

1 Introduction:

Key terms:

Working Capital – it is a firm's investment in short-term assets; which includes cash, marketable securities, inventory, and accounts receivable. It is equal to current assets.

Net Working Capital – is defined as current assets *minus* current liabilities.

Working Capital Policy – is the basic policy decisions regarding (1) *target levels* for each category of current assets and (2) *how* current assets will be financed.

Working Capital Management – involves both setting working capital policy and carrying out that policy in day-to-day operations.

1.1 Management of net working capital involves:

- Regulating the various types of current assets and current liabilities
- Making decisions about how current assets should be financed, for example, through short-term debt, long-term debt, or equity.

1.2 Current v Non-current Sources of Finance:

Net working capital is *increased* when current assets are financed through non-current sources.

1.3 The liquidity of current assets will affect the terms and availability of short-term credit. The *greater* the liquidity, the *easier* it becomes, generally, to obtain a short-term credit.

2 Alternative Current Asset Investment Policies

2.1 Three alternative policies regarding the total amount of current assets carried by a firm:

(a) *Relaxed current asset investment policy*

A policy under which relatively large amounts of cash, marketable securities, and inventories are carried and under which sales are stimulated by a liberal credit policy, resulting in a high level of receivables.

(b) *Restricted current asset investment policy*

A policy under which holdings of cash, securities, inventories, and receivables are minimized.

(c) *Moderate current asset investment policy*

A policy that is between the relaxed and restricted policies.

2.2 Factors affecting the optimal level of current asset investment:

- Uncertainty – example, holding safety stock in hand to cope with unexpected rise in demand.
- Terms for credit sales
- Changes in technology – example, more efficient machine to produce at a faster rate.

2.3 A restricted current asset investment policy, generally, provides the *highest* expected return on this investment, but it entails the *greatest* risk.

2.4 On the contrary, a relaxed current asset investment policy, generally, provides the *lowest* expected return on this investment, but it entails the *lowest* risk.

2.5 The management of net working capital requires consideration for the trade-off between return and risk:

- Holding more current than fixed assets means a reduced liquidity risk, greater flexibility.
- However, the rate of return will be less with current assets than with fixed assets.
- Long-term financing has *less* liquidity risk associated with it than short-term debt, but it also carries a *higher* cost.

2.6 Working capital policy is reflected in current ratio, quick ratio, turnover of cash and securities, inventory turnover, and day sales outstanding.

3 The Concept of Zero Working Capital

3.1 According to this concept working capital is defined as **Inventories + Receivables – Payables**. The rationale here is (1) that inventories and receivables are the keys to making sales, but (2) that inventories can be financed by suppliers through accounts payable.

3.2 Financial benefits associated with zero working capital policy:

- Every dollar freed up by reducing inventories or receivables, or by increasing payables, results in a one-time contribution to cash flow
- A movement toward zero working capital permanently raises a company's earnings.

3.3 It is not possible for most firms to achieve zero working capital and infinitely efficient production. Still, a focus on minimizing receivables and inventories while maximizing payables will help a firm lower its investment in working capital and achieve financial and production economies.

4 Managing the Components of Working Capital

Working capital consists of four main components: cash, marketable securities, inventory, and accounts receivable.

Cash Management

4.1 Cash refers to currency and demand deposits. Cash management involves having the optimum, neither excessive nor deficient, amount of cash on hand at the right time.

4.2 The objective of cash management is to invest excess cash for a return while retaining sufficient liquidity to satisfy future needs.

4.3 The amount of cash to be held depends upon the following factors:

- Cash management policies

- Current liquidity position
- Management's liquidity risk preferences
- Schedule of debt maturity
- The firm's ability to borrow
- Forecasted short- and long-term cash flow
- The probabilities of different cash flows under varying circumstances

4.4 Cash management also requires knowing the amount of funds available for investment and the length of time for which they can be invested. A firm may invest its funds in the following:

- Term deposits
- Money market funds
- Demand deposits that pay interest
- Securities

4.5 Firms hold cash for the following reasons:

- Transactions
- Compensation to banks for providing loans and services
- Precautionary step
- Speculative gains

4.6 The cash accounts of most firms can be thought of as consisting of transactions, compensating, precautionary, and speculative balances.



Key terms:

Transactions Balance – A cash balance associated with payments and collections; the balance necessary for day-to-day operations.

Compensating Balance – A bank balance that a firm must maintain to compensate the bank for services rendered or for granting a loan.

Precautionary Balance – A cash balance held in reserve for random, unforeseen fluctuations in cash inflows and outflows.

Speculative Balance – A cash balance that is held to enable the firm to take advantage of any bargain purchases that might arise.

4.7 Advantages of holding adequate cash and near-cash assets:

- Trade discounts
- Credit rating
- Business opportunities
- Emergencies

4.8 Cash conversion cycle (CCC)

The cash conversion model focuses on the length of time between when a company makes payments to its creditors and when a company receives payment from its customers. Formula:

$$\text{CCC} = \text{Inventory conversion period} + \text{Receivables collection period} - \text{Payables deferral period}$$

Note: Inventory conversion period = $\frac{\text{Days per year}}{\text{Inv. turnover}}$

5 Cash Budget as the Cash Management Tool

5.1 What is a cash budget?

A cash budget is a table showing cash flows (receipts, disbursements, and cash balances) for a firm over a specified period.

5.2 The cash budget provides more detailed information concerning a firm's future cash flows than do the forecasted financial statements. Purpose of a cash budget:

- Forecasts cash inflows, outflows, and ending cash balances
- Used to plan loans needed or funds available to invest

5.3 Timing of cash budget: Daily, weekly, or monthly, depending upon purpose of forecast. Monthly for annual planning, daily for actual cash management.

5.4 Data required for a cash budget:

- Sales forecast
- Information on collections delays
- Forecast of purchases and payment terms
- Forecast of cash expenses, taxes, etc.
- Initial cash on hand
- Target cash balance



Key terms:

Target Cash Balance – it is the desired cash balance that a firm plans to maintain in order to conduct business. The target cash balance probably will be adjusted over time, rising and falling with seasonal patterns and with long-term changes in the scale of the firm's operations.

5.5 Depreciation is a non-cash charge and hence is not included in the cash budget. Only cash payments and receipts appear on cash budget.

5.6 Sources of cash inflows in a cash budget:

- Sales proceeds/collections
- Proceeds from the sale of fixed assets
- Proceeds from stock and bond sales
- Interest earned
- Court settlements

5.7 Collections would be reduced by the amount of the bad debt losses. Lower collections would lead to higher borrowing requirements.

5.8 Cash management techniques generally fall into five categories:

- Synchronizing cash flows

A situation in which inflows coincide with outflows, thereby permitting a firm to hold low transactions balances.

- Using float

Float is defined as the difference between the balance shown in a firm's checkbook and the balance on the bank's records. There are 3 types of float (1) Disbursement float (2) Collection float and (3) Net float.

- Accelerating collections

These are techniques used to speed collections and to get funds where they are needed. Included are (1) Using lockboxes (2) Automatic debit.

- Determining where and when funds will be needed
- Controlling disbursements

Marketable Securities

5.9 What are marketable securities?

They are securities that can be *sold on short notice*.

5.10 Marketable securities typically provide much lower yields than operating assets. Why do companies hold marketable securities? Reasons include:

- Can be converted to cash on very short notice
- Marketable securities provide at least a modest return
- Marketable securities can be used as a substitute for transaction balance, for precautionary balance, for speculative balance, or for all three. In most cases, the securities are held primarily for precautionary purposes.

5.11 According to William Baumol, the optimal level of cash holdings should be higher if costs are high and the time to liquidate marketable securities is *long*, but securities holdings should be *lower* if interest rates are low.

Inventory

5.12 Inventories, which may be classified as (1) supplies, (2) raw materials, (3) work-in-process, and (4) finished goods, are an essential part of virtually all business operations.

5.13 Inventory levels depend heavily upon sales. Inventory must be acquired ahead of sales. Errors in establishment of inventory levels quickly lead either to lost sales or to excessive carrying costs.

5.14 The objectives of inventory management are:

- To ensure that the inventories needed to sustain operations are available
- To hold the costs of ordering and carrying inventories to the lowest possible level

5.15 Categories of inventory costs:

- Carrying Costs: Storage and handling costs, insurance, property taxes, depreciation, and obsolescence.
- Ordering Costs: Cost of placing orders, shipping and handling costs.
- Costs of Running Short: Loss of sales, loss of customer goodwill, and the disruption of production schedules.

5.16 Reducing the average amount of inventory generally reduces carrying costs, increases ordering costs, and may increase the costs of running short.

Account Receivable

5.17 Account receivable is a term used to describe a *balance due* from a customer.

5.18 Accounts Receivable = Credit sales per day X Length of collection period

5.19 When a credit sales is made, the following events occur:

- a) inventories are reduced by the cost of goods sold;
- b) accounts receivable are increased by the sales price; and
- c) the difference is profit, which is added to retained earnings.

5.20 **Average day sales (ADS)** = $\frac{\text{Annual sales}}{360} = \frac{(\text{Units sold}) (\text{Sales price})}{360}$

Day sales outstanding (DSO) = $\frac{\text{Receivables}}{\text{Average day sales}}$

Receivables = (ADS) (DSO)

5.21 Aging schedule is a report showing how long account receivable has been outstanding. It breaks down a firm's receivables by age of account. Aging schedule must be developed from the firm's accounts receivable ledger.

5.22 Credit policy consists of the following variables:

- Credit period
- Credit standards
- Collection policy
- Discounts

5.23 A tighter credit policy may discourage sales. Some customers may choose to go elsewhere if they are pressured to pay their bills sooner.



Key terms:

Credit Policy – is a set of decisions that include a firm’s credit period, credit standards, collection procedures, and discounts offered.

Credit Terms – it is a statement of the credit period and any discounts offered – for example, 2/10, net 30.

Credit Period – it is the length of time for which credit is granted.

Credit Standards – standards that stipulate the required financial strength that an applicant must demonstrate to be granted credit.

Collection Policy – the procedures that a firm follows to collect accounts receivable.

Cash Discount – it is a reduction in the price of goods given to encourage early payment.

6 Short-term Financing

Introduction

6.1 “Short-term” refers to financing that will be repaid in 1 year or less. Short-term financing may be used to meet **seasonal and temporary fluctuations** in a company’s funds position as well as to meet **permanent capital, finance current assets, or provide interim financing** for a **long-term project**.

6.2 Advantages and Drawbacks of Short-term Financing:

Advantages

- It is easier to arrange
- It is less expensive
- More flexible

Disadvantages

- Interest rates fluctuate more often
- Refinancing is frequently needed
- Delinquent repayment may be detrimental to the credit rating of a borrower

6.3 The sources of short-term financing are trade credit, bank loans, bankers’ acceptances, finance company loans, commercial paper, receivable financing, and inventory financing.

6.4 The factors that affect the selection of the source of short-term financing:

- Cost
- Effect on credit rating
- Risk
- Restrictions

- Flexibility
- Expected money market conditions
- The inflation rate
- Corporate profitability and liquidity positions
- The stability of the firm's operations



Key terms:

Permanent Current Assets – are current assets that a firm must carry even at the trough of its cycles.

Temporary Current Assets – are current assets that fluctuate with seasonal or cyclical variations in sales.

6.5 Alternative Current Asset Financing Policies:

The manner in which the permanent and temporary current assets are financed is called the firm's *current asset financing policy*.

There are 3 categories:

- **Moderate:** Match the maturity of the assets with the maturity of the financing. Example, inventory expected to be sold in 30 days could be financed with a 30-day bank loan.
- **Aggressive:** Use short-term financing to finance permanent assets.
- **Conservative:** Use permanent capital for permanent assets and temporary assets.

Trade Credits

6.6 Trade credit is a debt arising from credit sales and recorded as an account receivable by the seller and as an account payable by the buyer. Trade credits, or accounts payable, is the largest single category of short-term debt, representing about 40% of the current liabilities of the average non-financial corporation. Small firms rely heavily on trade credits.

6.7 The cost of trade credit: the following equation can be used to calculate the nominal cost, on an annual basis, of not taking discounts:

$$\text{Nominal annual cost} = \frac{\text{Discount percent}}{100 - \text{Discount percent}} \times \frac{360}{\text{Day credit is outstanding} - \text{Discount period}}$$



Key terms:

Free Trade Credit – Credit received during the discount period.

Costly Trade Credit – Credit taken in excess of free trade credit, whose cost is equal to the discount lost.

Accruals

6.8 Definition: Continually recurring short-term liabilities, especially accrued wages and accrued taxes.

6.9 Accruals are free in that no explicit interest is charged. Firms have little control over the level of accruals. They are influenced by industry custom, economic factors, and tax laws.

Short-term Bank Loans

6.10 Included are:

- Short-term loan (usually mature in a year or less)
- Promissory note
- Compensating balance
- Line of credit
- Revolving credit agreement



Key terms:

Prime rate is a published rate charged by commercial banks to large, strong borrowers.

Promissory note – is a document specifying the terms and conditions of a loan, including the amount, interest rate, and repayment schedule.

Commercial Paper

6.11 What is a commercial paper?

It is an unsecured, short-term promissory notes of large firms, usually issued in denominations of \$100,000 or more and having an interest rate somewhat below the prime rate. Issued by large, strong firms to insurance companies, to pension funds, to money market, and to banks.

6.11 The use of commercial paper is restricted to a comparatively small number of very large concerns that are exceptionally good credit risks.

6.12 One potential problem with commercial paper is that a debtor who is in temporary financial difficulty may receive little help because commercial paper dealings are generally less personal than are bank relationships.

Reading/reference materials:

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- Brockington R. Financial Management. 6th edition. DP Publications Ltd. 1993