Chapter 11

Short-Term Financing

Learning Objectives

After studying Chapter 11, you should be able to:

- Understand the sources and types of spontaneous financing.
- Calculate the annual cost of trade credit when trade discounts are forgone.
- Explain what is meant by "stretching payables" and understand its potential drawbacks.
- Describe various types of negotiated (or external) short-term borrowing.
- Calculate the effective annual interest rate on short-term borrowing with or without a compensating balance requirement and/or a commitment fee.
- Understand what is meant by factoring accounts receivable.

Topics

- Spontaneous Financing
- Negotiated Financing
- Factoring Accounts Receivable
- Composition of Short-Term Financing

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Spontaneous Financing

Types of spontaneous financing
- Accounts Payable (Trade Credit from Suppliers)
- Accrued Expenses

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Spontaneous Financing

Trade Credit -- credit granted from one business to another.

Examples:

– *Open Accounts*: the seller ships goods to the buyer with an invoice specifying goods shipped, total amount due, and terms of the sale.
– *Notes Payable*: the buyer signs a note that evidences a debt to the seller.

Spontaneous Financing

Trade Acceptances: the seller draws a ***draft*** on the buyer that orders the buyer to pay the draft at some future time period.

Draft -- A signed, written order by which the first party (drawer) instructs a second party (drawee) to pay a specified amount of money to a third party (payee). The drawer and payee are often one and the same.

Spontaneous Financing: Open Account – Terms of Sales

- *COD and CBD - No Trade Credit*: the buyer pays *cash on delivery* or *cash before delivery*. This reduces the seller's risk under *COD* to the buyer refusing the shipment or eliminates it completely for CBD.
- *Net Period - No Cash Discount* -- when credit is extended, the seller specifies the period of time allowed for payment. "Net 30" implies full payment in 30 days from the invoice date.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Spontaneous Financing: Open Account – Terms of Sales

- *Net Period - Cash Discount* -- when credit is extended, the seller specifies the period of time allowed for payment *and* offers a cash discount if paid in the early part of the period. "2/10, net 30" implies full payment within 30 days from the invoice date less a 2% discount if paid within 10 days.
- *Seasonal Dating* -- credit terms that encourage the buyer of seasonal products to take delivery before the peak sales period and to defer payment until after the peak sales period.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Trade Credit as a Means of Financing

What happens to accounts payable if a firm purchases $1,000/day at "net 30"?

$1,000 x 30 days = $30,000 account balance

What happens to accounts payable if a firm purchases $1,500/day at "net 30"?

$1,500 x 30 days = $45,000 account balance

A $15,000 increase from operations!

COLLEGE OF ENGINEERING

Cost to Forgo a Discount

What is the approximate annual cost to forgo the cash discount of "2/10, net 30" after the first ten days?

Approximate annual interest cost =

$$\frac{\text{\% discount}}{(100\% - \text{\% discount})} \times \frac{\text{365 days}}{(\text{payment date} - \text{discount period})}$$

COLLEGE OF ENGINEERING

Cost to Forgo a Discount

What is the approximate annual cost to forgo the cash discount of "2/10, net 30," and pay at the end of the credit period?

Approximate annual interest cost =

$$\frac{2\%}{(100\% - 2\%)} \times \frac{365 \text{ days}}{(30 \text{ days} - 10 \text{ days})}$$

= (2/98) x (365/20) = 37.2%

Cost to Forgo a Discount

The approximate interest cost over a variety of payment decisions for "2/10, net ____."

Payment Date*	Annual rate of interest
11	744.9%
20	74.5
30	37.2
60	14.9
90	9.3

* days from invoice date

S-t-r-e-t-c-h-i-n-g Account Payables

Postponing payment beyond the end of the net (credit) period is known as "stretching accounts payable" or "leaning on the trade."

Possible costs of "stretching accounts payable"

- Cost of the cash discount (if any) forgone
- Late payment penalties or interest
- Deterioration in credit rating

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Advantages of Trade Credit

Compare costs of forgoing a possible cash discount against the advantages of trade credit.

- Convenience and availability of trade credit
- Greater flexibility as a means of financing

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Who Bears the Cost of Funds for Trade Credit?

- Suppliers -- when trade costs cannot be passed on to buyers because of price competition and demand.
- Buyers -- when costs can be fully passed on through higher prices to the buyer by the seller.
- Both -- when costs can partially be passed on to buyers by sellers.

Accrued Expenses

- *Accrued Expenses* -- Amounts owed but not yet paid for wages, taxes, interest, and dividends. The accrued expenses account is a short-term liability.
  - Wages -- Benefits accrue via no direct cash costs, but costs can develop by reduced employee morale and efficiency.
  - Taxes -- Benefits accrue until the due date, but costs of penalties and interest beyond the due date reduce the benefits.

Spontaneous Financing

Types of negotiated financing:

- Money Market Credit
  - Commercial Paper
  - Bankers' Acceptances
- Unsecured Loans*
  - Line of Credit
  - Revolving Credit Agreement
  - Transaction Loan

* Secured versions of these three loans also exist.

COLLEGE OF ENGINEERING

"Stand-Alone" Commercial Paper

Commercial Paper -- Short-term, unsecured promissory notes, generally issued by large corporations (unsecured corporate IOUs).

- Commercial paper market is composed of the (1) dealer and (2) direct-placement markets.
- Advantage: Cheaper than a short-term business loan from a commercial bank.
- Dealers require a line of credit to ensure that the commercial paper is paid off.

COLLEGE OF ENGINEERING

"Bank-Supported" Commercial Paper

- A bank provides a letter of credit, for a fee, *guaranteeing* the investor that the company's obligation will be paid.
  - Letter of credit (L/C) -- A promise from a third party (usually a bank) for payment in the event that certain conditions are met. It is frequently used to guarantee payment of an obligation.
  - Best for lesser-known firms to access lower cost funds.

Bankers' Acceptances

Bankers' Acceptances -- Short-term promissory trade notes for which a bank (by having "accepted" them) promises to pay the holder the face amount at maturity.

- Used to facilitate foreign trade or the shipment of certain marketable goods.
- Liquid market provides rates similar to commercial paper rates.

Short-Term Business Loans

- *Unsecured Loans* -- A form of debt for money borrowed that is not backed by the pledge of specific assets.
- *Secured Loans* -- A form of debt for money borrowed in which specific assets have been pledged to guarantee payment.

Unsecured Loans

- *Line of Credit (with a bank)* -- An informal arrangement between a bank and its customer specifying the maximum amount of credit the bank will permit the firm to owe at any one time.
  - One-year limit that is reviewed prior to renewal to determine if conditions necessitate a change.
  - Credit line is based on the bank's assessment of the creditworthiness and credit needs of the firm.
  - "Cleanup" provision requires the firm to owe the bank nothing for a period of time.

Unsecured Loans

Revolving Credit Agreement -- A formal, legal commitment to extend credit up to some maximum amount over a stated period of time.

- Firm receives revolving credit by paying a commitment fee on any unused portion of the maximum amount of credit.
  - Commitment fee -- A fee charged by the lender for agreeing to hold credit available.
- Agreements frequently extend beyond 1 year.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Unsecured Loans

- *Transaction Loan* -- A loan agreement that meets the short-term funds needs of the firm for a single, specific purpose.
  - Each request is handled as a separate transaction by the bank, and project loan determination is based on the cash-flow ability of the borrower.
  - The loan is paid off at the completion of the project by the firm from resulting cash flows.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Detour: Cost of Borrowing

Interest Rates

- Prime Rate -- Short-term interest rate charged by banks to large, creditworthy customers.

Differential from prime depends on:
- Cash balances
- Other business with the bank
- Cost of servicing the loan

Detour: Cost of Borrowing

Computing Interest Rates

- Collect Basis -- interest is paid at maturity of the note.

Example: $100,000 loan at 10%

stated interest rate for 1 year.

$$\frac{\$10{,}000 \text{ in interest}}{\$100{,}000 \text{ in usable funds}} = 10.00\%$$

Detour: Cost of Borrowing

- Discount Basis -- interest is deducted from the initial loan.

Example: $100,000 loan at 10% stated interest rate for 1 year.

$$\frac{\$10{,}000 \text{ in interest}}{\$90{,}000 \text{ in usable funds}} = 11.11\%$$

Detour: Cost of Borrowing

- *Compensating Balances:* Demand deposits maintained by a firm to compensate a bank for services provided, credit lines, or loans.

Example: $1,000,000 loan at 10% stated interest rate for 1 year with a required $150,000 compensating balance.

$$\frac{\$100{,}000 \text{ in interest}}{\$850{,}000 \text{ in usable funds}} = 11.76\%$$

Detour: Cost of Borrowing

Commitment Fees: The fee charged by the lender for agreeing to hold credit available is on the unused portions of credit.

Example: $1 million revolving credit at 10% stated interest rate for 1 year; borrowing for the year was $600,000; a required 5% compensating balance on borrowed funds; and a .5% commitment fee on $400,000 of unused credit.

What is the cost of borrowing?

Detour: Cost of Borrowing

Interest:	($600,000) x (10%)	= $ 60,000
Commitment Fee:	($400,000) x (0.5%)	= $ 2,000
Compensating Balance:	($600,000) x (5%)	= $ 30,000
Usable Funds:	$600,000 - $30,000	= $570,000

$$\frac{\$60{,}000 \text{ in interest} + \$2{,}000 \text{ in commitment fees}}{\$570{,}000 \text{ in usable funds}} = 10.88\%$$

Detour: Cost of Borrowing

Effective Annual Rate of Interest (generally) =

$$\frac{Total\ Interest\ Paid + Total\ Fee\ Paid}{Usable\ Funds}\left(\frac{365\ days}{\#\ of\ days\ of\ loan}\right)$$

Assume the same loan described on previous slide except that the loan is for 270 days and the 10% rate is on an annual basis. What is the EAR?

- $44,384 in interest, $2,000 in commitment fees, and $570,000 in usable funds.

$$\frac{\$44{,}384 + \$2{,}000}{\$570{,}000} \times \frac{365}{270} = 8.137\% \times 1.3519 = \underline{11.00\%}$$

COLLEGE OF ENGINEERING

Secured (or Asset-Based) Loans

- Security (collateral) -- Asset (s) pledged by a borrower to ensure repayment of a loan. If the borrower defaults, the lender may sell the security to pay off the loan.

  Collateral value depends on:
  - Marketability
  - Life
  - Riskiness

COLLEGE OF ENGINEERING

Uniform Commercial Code

- Model state legislation related to many aspects of commercial transactions that went into effect in Pennsylvania in 1954. It has been adopted with limited changes by most state legislatures.

Article 9 of the Code deals with:

- Security interests of the lender
- Security agreement (device)
- Filing of the security agreement

Accounts-Receivable-Backed Loans

- One of the most liquid asset accounts.
- Loans by commercial banks or finance companies (banks offer lower interest rates).

Loan evaluations are made on:

- Quality: not all individual accounts have to be accepted (may reject on *aging*).
- Size: small accounts may be rejected as being too costly (per dollar of loan) to handle by the institution.

Accounts-Receivable-Backed Loans

Types of receivable loan arrangements:

- Nonnotification -- firm customers are not notified that their accounts have been pledged to the lender. The firm forwards all payments from pledged accounts to the lender.
- Notification -- firm customers are notified that their accounts have been pledged to the lender and remittances are made directly to the lending institution.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Inventory-Backed Loans

- Relatively liquid asset accounts

Loan evaluations are made on:

- Marketability
- Perishability
- Price stability
- Difficulty and expense of selling for loan satisfaction
- Cash-flow ability

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Types of Inventory-Backed Loans

- Floating Lien -- A general, or blanket, lien against a group of assets, such as inventory or receivables, without the assets being specifically identified.
- Chattel Mortgage -- A lien on specifically identified *personal property* (assets other than real estate) backing a loan.

Types of Inventory-Backed Loans

- Trust Receipt -- A security device acknowledging that the borrower holds specifically identified inventory and proceeds from its sale in trust for the lender.
- Terminal Warehouse Receipt -- A receipt for the deposit of goods in a public warehouse that a lender holds as collateral for a loan.

Types of Inventory-Backed Loans

- Field Warehouse Receipt -- A receipt for goods segregated and stored on the borrower's premises (but under the control of an independent warehousing company) that a lender holds as collateral for a loan.

Factoring Accounts Receivable

Factoring -- The selling of receivables to a financial institution, the *factor*, usually "without recourse."

- Factor is often a subsidiary of a bank holding company.
- Factor maintains a credit department and performs credit checks on accounts.
- Allows firm to eliminate their credit department and the associated costs.
- Contracts are usually for 1 year, but are renewable.

Factoring Accounts Receivable

Factoring Costs

- Factor receives a commission on the face value of the receivables (typically <1% but as much as 3%).
- Cash payment is usually made on the actual or average due date of the receivables.
- If the factor advances money to the firm, then the firm must pay interest on the advance.
- Total cost of factoring is composed of a factoring fee plus an interest charge on any cash advance.
- Although expensive, it provides the firm with substantial flexibility.

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING

Composition of Short-Term Financing

The best mix of short-term financing depends on:

- Cost of the financing method
- Availability of funds
- Timing
- Flexibility
- Degree to which the assets are encumbered

FLORIDA INTERNATIONAL UNIVERSITY COLLEGE OF ENGINEERING