

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Working Capital**

##### **2.1.1 Working Capital Definitions**

Generally, working capital refers to a company's investment in current assets – cash, short-term securities, accounts receivable and inventories. However, for the purposes of working capital management, the more descriptive term is net working capital, which refers to the current assets minus current liabilities, which are typically accounts payable and other obligations due within one year. It is also explained as follows: “*Current assets, commonly called working capital, represent the portion of investment that circulates from one form to another in the ordinary conduct of business.*” (Gitman, 2003). This idea embraces the recurring transaction from cash to inventories to receivables and back to cash. As cash substitutes, marketable securities are considered part of working capital.

Filbeck and Krueger (2005), defined working capital management as follows: “*it is the difference between resources in cash or readily convertible into cash (Current assets) and organizational commitments for which cash soon will be required (current liabilities)*”.

The importance of working capital is defined by Wild, Subramanyam, and Halsey (2004, p519), as follows: “It is important as a measure of liquid asset that provide a safety cushion to creditors. It is also important in measuring the liquid reserve available to meet contingencies and the uncertainties surrounding a company’s balance of cash and outflows.”

In general, working capital management is simple and a straightforward concept of ensuring the ability of the organization to fund the difference between the short term assets and short term liabilities (Harris, 2005, cited in Afza & Nazir, 2007). In practice, working capital management has become one of the most important issues in the organizations where many financial executives are struggling to identify the basic working capital drivers and the appropriate level of working capital (Lamberson, 1995).

Working capital, capital budget and capital structure are components of corporate finance. Capital budget and capital structure concerns rising and management long term capital. On the other hand, “*Working capital, including current asset and current liabilities, is the source of short term capital.*” (Chiou et al, 2006).

Current asset is defined by Gitman (2003, p44) as: “*Short term assets that are expected to be converted into cash within one year or less.*” While current liability is

stated as follows: “*Current liabilities are short term liabilities that is expected to be paid within one year or less.*”

The conversion of current assets from inventory to receivables to cash provides the source of cash used to pay the current liabilities. The cash outlays for current liabilities are relatively predictable. When an obligation is incurred, the firm generally knows when the corresponding payment will due. What is difficult to predict are the cash inflows—the conversion of the current assets to more liquid forms. The more predictable its cash inflows, the less net working capital a firm needs. Because most firms are unable to match cash inflows to outflows with certainty, current assets that more than cover outflows for current liabilities are usually necessary. In general, the greater the margin by which a firm’s current assets cover its current liabilities, the better it will be to pay its bills as they come due.

### **2.1.2 Concept of Working Capital**

The working capital meets the short term financial requirements of a business enterprise. It is the investment required for running day-to-day business. It is the result of the time lag between the expenditure for the purchase of raw materials and the collection for the sales of finished products. The components of working capital are inventories, accounts to be paid to suppliers, and payments to be received from customers after sales. Financing is needed for receivables and inventories net of payables. The proportions of these components in the working capital change from

time to time during the trade cycle. The working capital requirements decide the liquidity and profitability of a firm and hence affect the financing and investing decisions. Lesser requirement of working capital leads to less need for financing and less cost for capital and hence availability of more cash for shareholders. However the lesser working capital may lead to lost sales and thus may affect the profitability (Ganesan, 2007).

### **2.1.3 The Importance of Working Capital**

The management of working capital by managing the proportions of the working capital management components is important to the financial health of businesses from all industries. To reduce accounts receivable, a firm may have strict collections policies and limited sales credits to its customers. This would increase cash inflow. However the strict collection policies and lesser sales credit would lead to lost sales thus reducing the profits. Maximizing account payables by having longer credits from the suppliers also has the chance of getting poor quality materials from supplier that would ultimately affect the profitability. Minimizing inventory may lead to lost sales by stock-outs. The working capital management should aim at having balanced, optimal proportions of the working capital management components to achieve maximum profit and cash flow.

The components of working capital constantly change with the cycle of operations, but the amount of working capital is fixed. This is one reason why net working

capital is a useful summary measure of current assets or liabilities (Brealey, Myers and Marcus, 2001). Working capital represents the funds available with the company for day to day operations. Working capital finances the cash conversion cycle. Company cannot survive with negative working capital which represents that the company has no funds for day to day operations.

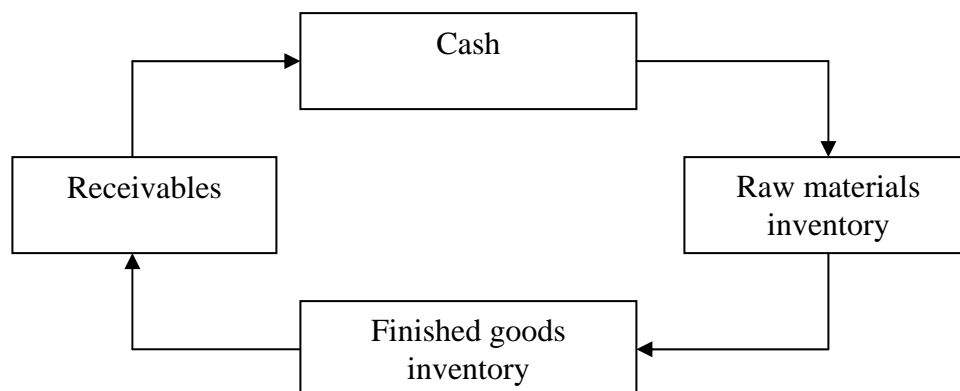


Figure 2.1 Simple cycle of operations (Brealey, Myers and Marcus, 2001, p168)

## 2.2 Cash Conversion Cycle

### 2.2.1 Cash Conversion Cycle Definitions

During the last decade there has been an increased interest in working capital management internationally. The levels of accounts receivable, inventories, and short-term debt affect the liquidity position of the firm significantly. The current and quick ratios have been recognized traditionally as appropriate measures of the liquidity position of a firm. However, both these ratios are static and their appropriateness for liquidity analysis is questionable. Therefore, a dynamic liquidity

measure, the cash conversion cycle approach had been introduced by Hager (1976) and has been recommended by Largay and Stickney (1980).

Richards and Laughlin (1980) suggested that a cash conversion cycle analysis should be used to supplement the traditional but static liquidity ratio analysis because it provides dynamic insights. They concluded that there is a positive relationship between the current and quick ratios and the cash conversion cycle.

The cash conversion cycle (CCC) is the length of time funds are tied up in working capital, or the length of time between paying for working capital and collecting cash from the sale of the working capital (Brigham & Houston, 2007). Brealey, Myers and Marcus (2001) define Cash Conversion Cycle as: *“The longer the production process, the more cash the firm must keep tied up in inventories. Similarly, the longer it takes customers to pay their bills, the higher the value of accounts receivable. On the other hand, if a firm can delay paying for its own materials, it may reduce the amount of cash it needs. In other words, accounts payable reduce net working capital.”*

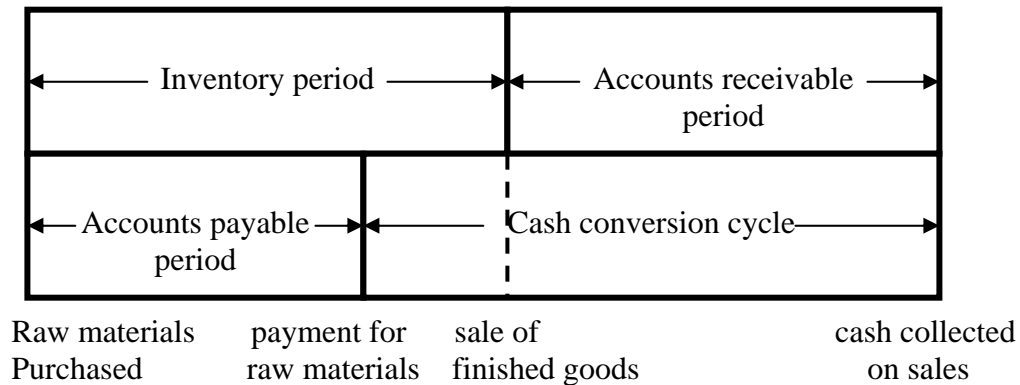
### **2.2.2 Measuring Cash Conversion Cycle**

Cash conversion cycle is simply the amount of time a firm's resources are tied up; calculated by subtracting the average payment period from the operating cycle. A firm's operating cycle is the time from the beginning of the production process to

collection of cash from the sale of the finished product. The operating cycle encompasses two major short-term asset categories: inventory and accounts receivable. It is measured in elapsed time by summing the inventory period (IP) and account receivables period (ARP).

However, the process of producing and selling a product also includes the purchase of production inputs on account, which results in accounts payable. Accounts payable reduce the number of days a firm's resources are tied up in the operating cycle. The time it takes to pay the accounts payable, measured in days, is the accounts payable period (APP). The operating cycle less the average payment period is referred to as cash conversion cycle (CCC). It represents the amount of time the firm's resources are tied up. The formula for the cash conversion cycle is:  $CCC = IP + ARP - APP$ .

- IP is time between purchase of raw material, production of the goods or service and the sale of the product. The calculation of IP is  $\text{inventory} / \text{costs of goods sold} / 365$ .
- ARP is time between sales of the final product on credit and cash receipts for the accounts receivable. The calculation of ARP is  $\text{receivables} / \text{sales} / 365$ .
- APP is time between purchase of raw material on credit and cash payments for the resulting accounts payable. The calculation of APP is  $\text{accounts payable} / \text{costs of goods sold} / 365$ .



Source: Brealey, Myers & Marcus, *Fundamentals of Corporate Finance*

Figure 2.2 Cash conversion cycle model

## 2.2.3 Elements of Cash Conversion Cycle

### 2.2.3.1 Accounts Receivable

Accounts receivable is one of a series of accounting transactions dealing with the billing of customers for goods and services received by the customers. In most business entities this is typically done by generating an invoice and mailing or electronically delivering it to the customer, who in turn must pay it within an established timeframe called credit or payment terms. Ross, Westerfield, Jaffe, and Jordan (2008) define accounts receivable as: “*amounts not yet collected from customers for goods or services sold to them.*”

Weygandt, Keiso, and Kell (2005) define trade receivables as accounts and notes receivables: “*accounts receivables are amounts by customers on account. They result from sale of goods and services. These receivables generally are expected to be*



*collected within 30 to 60 days. They are the most significant type of claim held by a company. Notes receivable represent claim for which instruments of credit are issued as evidence of the debt. The credit instrument normally requires the debtor to pay interest and extends for time periods of 60 – 90 days or longer. Notes and accounts receivables result from sales transactions are often called trade receivables.*

### **2.2.3.2 Inventory**

Ross et al (2008) defined inventory as: “*composed of raw materials to be used in production, work in process, and finished goods.*” Inventory affects both income statement and balance sheet. In the income statement, inventory is vital in determining results of operations for a particular period. As for balance sheet, especially in merchandising companies, inventory is the most significant current asset (Weygandt et al, 2005).

Inventory management is typically much more complicated for exporters in general, and for multinational companies in particular, than for purely domestic firms. The production and manufacturing economies of scale that might be expected from selling products globally may prove elusive if products must be tailored for individual local markets, as very frequently happens, or if actual production takes place in factories around the world (Gitman, 2003).

### **2.2.3.3 Accounts Payable**

Accounts payable are the major source of unsecured short-term financing for business firms. They result from transactions in which merchandise is purchased but no formal note is signed to show the purchaser's ability to the seller. The purchaser in effect agrees to pay the supplier the amount required in accordance with credit terms normally stated on the supplier's invoice (Gitman, 2003). Notes payable is often used instead of accounts payable. Notes that are due for payment within one year or less of the balance sheet are classified as current liabilities.

## **2.3 Current Ratio**

The current ratio as one of the most commonly cited financial ratios measures the firm's ability to meet its short term obligations. Generally, the higher the current ratio, the more liquid the firm is considered to be. A current ratio of 2.0 is occasionally cited as acceptable, but a value's acceptability depends on the industry in which the firm operates (Gitman, 2003, p54).

The current ratio, like any ratio, is affected by various types of transactions. For example, suppose the firm borrows over the long term to raise money. The short run effect would be an increase in cash from the issue proceeds and an increase in long-term debt. Current liabilities would not be affected, so the current ratio would rise. Note that an apparently low current ratio may not be a bad sign for a company with a large reserve of untapped borrowing power (Ross, 2008, p47).

## **2.4 Daily Working Capital**

Daily working capital (DWC) is used to measure company's need for capital. The lower the figure, the less capital it needs to grow. The DWC is calculated by adding Days sales outstanding in accounts receivable and Days sales outstanding in inventory and subtract it with Days sales outstanding in accounts payable. The fewer number of days, the more efficient the use of working capital.

## **2.5 Net Working Capital Level**

Net working capital level (NWCL) is used to measure the proportion of net working capital to its total assets. The NWCL is calculated by dividing Net working capital with total assets of the firm.

## **2.6 Return on Assets**

The primary goal of a business firms is profitability. Business will not survive in the long-run without profitability. It is measured with income and expenses. Income is the money generated from the business activities. Expenses are the costs of resources used up or consumed by the activities of the business. Return on assets is one of the profitability ratios. This is an indicator of how profitable a company is before leverage.

The return on assets (ROA) measures the overall effectiveness of management in generating profits with its available assets. The higher the firm's return on assets, the

better the firm's ability to make a profit (Gitman, 2003). The ROA ratio is calculated by dividing net income to total assets, and it is expressed in a percentage.

## **2.7 Previous Research and Hypothesis Development**

Raheman & Nasr (2007) studied the effect of different variables of working capital management including the average collection period, inventory turnover in days, average payment period, cash conversion cycle and current ratio on the net operating profitability of Pakistani firms. The results show that there was a significant negative relationship between variables of the working capital management and profitability of the firm, meaning that as the cash conversion cycle increases it will lead to decreasing profitability of the firm. Thus managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level.

Teruel & Solano (2007) studied the effects of working capital management on the profitability of a sample of SME firms in Spain. The results demonstrate that managers can create value by reducing their firm's number of day's accounts receivable and inventories. Similarly, shortening the cash conversion cycle also improves the firm's profitability. Hence, there was a significant negative relationship between variables of working capital management and profitability of the firm.

Deloof (2003) on the other hand studied the large Belgian non-financial firms for the 1992 – 1996 periods to investigate the relation between working capital management

and corporate profitability. Trade credit policy, inventory policy and cash conversion cycle is used as a comprehensive measure of working capital management. The result suggests that managers can increase corporate profitability by reducing the number of day's accounts receivable and inventories since there is a negative relationship between working capital management and corporate profitability.

Uyar (2009) studied the relationship of cash conversion cycle with firm profitability in Turkey. The result indicated that there is a significant negative correlation between the CCC and ROA. The firms with shorter CCC are more likely to be more profitable than the firms with longer CCC.

Sen & Oruc (2009) also studied the relationship between working capital management and firm profitability in Istanbul Stock Exchange. According to the results, there is a significant negative relationship between working capital management variables, measured by cash conversion cycle, and the firm's profitability.

Based on the above previous research, the author developed a hypothesis that there is a relationship between efficiency of working capital management variables and firm's profitability in the sample of non-financial companies listed in Kompas 100 index at Indonesia Stock Exchange.