

**RÉPONSE D'HYDRO-QUÉBEC
À L'ENGAGEMENT NUMÉRO 28**

Régie de l'énergie
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Engagement 28 :

Fournir les extraits de Brealey et Myers tel qu'indiqué à HQD-13, Document 2.1 (Demandé par la Coalition).

Réponse à l'engagement 28 :

Les extraits demandés sont reproduits aux pages suivantes.

CHAPTER THIRTY

SHORT-TERM
FINANCIAL
PLANNING

MOST OF THIS book is devoted to long-term financial decisions such as capital budgeting and the choice of capital structure. Such decisions are called *long-term* for two reasons. First, they usually involve long-lived assets or liabilities. Second, they are not easily reversed and therefore may commit the firm to a particular course of action for several years.

Short-term financial decisions generally involve short-lived assets and liabilities, and usually they are easily reversed. Compare, for example, a 60-day bank loan for \$50 million with a \$50 million issue of 20-year bonds. The bank loan is clearly a short-term decision. The firm can repay it two months later and be right back where it started. A firm might conceivably issue a 20-year bond in January and retire it in March, but it would be extremely inconvenient and expensive to do so. In practice, such a bond issue is a long-term decision, not only because of the bond's 20-year maturity but also because the decision to issue it cannot be reversed on short notice.

A financial manager responsible for short-term financial decisions does not have to look far into the future. The decision to take the 60-day bank loan could properly be based on cash-flow forecasts for the next few months only. The bond issue decision will normally reflect forecasted cash requirements 5, 10, or more years into the future.

Managers concerned with short-term financial decisions can avoid many of the difficult conceptual issues encountered elsewhere in this book. In a sense, short-term decisions are easier than long-term decisions, but they are not less important. A firm can identify extremely valuable capital investment opportunities, find the precise optimal debt ratio, follow the perfect dividend policy, and yet founder because no one bothers to raise the cash to pay this year's bills. Hence the need for short-term planning.

We start the chapter with an overview of the major classes of short-term assets and liabilities. We show how long-term financing decisions affect the firm's short-term financial planning problem. We describe how financial managers trace changes in cash and working capital, and we look at how they forecast month-by-month cash requirements or surpluses and develop short-term financing strategies. We conclude by examining more closely the principal sources of short-term finance.



30.1 THE COMPONENTS OF WORKING CAPITAL

Short-term, or *current*, assets and liabilities are collectively known as **working capital**. Table 30.1 gives a breakdown of current assets and liabilities for all manufacturing corporations in the United States in 2000. Note that current assets are larger than current liabilities. **Net working capital** (current assets less current liabilities) was positive.

Current Assets

One important current asset is *accounts receivable*. When one company sells goods to another company or a government agency, it does not usually expect to be paid immediately. These unpaid bills, or *trade credit*, make up the bulk of accounts receivable. Companies also sell goods on credit to the final consumer. This *consumer credit* makes up the remainder of accounts receivable. We will discuss the management of receivables in Chapter 32. You will learn how companies decide which customers are good or bad credit risks and when it makes sense to offer credit.

Another important current asset is *inventory*. Inventories may consist of raw materials, work in process, or finished goods awaiting sale and shipment. Firms

TABLE 30.1

Current assets and liabilities for U.S. manufacturing corporations, first quarter, 2001 (figures in \$ billions).

Source: U.S. Census Bureau, *Quarterly Financial Report for Manufacturing, Mining and Trade Corporations, First Quarter, 2001* (www.census.gov/prod/www/abs/qfr-mm).

Current Assets		Current Liabilities	
Cash	156.3	Short-term loans	228.4
Marketable securities	104.4	Accounts payable	357.3
Accounts receivable	527.2	Accrued income taxes	55.5
Inventories	510.7	Current payments due on long-term debt	85.3
Other current assets	246.9	Other current liabilities	507.4
Total	1547.5	Total	1233.9
Net working capital (current assets – current liabilities) = \$1,547.5 – 1,233.9 = \$313.6 billion			

invest in inventory. The cost of holding inventory includes not only storage cost and the risk of spoilage or obsolescence but also the opportunity cost of capital, that is, the rate of return offered by other, equivalent-risk investment opportunities.¹ The benefits of holding inventory are often indirect. For example, a large inventory of finished goods (large relative to expected sales) reduces the chance of a “stockout” if demand is unexpectedly high. A producer holding a small finished-goods inventory is more likely to be caught short, unable to fill orders promptly. Similarly, large inventories of raw materials reduce the chance that an unexpected shortage would force the firm to shut down production or use a more costly substitute material.

Bulk orders for raw materials lead to large average inventories but may be worthwhile if the firm can obtain lower prices from suppliers. (That is, bulk orders may yield quantity discounts.) Firms are often willing to hold large inventories of finished goods for similar reasons. A large inventory of finished goods allows longer, more economical production runs. In effect, the production manager gives the firm a quantity discount.

The task of inventory management is to assess these benefits and costs and to strike a sensible balance. In manufacturing companies the production manager is best placed to make this judgment. Since the financial manager is not usually directly involved in inventory management, we will not discuss the inventory problem in detail.

The remaining current assets are cash and marketable securities. The cash consists of currency, demand deposits (funds in checking accounts), and time deposits (funds in savings accounts). The principal marketable security is commercial paper (short-term, unsecured notes sold by other firms). Other securities include U.S. Treasury bills and state and local government securities.

In choosing between cash and marketable securities, the financial manager faces a task like that of the production manager. There are always advantages to holding large “inventories” of cash—they reduce the risk of running out of cash and having to raise more on short notice. On the other hand, there is a cost to holding idle

¹How risky are inventories? It is hard to generalize. Many firms just assume inventories have the same risk as typical capital investments and therefore calculate the cost of holding inventories using the firm's average opportunity cost of capital. You can think of many exceptions to this rule of thumb however. For example, some electronics components are made with gold connections. Should an electronics firm apply its average cost of capital to its inventory of gold? (See Section 11.1.)

cash balances rather than putting the money to work in marketable securities. In Chapter 31 we will tell you how the financial manager collects and pays out cash and decides on an optimal cash balance.

Current Liabilities

We have seen that a company's principal current asset consists of unpaid bills from other companies. One firm's credit must be another's debit. Therefore, it is not surprising that a company's principal current liability often consists of *accounts payable*, that is, outstanding payments to other companies. A firm that delays paying its bills is in effect borrowing money from its suppliers. So companies that are strapped for cash sometimes solve the problem by *stretching payables*.

To finance its investment in current assets, a company may rely on a variety of short-term loans. Banks and finance companies are the largest source of such loans, but companies may also issue short term debt, called *commercial paper*. We will describe the different kinds of short-term debt toward the end of the chapter.



30.2 LINKS BETWEEN LONG-TERM AND SHORT-TERM FINANCING DECISIONS

All businesses require capital, that is, money invested in plant, machinery, inventories, accounts receivable, and all the other assets it takes to run a business efficiently. Typically, these assets are not purchased all at once but obtained gradually over time. Let us call the total cost of these assets the firm's *cumulative capital requirement*.

Most firms' cumulative capital requirement grows irregularly, like the wavy line in Figure 30.1. This line shows a clear upward trend as the firm's business grows. But there is also seasonal variation around the trend: In the figure the capital requirements peak late in each year. Finally, there would be unpredictable week-to-week and month-to-month fluctuations, but we have not attempted to show these in Figure 30.1.

The cumulative capital requirement can be met from either long-term or short-term financing. When long-term financing does not cover the cumulative capital requirement, the firm must raise short-term capital to make up the difference. When long-term financing *more* than covers the cumulative capital requirement, the firm has surplus cash available for short-term investment. Thus the amount of long-term financing raised, given the cumulative capital requirement, determines whether the firm is a short-term borrower or lender.

Lines A, B, and C in Figure 30.1 illustrate this. Each depicts a different long-term financing strategy. Strategy A always implies a short-term cash surplus. Strategy C implies a permanent need for short-term borrowing. Under B, which is probably the most common strategy, the firm is a short-term lender during part of the year and a borrower during the rest.

What is the *best* level of long term financing relative to the cumulative capital requirement? It is hard to say. There is no convincing theoretical analysis of this question. We can make practical observations, however. First, most financial managers attempt to "match maturities" of assets and liabilities. That is, they finance long-lived assets like plant and machinery with long-term borrowing and equity. Second, most firms make a permanent investment in net working capital (current assets less current liabilities). This investment is financed from long-term sources.