frac{\text{Bank Credit}}{\text{Working Capital}} \times 100
\]

F(xvi) **Percentage of Depreciation to Working Capital:**

This ratio highlights upon financing policy of the concern. This is calculated:

\[
\text{Percentage of Depreciation to Working Capital} = \frac{\text{Depreciation}}{\text{Working Capital}} \times 100
\]

F(xvii) **The Ratio of Sales to Current Liabilities:**

The management of current liabilities may be examined by the ratio of cost of sales to current liabilities. The rupee of current liabilities should always bring higher amount of cost of sales and this would indicate better working capital management through proper maintenance of current liabilities. This ratio can be worked out as follows:

\[
\text{The Ratio of Cost of Sales to Current Liabilities} = \frac{\text{Cost of Sales}}{\text{Current Liabilities}}
\]

F(xviii) **Ratio of Current Liabilities to Total Assets:**

Another indicator of current liabilities management is the ratio of current liabilities to total assets. From the overall profitability
the proportion of current liabilities should be more and current assets should be less. This ratio can be calculated as under:

\[
\text{Ratio of Current Liabilities to Total Assets} = \frac{\text{Current Liabilities}}{\text{Total Assets}}
\]