



SECTION - 5

WORKING CAPITAL MANAGEMENT

This Section includes

- Working Capital
- The Elements of Working Capital
- Management of Working Capital
- The Management of Current Assets
- The Management of Current Liabilities

5.1 WORKING CAPITAL

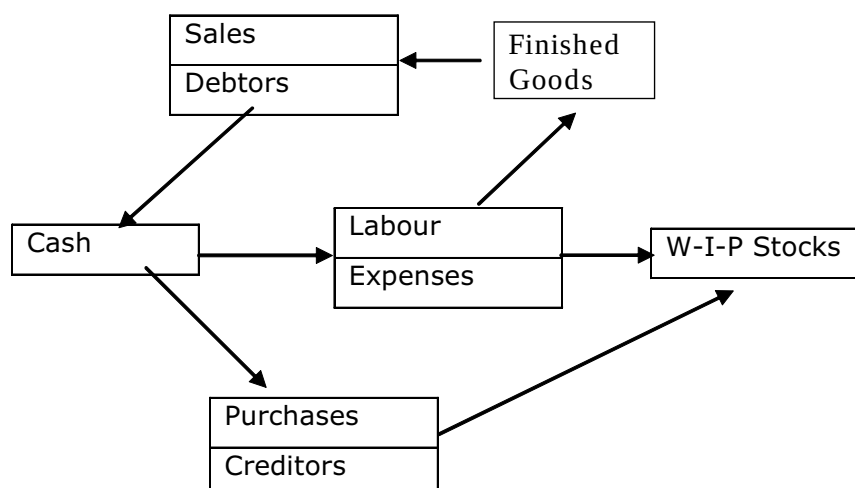
- 5.1.1 The importance of working capital in the operations of a company is very high. Typically, organizations on an average have over 40% of their total capital invested in working capital. Unlike the investments in fixed assets which are often subject to rigorous investment appraisal decisions, the investment in working capital is taken based on a series of apparently diversified factors such as sales, production, purchasing, inventories, receivables and cash. However, all these decisions may have a consequence on the level of investment in working capital and hence on the overall capital employed by the company. Therefore, a comprehensive and coordinated policy is needed alongside appropriate monitoring.
- 5.1.2 A study has found that financial managers spend more than one-third of their time on managing working capital.
- 5.1.3 While management of investments in projects is only during periods of project implementation, the management of working capital is round the clock on **all 365 days in a year. I:**

5.2 THE ELEMENTS OF WORKING CAPITAL

- 5.2.1 The management of working capital is of equal importance in both manufacturing and service industries. The main difference lies in the fact that whereas a manufacturer may have funds tied up in physical stocks of raw materials, work-in-process, finished goods and receivables, a service organization may have funds tied up mainly in work-in-process, i.e., work done but not yet invoiced to the customer and receivables.
- 5.2.2 Working Capital is the fund required to support the cost of production and expenses on sales, distribution and administration required prior to the receipt of the cash from the sale of finished goods or service. Thus a company which has a longer lead time between production and sale will require a greater investment in working capital. The money spent on these items has to be quickly turned around into cash through the sale of output to customers who subsequently pay us. The profit at the end of such

operating cycle enables the firm to pay interest on the loans and also a dividend to the equity shareholders.

- 5.2.3 Definitions of working capital vary. Gross Working Capital is the Total of all Current Assets. Net Working Capital is defined as the difference between Current Assets and Current Liabilities.
- 5.2.4 Current Assets have short life span and swift transformation into other asset forms. They comprise of the following:
- Inventories
 - Consumable store
 - Debtors
 - Bank balance and cash.
- 5.2.5 The elements of current liabilities are:
- Creditors towards purchases and expenses
 - Bank overdraft
 - Accrued charges
 - Tax liabilities
 - Dividend liabilities
 - Even Bank Borrowings towards working capital is considered as 'Current liabilities (though secured creditors) as they are generally payable on demand.
- 5.2.6 The working capital cycle is given below:





5.2.7 The working capital as a figure conveys nothing. The same working capital in two companies does not necessarily imply the same cash position. In order to determine the extent of liquidity of the working capital, the composition of the working capital, the percentage of each element to the total, and the real current nature of the asset have to be carefully studied and properly assessed. Based on a study of past requirements and performance, a forecast of future requirements has to be made.

5.3 MANAGEMENT OF WORKING CAPITAL

5.3.1 Characteristics of Current Assets:

The following two characteristics of current assets must be borne in mind:

- a. Asset life span
- b. Swift transformation into other asset forms

The above qualities have certain implications:

- a. Decisions pertaining to working capital management are repetitive and frequent.
- b. The difference between profit and present value is insignificant.
- c. The close interaction among working capital components implies that efficient management of one component can not be undertaken without simultaneous consideration of others. For example, a company having a large accumulation of finished goods may have to provide more liberal credit terms or a relaxed credit collection norms to be applied.

5.3.2 Factors influencing Working capital requirement:

Factors influencing Working Capital requirement are:

- a. Nature of business
- b. Seasonality of operations
- c. Production policy
- d. Market conditions
- e. Conditions of purchase and sales.

5.3.3 Working Capital Policy:

The two important issues in formulating working capital policy are:

- a. What should ratio of current assets to sales be?
- b. What should the ratio of short term financing to long term financing be?

To increase the effectiveness of working capital, the time taken in the working capital cycle of conversion of raw materials into cash again has to be reduced to a minimum. As changes in the volume of sales affect working capital requirement, these changes in sales should be factored in in determining working capital.



The volume of materials to be held in stock is determined mainly by the rate of consumption, suppliers delivery period and the economic order quantity.

Credit to customers, credit available from suppliers, etc. also should be kept in view in forecasting working capital requirement.

5.3.4 Estimation of Working Capital requirement:

In estimating the working capital requirement, it is very important to have a clear understanding of the working capital cycle time. The working capital cycle time is nothing but the sum total of the time taken by various activities involved from the time an order is placed by a customer till the goods manufactured are billed to the customers and money is realized from the customer at the bank. The longer the working capital cycle time, more is the working capital required and vice versa.

It is the responsibility of the finance manager to ensure that adequate care is taken in working out normal time required in the various activities comprising the current assets cycle time.

5.4 THE MANAGEMENT OF CURRENT ASSETS

- 5.4.1 Current assets are those which can be expected to be turned over into cash within a reasonable period of time ,however not over a year.. In most companies, current assets represent more than 40% of the total assets and the control of this large and volatile investment warrants considerable attention.
- 5.4.2 The total amount of current assets required by an organization is related to the volume of sales and output. If a company increases its sales, it will require a higher level of stocks to service production and sales facilities and a higher level of debtors to maintain the increased sales volume.
- 5.4.3 However, management still has some discretion over the level of current assets at any particular level of output, though a risk-return trade-off is involved. The lower the level of current assets, the more profitable the company will be (as asset turnover will be increased), but there will also exist a higher risk of running short of stocks or cash in the event of an unexpected increase in demand or claim from a supplier.
- 5.4.4 Similarly, a reduced level of debtors may increase the asset turnover of the company, but adversely affect profits through a drop in sales. A credit policy is part of a company's 'marketing mix' and they may lose sales to competitors who may offer more attractive credit terms.
- 5.4.5 The general rule with current assets is to determine the minimum required quantity at the expected level of output and add a safety margin to cover any contingencies, the size of the safety margin being dependent on management's attitude to risk.

5.4.6 Managing Stocks:

The amount of capital employed that is 'locked up' in stocks will affect profitability. However, a certain level of stocks is necessary for the following reasons:

- a. Materials and parts can be purchased at a lower rate when purchased in large lots and anticipated increases in material costs may be avoided.



- b. Reserve or safety stocks are required to avoid a costly situation of stock-outs and consequent stoppages of production and interruption in deliveries. In process industries, shut down and re-start of a plant are complex and time-consuming operations and also would result in higher wastages and increased cost of production.
- c. The length of production time cycles can vary. In pharmaceutical industry, for example, a batch may spread over a few days from start to completion.
- d. The production flows from different manufacturing stages will not match and the imbalance is adjusted through intermediate stock holdings. This is especially true in large automobile factories, where final finished product is basically an assembly of components and sub-assemblies produced in a large section of shops in the factory and also bought from outside.
- e. The order pattern is not even. Orders arrive in irregular flows and to maintain customer goodwill quick deliveries are essential. This applies to any jobbing industry.
- f. There may be difficulties in forecasting future demand patterns.
- g. Economies of scale may be lost.

If all the stages of production from buying of raw materials to the final demand of the customers could be synchronized, then there would be no need for stocks to be kept at any stage in the production – distribution system. This is the principle on which concepts such as Just-in-time (JIT) manufacturing builds upon. Essential to such approaches are advanced manufacturing technology, particularly flexible manufacturing systems and continuous flow where it is possible to reduce the set-up costs between batches and eliminate the need for stock-holding to match production rates.

The main characteristics of controlling stocks usually involve some of the following variables:

- a. Demand or usage, and the rate of usage.
- b. Delivery rate
- c. Cost of buying or making one unit
- d. Cost of storing one unit during unit time
- e. Cost of being out of stock
- f. Re-order lead time
- g. Risk of non availability when in need,
- h. Batch size related cost.

Inventories can be effectively managed by monitoring actual performance through various financial turnover ratios, and employing techniques such as Just-in-time (JIT), Material Resource Planning (MRP), and Total Quality Management (TQM).

Other tools for Inventory Management are:

- ABC Analysis
- Standardization and Variety Reduction



- Value Engineering
- Controls through Bar coding, RFID
- Performance management

5.4.7 Managing Receivables and Credit:

The amount of a company's funds 'locked up' in debtors at any time is determined by the following:

- a. The volume of sales
- b. The credit policy
- c. The efficiency of debt collection
- d. The occurrence of bad debts.
- e. Industry bench marks.

It has been observed that for manufacturing companies, about 20% of the company's assets may be held as debtors.

An increase in sales will automatically lead to an increase in the level of debtors if the credit terms are maintained. Consequently there will be a need for an increase in the level of finance for debtors and it is also likely that increased sales will place demands on production and purchasing which in turn may require additional funds. Further, it is likely that there will be an increase in the doubtful debt provision and discounts.

The factors in Credit Management are:

1. Terms of payment:
 - Cash
 - Credit
 - Consignment
 - Bill of Exchange
 - Letter of Credit
2. Credit Policy Variables:
 - Credit standards
 - Credit Period
 - Cash Discount
 - Collection Effort

Credit Evaluation is important and the following techniques can be employed:

- Traditional:
 - Character
 - Capacity
 - Capital
 - Collateral
 - Conditions



FINANCIAL MANAGEMENT DECISIONS

- Numerical credit scoring
- Employing specialist agencies

Sources of information for credit evaluation are the financial statements of the customers, Bank references, referrals and past experience.

Financial ratios such as average age of debts outstanding, and collection period can be used to monitor debtors. Customer account profitability should be worked out to decide upon the most profitable customers, and those consuming significant resources of the organization.

Credit granting is an important decision and should be handled by a duly authorised senior executive specifically designated for the purpose.

5.4.8 Short-term Investments:

If a company has a surplus of cash and does not expect this surplus to be used in the near future it should invest the funds in the short-term money market, such as bank deposits, inter-corporate loans and treasury bills. The security of funds is more important than the return achieved out of investing such funds.

5.4.9 Management of Cash:

Cash is a non-earning asset, and therefore, the natural policy is to minimize it. Any surplus should be suitably invested. Short- and medium-term cash flow forecasts may be used for predicting fluctuations in cash flow.

The cost of holding cash is not only the profit that could have been earned had the funds been put to other uses, but also the depreciation due to inflation and possible changes in exchange rates.

However, there are some good reasons for holding cash:

- a. Transactional purposes
- b. As collateral for bankers against borrowings
- c. Precautionary motive to meet uncertainties and emergencies
- d. Funds for speculation
- e. Cash balances help improve a company's credit rating.

Essentially the efficient management of cash is the synchronization of the cash flows. This is achieved not only by the careful management of the cash conversion cycle but also the management of the float (the time taken to clear and deposit cheques – includes mail float, processing float in the company and clearing float).

5.5.0 The Management of Current Liabilities:

5.5.1 Current liabilities are all the debts owed by a company which are due for payment within a reasonable period of time but not over a year. However, while they exist, they represent the short-term financing of the company.

5.5.2 There are two possible approaches to the modeling of current liabilities:

- a. They may be ignored and instead the financing costs incorporated into the appropriate current asset. For example, the creditors can be incorporated into the inventory model.



- b. They may be incorporated into the short-term finance element, i.e., cash. This requires the treatment of short-term finances as multiple elements and thus programming techniques are appropriate.

5.5.3 Managing Creditors:

Trade credit is a major source of short-term funds for most companies.

However, the level of trade credit, like all forms of financing, must not be taken beyond the capacity of the company's cash flow to service the payment requirements when they fall due.

To control credit, a company should monitor the average age of accounts payable and match these payments with receivables in their cash budget. Some suppliers offer cash discounts and unless a company is very short of funds it is usually a sound rule to accept discounts whenever possible.

- 5.6.0 A higher current ratio is not always a good indicator as it amounts to ineffective utilization of funds.
- 5.7.0 Very efficient finance person will keep an eye always on Asset liability management (ALM) so as to balance short term and long term assets and liabilities prudently.
- 5.8.0 The articles appended at the end of chapter will further illustrate some of the concepts discussed in the chapter.

Keeping Receivables Rolling At DSC Logistics, “keep ‘em moving” applies to orders and payments as well as to warehousing and delivery. Third in a series of articles on using software to improve the order-to-cash cycle.

Marie Leone, CFO.com, May 25, 2004

At logistics and supply-chain company DSC Logistics, chief financial officer JoAnn Lilek recognizes that “one key to making money in logistics is business process automation.”

Lilek's affection for automation extends to the order-to-cash cycle, in which she includes order entry, invoicing, accounts receivable, dispute resolution, collection, and cash application. By her lights, automating that cycle reduces costly, time-consuming errors, boosts collections, and improves working capital.

Those three improvements would be important to any business — but they're especially important for a company like DSC whose profits depend on high transaction volume. As a third-party logistics manager, DSC arranges the shipment, warehousing, and delivery of goods, and settles accounts all along the way. Tens of thousands of business transactions pass through DSC's systems every month, so management has developed a keen appreciation for quick and error-free order-to-cash processes.

DSC is private, and Lilek won't reveal hard numbers associated with order-to-cash lapses or improvements, but she contends that the \$300 million company uses its \$6 million information technology budget “effectively.” What's more, adds the finance chief, some of the company's accounts receivable upgrades have improved the general-ledger processes of its customers. In fact, says chief information officer Jon Fieldman, integrating the flow of data between DSC and its customers is like implementing a merger because it “tied us so tightly together.”



Close customer contact, it happens, is how the company began. In 1960, Jim McIlrath was fired from a cold-storage company for arguing with the owner over expanding the business to help customers warehouse dry goods. McIlrath started his own business on Chicago's South Side — Dry Storage Corp., or DSC — whose current chief executive officer is his daughter Ann Drake.

Window on Receivables

Close customer contact, in IT terms, often means data visibility — which is “a very relevant piece” of the order-to-cash cycle, says Lilek.

Two years ago, Fieldman introduced a Web-based tool from Viewlocity that gives customers a window on their part of DSC's supply chain. Customers can search and filter order and inventory information in near real time; date-time stamps enable them to examine the history or check up on the status of any order.

After adding transparency to their supply chain, Lilek and Fieldman turned to the august business practice of invoicing. In some cases, their goal was to eliminate paper invoices; in other cases, it was to banish invoices altogether.

Paperless accounts receivable had plenty of takers among DSC's clientele. Most of its customers are *Fortune* 500 retailers and manufacturers — such as Kimberly-Clark, Multifoods, Georgia-Pacific, Unilever, and Kellogg's — that already use electronic data interchange (EDI) to transfer transaction information.

As for freeing the process from invoices completely, one approach is to use EDI 214 data, which can automatically update a customer's supply chain system with shipment status information. A customer would integrate EDI 214 into its account payable system, then link to DSC's accounts receivable system, part of JD Edwards' OneWorld enterprise resource planning (ERP) system.

After the two systems are synched up, payment terms, carrier rates, and any other parameters are fed into the customer's system. When a customer places an order, the carrier's delivery of the appropriate goods initiates an EDI 214 transmission to the customer; the customer's system then automatically authorizes a payment to DSC. Price discrepancies are kicked out for investigation.

Looking for Trouble

Although discrepancies must be investigated manually, Lilek insists that the greater the amount of automation in the accounts receivable process, the fewer the instances of manual intervention — and the less time and money spent researching and correcting errors. Exorcising manual postings from the order-to-cash cycle, she adds, is fundamental to good accounting, especially in a business with a high volume of transactions.

Lilek contends, however, that improving “data matching” is even more important to the order-to-cash cycle. Data matching refers to linking a payment with its corresponding invoice number and order number — which are usually different. That's another reason Lilek favors eliminating invoices entirely: no invoice number means that only the order number need be linked to the customer's remittance.



It took time to build the three-part information technology system that keeps DSC humming. In 1998, Fieldman and his team integrated DSC's proprietary warehouse management system, which tracks and manages orders and inventory for 30 U.S.-based distribution centers, with a customized transportation system from i2 Technologies. In 2003, the company completed the integration of the OneWorld ERP software, tying the entire system together by running the applications on multiple AS/400 servers.

The effort was shepherded by both IT and operations executives because many of the changes were driven by customers who believed that improving DSC's order-to-cash cycle would benefit them, too. For example, now that transactions are pushed through DSC's system faster and with fewer errors, its customers enjoy faster, less-error-prone settlement.

Beyond Order-to-Cash

Lilek believes that one of DSC's business strengths is maintaining consistent processes from department to department across the company. During the next year, she wants to exploit the company's order-to-cash technology to pursue other business-process goals.

For instance, eventually she'd like to eliminate the paper check-cutting process when DSC must pay its own suppliers. Today, a manager for the general ledger tells an accounting staffer that a batch of invoices needs to be reviewed and posted, and that checks need to be cut and mailed.

In an automated scenario, it would be DSC's financial system that was loaded with payment terms and other invoicing criteria. An invoice submitted for payment would prompt an electronic funds transfer if all the criteria were met. The bigger challenge would be getting DSC and its suppliers to adopt such a system, says Lilek, but she has high hopes — she's been through something like this before.

Small Is Big

Baby-food maker Milnot/Beech-Nut keeps up with the industry's big boys by holding down trade-spending costs. Second in a series of articles on using software to improve the order-to-cash cycle.

Marie Leone, CFO.com

May 18, 2004

"Small is big here." That catchphrase, for Beech-Nut baby food, applies to more than tiny taste buds and strained peas, according to Alain Souligny, chief financial officer of Beech-Nut parent Milnot Holding Corp.

"As a small company, we try very hard to stay ahead of changes in the marketplace, so that we can use [the head start] as a competitive edge," asserts Souligny. And Milnot/Beech-Nut — a privately held St. Louis company whose 2003 revenues totaled \$175 million — needs every edge it can get; its competitors include \$25 billion Novartis, makers of Gerber baby food, and \$71 billion Nestle, which manufactures Carnation evaporated milk.

One way Milnot/Beech-Nut keeps ahead of the competition is by using technology to improve the order-to-cash cycle. Not only do those improvements support accounts receivable, says



Souligny, but they also help alleviate the endemic industry problems related to trade spending — the costs that manufacturers incur when they rebate retailers for product promotions.

“Short pays” are one such problem. Retailers who know they’re due a rebate from a manufacturer will push through an unauthorized invoice reduction — a short pay — rather than wait for the reimbursement. Without proper communication between the two parties, the manufacturer can be stuck with numerous partially paid invoices that must be manually reconciled by its accounts receivable department.

Automation would go a long way to solve the problem, if only the industry could agree on a single communication conduit. Wal-Mart, for example, demands that Milnot/Beech-Nut use electronic supply-chain technology from A2 Automation; US Food Service requires that the company use technology from EFS Network; and other customers insist on a direct connection by electronic data interchange (EDI).

Until that (far-off) day when communication systems are standardized, says Souligny, Milnot/Beech Nut’s strategy is to get its own house in order by removing surprises from the order, invoice, and trade-spending processes — what he calls “the perfect order.” That means having enough product to fill each order completely; making shipments and deliveries on time; invoicing accurately; following through with timely receivables collection and posting; and eliminating customer disputes and unexpected deductions.

Milnot/Beech-Nut’s tactical response was to improve the efficiency of back-office operations and trade-spending planning, and to build a data warehouse that would enable the company to measure profitability at the customer and product level.

In 1998 Milnot/Beech-Nut began an enterprise-resource-planning (ERP) project based on a Ross iRenaissance enterprise system. Although Souligny believes that the project could have been completed within 18 months, a failed merger attempt with H.J. Heinz Co. that dragged on from 1999 through 2000 stalled the implementation. The company completely replaced its legacy system only this year.

This year Milnot/Beech-Nut completed the transition from its legacy enterprise system to iRenaissance enterprise-resource-planning (ERP) software from Ross Systems Inc. Data from the Ross system is extracted, standardized, and sent to the company’s home-grown executive information system, which aggregates sales and operational data, including the coveted customer-profitability/product-profitability metrics.

Ed Roe, director of information systems, is in the process of outsourcing all EDI communications to Transcentric, so sales director Tim McCreery and corporate controller Connie Huck can focus on trade-spending issues. McCreery and Huck’s finance/operations team has partnered with Minneapolis-based Gelco Trade Management Group to develop a deduction management system.

Although the team continues to work with Gelco to tweak the software, Milnot/Beech-Nut executives say that the Web-based application is already slashing the administrative costs of processing customer deductions. In addition, McCreery and Huck are setting up a feed of syndicated industry data into the trade management system so they’ll be able to calculate the return on investment of individual trade programs.



In recent years Milnot/Beech-Nut has pumped \$500,000 annually into hardware and software purchases, says Souligny, and the smart application of IT dollars has helped the company's information systems remain sleek. Roe runs the department with just one other employee, and the company's total annual MIS budget is less than 1 percent of sales..

Souligny points out that the net effect of the order-to-cash process improvements — including reductions in headcount and trade spending, as well as improved cash collection — have almost offset the cost of running Milnot's corporate finance department.

In the past year, he adds, trade-spending costs for the company's Beech-Nut brand were reduced by 3.8 percent &mdash a \$4.2 million saving — while the brand grew market share by one percentage point. Increased control over trade-promotion spending reduced month-end customer deductions by \$1.5 million compared with the previous year. Souligny also confirms improved invoice accuracy, but he'll need more historical data to quantify the improvement.

Souligny says that the company still needs to work on its customer scorecard — a ranking Milnot/Beech-Nut's top 25 customers by sales. "The scorecard is the ultimate test" for the order-to-cash cycle, he notes, because executives can easily drill down to the root causes of difficulties with order completion, on-time shipments, sales increases, or profit contributions.

Milnot/Beech-Nut's investments in the order-to-cash cycle have an eye on that not-so-distant future when "manufacturers will be fully responsible for managing their inventory" at the retail level, according to Souligny. Someday soon, he believes, his customer reps will automatically know when a grocery store is low on, say, jars of banana supreme, and ship out just the right amount the next hour.

Improving Milnot/Beech-Nut's order-to-cash cycle is just the beginning, adds the finance chief. Souligny says he's glad to be at a smaller outfit where IT projects can be fast-tracked and management doesn't get caught up in big-company politics. It seems "small is big" for Souligny, too.