One of the most important relationships in the market is the relationship between risk and return. Risk is a factor in business. In the following activity, you will work with your group to do a cost-benefit analysis to determine if you should expand your business. In the following activity, you will work with your group to do a cost-benefit analysis to determine if you should expand your business.

Sample Cost-Benefit Analysis

Group Work Stage 1:

1. Estimate on what you will need to cover your expenses for a year and assume that you will estimate on what you will need to cover your expenses for a year and assume that you will need at least 18 months for stocks and three years for mutual-fund accounts.

50 weeks

2. So if your manager makes a lot of trades in a year—so if your manager makes a lot of trades in a year—

6. Why do you think a jeans manufacturer might not test every pair of jeans produced? Why do you think a jeans manufacturer might not test every pair of jeans produced?

7. What does the cartoon imply will happen to the man in the second panel? What does the cartoon imply will happen to the man in the second panel?

8. Which country experienced the least change in total dollars? Which country experienced the least change in total dollars?

9. Using high-speed Internet connections, day traders, for a fee, can buy and sell stocks on a Using high-speed Internet connections, day traders, for a fee, can buy and sell stocks on a

10. In September 1999, should someone who was planning to buy a house have put money in a savings account In September 1999, should someone who was planning to buy a house have put money in a savings account

11. The value of the dollar decreases when the price of gold increases. So the price of gold is a good inflation The value of the dollar decreases when the price of gold increases. So the price of gold is a good inflation

12. What are some of the options a company that needs long-term financing faces? What are some of the options a company that needs long-term financing faces?
### Chapter 10: Resource Manager

#### Section Resources

**Section 1: Investing in the Free Enterprise System**
- How does a business decide whether to expand or not?
- Why are people willing to finance business investments?
- How does competition for financing affect resource allocation in a market economy?

**Section 2: Types of Financing for Business Organizations**
- What are the four factors that should companies consider when choosing financing options?
- What are the three general kinds of debt financing?

**Section 3: The Production Process**
- What are the four major steps in the production process?
- How has technology changed production methods since the early 1800s?

#### Technology/Multimedia Resources

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<th>Daily Focus Transparency 10-1</th>
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<td>Vocabulary PuzzleMaker 10-1</td>
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<td>NBR's Economics &amp; You* 10-1</td>
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#### Reading Objectives Reproducible Resources

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<td>Section Quiz 10-3*</td>
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#### Reproducible Lesson Plan 10-2

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<td>Section Quiz 10-4*</td>
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### Activities from the Classroom of

**The Stock Market Game™**

Have students participate in The Stock Market Game™ (Internet version). Students simulate actual stock transactions for a 12-week period. Working in small groups, students take investment roles to build an investment company. The game can be played online or with a simulation tool. Students simulate actual stock transactions for a 12-week period. Working in small groups, students take investment roles to build an investment company.

#### Key to Ability Levels

- **L1** BASIC activities for all students
- **L2** AVERAGE activities for average to above-average students
- **L3** CHALLENGING activities for above-average students
- **ELL** ENGLISH LANGUAGE LEARNER activities

### National Council on Economic Education

**Voluntary Standards Emphasized in Chapter 10**

- **Content Standard 15**: Students will understand that investment in factories, machinery, new technology, and the health, education, and training of people can raise future standards of living.

### Resources Available from NCEE

- **Capstone**: The Nation’s High School Economics Course
- **Focus**: High School Economics
- **Learning from the Market**: Integrating The Stock Market Game™ Across the Curriculum

To order these materials, or to contact your State Council on Economic Education about workshops and programs, call 1-800-338-1192 or visit the NCEE Web site at http://www.nationalcouncil.org

*Also available in Spanish*
Introducing
CHAPTER 10

CHAPTER 10

Financing and Producing Goods

Why It's Important

How do shoe manufacturers get started? How could you get started if you wanted to open a business? This chapter will explain how companies obtain the financing needed to open for business, and how they try to work efficiently to make profits.

Cover Story

To the Denver Post, Mar. 26, 1989

Finding money for your small business is often as daunting as looking for a job. It can be an arduous process of networking, mailing people information about yourself and then calling to see what they think.

A Chicago company is using the Internet to try to streamline the money-hunting process for entrepreneurs by connecting them with venture capitalists. Venture Capital Online has signed up more than 80 venture capital firms nationwide representing $15 billion in capital. It has 200 possible deals in the pipeline.

Investing in the Free Enterprise System

SECTION 1 RESOURCE MANAGER

Reproducible Masters

- Reproducible Lesson Plan 10–1
- Reading Essentials and Study Guide 10–1
- Guided Reading Activity 10–1
- Section Quiz 10–1
- Daily Focus Activity 46
- Daily Lecture Notes 10–1

Multimedia

- Daily Focus Transparency 46
- Vocabulary PuzzleMaker
- Interactive Tutor Self-Assessment Software
- ExamView® Pro Testmaker
- MindJogger Videoquiz
- NBRJ Economics & You Presentation Plus!

SECTION 1

Overview

Section 1 explains or describes how savings are used as investment funds to finance business startup and growth, how companies use cost-benefit analyses, and how bidding for funds affects the allocation of resources in a free market economy.

1 Focus

Overview

Terms to Know

- financing
- cost-benefit analysis
- revenues
- profits

Reading Objectives

1. How does a business decide whether to expand or not?
2. Why are people willing to finance business investment?
3. How does competition for financing determine how resources are allocated in a market economy?

Financing: obtaining funds or money capital for business purposes.

Cover Story

Economics & You

SECTION 1, Pages 263–268

Putting the Free Enterprise System to Work

1. What are the three components of any bond?
2. What does the issuer of a bond promise to do?
3. How does competition for funds affect the allocation of resources in a free market economy?

Glossary definition of the term:

1. What are the three components of any bond? 

2. What does the issuer of a bond promise to do? 

3. How does competition for funds affect the allocation of resources in a free market economy?
2 Teach

Guided Practice

L1 Illustrating Ideas

Review the text under the subheading “Before You Pursue Financing” on pages 265–266. Then have students create a flowchart illustrating the steps businesses must take before obtaining financing for business startup or expansion. Direct students to accompany each step on the flowchart with an appropriate title and illustration. Call on volunteers to present and discuss their flowcharts.

Turning Savings Into Investments

Financing business operations and growth is an integral part of a free enterprise system. It all begins with people who save by depositing their funds in one of several types of financial institutions, which you learned about in Chapter 6. Financial institutions, in turn, make these deposits available to businesses to finance growth and expansion. Figure 10.1 illustrates how people’s savings become a resource available to finance business expansion in the United States.

Before You Pursue Financing

Let’s assume that you own an electronics repair company that you have incorporated. You now have the opportunity to open additional repair shops, but you do not have enough extra cash to invest in the expansion. You can obtain this financing in one of many ways. These include digging into your own personal savings, asking your friends and parents to loan funds to the company, borrowing from a financial institution, or selling more shares of stock. Even if you are able to finance the expansion, however, one important question remains. Should you expand?

Businesses usually answer this question by making a standard cost-benefit analysis. This analysis requires that you estimate the cost of any action and compare it with the benefits of that action. Developing a cost-benefit analysis involves five steps:

1. Estimate the costs of expansion.
2. Calculate expected revenues, or total income from sales.
3. Calculate expected profits, or revenues minus costs.
4. Calculate how much it will cost you to borrow funds to finance your proposed business expansion.
5. If expected profits more than cover the cost of financing, then the expansion may be warranted. See Figure 10.2 on page 266.

Meeting Special Needs

Limited English Proficiency

Students with limited English proficiency may have difficulty understanding how bidding for funds in a free market affects the allocation of resources. Ask these students to imagine that they have $10,000 to invest and that five business owners have asked to borrow the money to finance expansion. Point out that, as investors, they would probably decide to give funds to the most creditworthy business owner whose company has the best performance record. In conclusion, mention that by making such a decision they have helped to determine the allocation of scarce financial resources.

Refer to Inclusion for the Social Studies Classroom Strategies and Activities.

Independent Practice

L1 Hypothesizing

Have students hypothesize what the American economy would be like if financing was allocated to businesses by lottery instead of through a competitive system. Ask students to write their ideas in a brief essay. Call on volunteers to read their essays to the class.

Cooperative Learning

Organize students into several small groups. Direct each group to locate and interview a small business owner in the community. Suggest that groups focus their interviews on how the business was started, including that they have $10,000 to invest and that five business owners have asked to borrow the money to finance expansion. Point out that, as investors, they would probably decide to give funds to the most creditworthy business owner whose company has the best performance record. In conclusion, mention that by making such a decision they have helped to determine the allocation of scarce financial resources.

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Cooperative Learning

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Refer to Inclusion for the Social Studies Classroom Strategies and Activities.
The steps below show an example of cost-benefit analysis. Here is a simple numerical example: Suppose that you can borrow $1 million to finance your business expansion. Your bank will charge 10 percent per year for the loan. That equals $100,000 per year. If your expansion could generate profits of $200,000 per year, then borrowing $1 million would certainly be worthwhile.

Remember the rule that always applies: Undertake an activity up to the point at which the additional benefit equals the additional cost. In this case the activity is financing an expansion. The additional benefit is higher profits, and the additional cost is the cost of borrowing.

**Why People Are Willing to Finance Investment**

Businesses are interested in obtaining financing so that they can expand and make higher profits in the future. The people who finance such business investments—whether intentionally or unintentionally—are also seeking rewards. Savers unintentionally finance business growth when they deposit funds in a savings account or certificate of deposit (CD). Their reward is the interest earned on the savings account or CD. For those who intentionally finance investment, the reward is the interest on a corporate bond that they purchase, or dividends from the stock that they buy in an expanding company.

**Pursuing Investment Financing**

In a free enterprise system, resources normally go where they generate the highest expected value. Financing investment often directs the allocation of these resources. When one business succeeds at obtaining financing, it uses funds that might have helped another business. In a market economy, each business competes for scarce financial resources. If the cost to finance business expansion is relatively high, only those businesses that believe they have the most profitable expansion projects will be willing to go ahead with those projects. The U.S. Small Business Administration (SBA) operates 57 small business development centers across the nation. These offices combine resources from the private sector, the educational community, and federal, state, and local governments to provide information and assistance on small business startup, expansion, and management.

**Five Steps of Cost-Benefit Analysis**

**Figure 10.2**

1. **Cost-Benefit Analysis**
   - **Step 1:** Calculate your expected revenues.
     - **Expected Revenues**
     - **Expected Profits**
     - **Costs**
     - **Profits**

2. **Costs you may face if you expand your business include:**
   - *renting new stores*
   - *training new workers*
   - *additional bookkeeping*
   - *opportunity cost of your time to check on new shops*

3. **Calculating your expected profits:**
   - *profits* should outweigh your costs of expansion.

4. **Your expected profits should outweigh your costs of expansion.**
   - *Revenues* and *Profits* are shown on the graph.

5. **Calculating how much the loan plus interest will cost you monthly.**
   - *Expected Costs* are shown on the graph.

**Free Enterprise Activity**

Organize students into several small groups, and have groups decide on an independent business—a baby-sitting service or lawn care service, for example—that they would like to start. Ask groups to conduct a cost-benefit analysis to determine the likelihood of success for their businesses. Suggest that groups investigate the cost of supplies, labor, and workspace needed for their businesses. Also, have them research to find the kinds of profits they might make. Call on group representatives to present their analyses to the class.

**Relevant Issues in Economics**

**Shadow Prices and Discounting**

Economists often use cost-benefit analysis to evaluate the cost-effectiveness of government programs. Sometimes it may be difficult to calculate the dollar value of a particular cost of a program—the environmental cost of building a highway, for example. In such cases, economists assign a shadow price, or an estimated dollar value, for the cost. Also, some benefits may not accrue until a future date. Economists assume that people would rather consume goods and services in the present rather than the future and, therefore, give present benefits greater value than future benefits. This process is called discounting.

**Meeting Lesson Objectives**

Assign Section 1 Assessment as homework or an in-class activity.

**Use Interactive Tutor Self-Assessment Software to review Section 1.**

**Section Quiz 10–1**

**Date**

**Class**

**Score**

**Organize students into groups of three. Have groups outline the main points discussed in the section, with each group member taking one of the three main subheadings.**
pay the high cost of financing. If the cost of financing is relatively low, more companies will decide that they, too, can profitably engage in additional business investment. In either instance, the lending institution makes the final decision in regard to lend- ing the business the money to expand.

Methods of Financing

There are several methods of financing business expansion. As you learned in Chapter 6, corporations offer stock and may sell bonds to finance investment. Businesses, just like individuals, can also borrow from banks, finance companies, or other institutions. Today businesses can even use the Internet to obtain financing. In Section 2, you’ll learn more about the types of financing for business operations.

LEARNING THE SKILL

To learn how to make a valid generalization, follow the steps listed on the left.

Practicing the Skill

Read the excerpt below, then identify whether each generalization that follows is valid or invalid. Explain your answers.

“Mobile phones are increasing in Finland. At the Lintumespan Middle School, six miles outside of Helsinki, kids as young as 10 are showing up with mobile phones. They’re supposed to turn them off during class hours, but some of them always forget. What’s worse, the children have their phones rigged to ring with a few bars from songs by Guns N’ Roses and the Lexington Cowboys. . . . Some 58% of all Finns own a mobile phone—the highest penetration in the world. . . . Mobile phone subscribers can request their bank balances, weather updates, traffic reports, even the latest headlines from Cable News Network, through short-message services.”

Barbara Welt, May 3, 1999

At the Lintumespan Middle School, six miles outside of Helsinki, kids as young as 10 are turning up at one school with mobile phones.

3. Some 58% of all Finns own a mobile phone—the highest penetration in the world.

6. Mobile phone sales are increasing in Finland.

Answers to Practicing the Skill

1. Invalid; the excerpt states that 58 percent of Finns own mobile phones.
2. Invalid; the excerpt states that children as young as 10 are turning up at one school with mobile phones—it does not mention ownership. Perhaps a better generalization would be: Some Finnish schoolchildren use mobile phones.
3. Valid; the excerpt lists the various services that can be used by owners of mobile phones.
4. Invalid; the excerpt does not address phone sales.

Application Activity

Have students exchange and discuss their clippings and generalizations.

Related Research and Media

Mobile phones are increasing in Finland. At the Lintumespan Middle School, six miles outside of Helsinki, kids as young as 10 are showing up with mobile phones. They’re supposed to turn them off during class hours, but some of them always forget. What’s worse, the children have their phones rigged to ring with a few bars from songs by Guns N’ Roses and the Lexington Cowboys. . . . Some 58% of all Finns own a mobile phone—the highest penetration in the world. . . . Mobile phone subscribers can request their bank balances, weather updates, traffic reports, even the latest headlines from Cable News Network, through short-message services.

Barbara Welt, May 3, 1999

Have students review the Expected Profits bar graph on page 267. Ask them what the graph shows about the relationship between revenues and profits. As revenues increase, profits increase. Tell students that they have just made a generalization about this relationship. Then point out that the ability to make generalizations is useful in seeing patterns in large amounts of information.

Next, work through the Practicing the Skill questions with students. Conclude by assigning the Application Activity.
CHAPTER 10
SECTION 2, Pages 270–275

1 Focus
Overview
Section 2 describes the types of short-term, intermediate-term, and long-term financing available to businesses, and outlines four factors businesses consider before borrowing funds.

2 Teach
Guided Practice
L1 Categorizing Ideas: On the board, draw a four-column table with "Type of Financing," "Period of Borrowing," "Examples," and "Why Used?" as column headings. Organize students into four groups, and assign one of the columns to each group. Have group members consult and then send a representative to the board to enter information into their assigned column. Have students copy the completed table into their notebooks. Suggest that they retain the chart for review purposes.

Types of Financing for Business Operations

Three Kinds of Financing
Raising money for a business through borrowing, or debt financing, can be divided into three categories: short-term, intermediate-term, and long-term financing.

Short-Term Financing
When a business borrows money for any period of time less than a year, it has obtained short-term financing. Figure 10.3 describes several types of short-term debt financing.

FIGURE 10.3

Short-Term Financing

Trade Credit
Trade credit is extended by one firm to another business buying the firm’s goods. It allows the buyer to take possession of goods immediately and pay for them at some future date—usually 30 to 90 days later.

Unsecured Loans
Most short-term bank credit for businesses is in the form of unsecured bank loans. These are loans not guaranteed by anything other than the promise to repay them.

Unsecured Loans
- Most short-term bank credit for businesses is in the form of unsecured bank loans.
- These are loans not guaranteed by anything other than the promise to repay them.

Secured Loans
Secured loans are backed by collateral—something of value that borrows money, a business must pay interest on its loan and repay it within a stated period of time. As you read this section, you'll learn about the financing options from which businesses may choose.

Revising the thesis sentence
The borrower must sign a promissory note to repay the money in full by a specified time and with a specified rate of interest. The usual repayment period is one year.

Line of Credit
A line of credit is a maximum amount of money a company can borrow from a bank during a period of time, usually one year.

Meeting Special Needs
Reading Disability Students with reading or organizational problems may have trouble classifying the different types of financing. Have students draw cartoons or other visuals to illustrate the different forms of financing. For example, for line of credit, students might draw several people waiting in line at a window labeled "Credit." Remind students to give a title to each of their visuals. Also, suggest that they use different colored paper for short-term, intermediate-term, and long-term financing. The combination of symbols, words, and colors will help students distinguish and group the various forms of financing.

Project Daily Focus Transparency 47 and have students answer the questions. This activity is also available as a blackline master.

Daily Focus Transparency 47

SECTION 2 RESOURCE MANAGER

Multimedia
- Daily Focus Transparency 47
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- Interactive Tutor Self-Assessment Software
- ExamView® Pro Testmaker
- MindJogger Videoquiz
- Interactive Economics!
- Presentation Plus

Reproducible Masters
- Reproducible Lesson Plan 10–2
- Vocabulary Guide 10–2
- Guided Reading Activity 10–2
- Section Quiz 10–2
- Daily Focus Activity 47
- Daily Lecture Notes 10–2

Vocabulary PuzzleMaker

Interactive Economics!

Presentation Plus

For students answer the questions. Project Daily Focus Transparency 47 and have students answer the questions. This activity is also available as a blackline master.

Daily Focus Transparency 47

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Vocabulary PuzzleMaker

Interactive Economics!

Presentation Plus
Have students review the information in Figure 10.4. Then point out that long-term financing usually is used when the useful life of the building or equipment being purchased matches or exceeds the length of the debt. For example, a company would purchase a ship with long-term financing because the useful life of the ship will match the length of the long-term debt.

Have students read the information in Figure 10.5. Then point out that long-term financing usually is used when the useful life of the building or equipment being purchased matches or exceeds the length of the debt. For example, a company would purchase a ship with long-term financing because the useful life of the ship will match the length of the long-term debt.
## Assessment

### Section Quiz 10–2

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### Choosing the Right Financing

Financial managers try to obtain capital at a minimum cost to the company. To do so, they try to choose the best mix of financing. The length of a loan that a company takes out or a corporation's decision regarding whether to sell bonds or issue stock depends on four factors. These factors are the costs of interest, the financial condition of the company, the overall economic climate, and the opinions of the company's owners.

#### Interest Costs

When interest rates in general are high, a business may be reluctant to take out a loan. A company may delay its expansion until it can borrow at better interest rates. Or it may take out a series of short-term loans at high rates, hoping that interest rates will drop. When that happens, the company will then take out a long-term loan.

Interest rates also affect the decision to issue bonds. When rates are high, corporations must offer high rates of interest on their bonds to attract investors. When interest rates drop overall, corporations can offer lower rates of return on their bonds.

### Financial Condition of the Company

A company or corporation whose sales and profits are stable or are expected to increase can safely take on more debt—if its current debt is not too large. Financial managers use cost-benefit analysis to determine if the potential profits will cover the cost of financing expansion.

#### Market Climate

As shown in Figure 10.6, financial managers need to be aware of the market climate when determining whether to sell bonds or issue stock to raise financing. If economic growth in the overall market appears to be slow, investors may prefer the fixed rate of return of bonds or preferred stock to the unknown return on common stock.

### Control of the Company

Bonds do not have voting rights attached to them. Most preferred stocks also do not give voting rights to shareholders. The owners of common stocks, however, do have the right to vote in company elections. When debating issues of financing, financial managers may have to gain approval from the owners of common stocks before taking action.

### Figure 10.6

**Market Climate** Business managers must keep an eye on the market climate before obtaining financing. High interest rates combined with a slow economy could spell disaster for a business interested in expanding.

### Visual Learning Activity

**Graphic Organizer** Have students use a graphic organizer similar to the one here to describe the three kinds of debt financing available to companies. Direct them to place "Types of Financing" in the central oval, the three types of financing in the intermediate ovals, and examples of these types in the outer ovals.

### Assessment Answers

1. All definitions can be found in the Glossary.
2. short-term, intermediate-term, and long-term financing
3. Four factors that affect a company's financing plans are interest costs, financial conditions of the company, market climate, and control of the company.
4. Answers may vary. Many students will suggest trade credit, since they have limited funds to spend on inventory.
5. Paragraphs should cover the following points: An unsecured loan is not guaranteed by anything but the promise to repay. The borrower must sign a promissory note to repay the money in full by a specified time and with a specified rate of interest. Secured loans are backed by collateral. Businesses offer property such as machinery, inventories, or accounts receivable as collateral. If a secured loan is not repaid, the lender may claim the collateral.
Thomas Sowell

Economist (1930–)

Economics professor and author Thomas Sowell is an outspoken commentator on political, economic, and social issues. Sowell suggests that many of the country’s problems can be addressed by applying basic economic concepts to all aspects of life. In this excerpt, Sowell shows how the failure to apply inventory control or the law of supply and demand has created problems in education:

“When anyone who owns a small business discovers that unsold products are piling up on the shelf or in the warehouse, it doesn’t take a rocket scientist to figure out that it is time to cut back production until the inventory declines. But no such logic applies in the academic world. Complaints about the excess number of PhDs in the humanities have gone on for years. Every year, for 12 consecutive years, American universities have broken all previous records for the number of PhDs awarded. ... Forget about supply and demand when it comes to academia. Ironically, doctors in science, engineering and mathematics have come down somewhat in recent years, even though American companies are recruiting engineers from India, Russia and other places. But in English, history, and other humanities fields, the graduate schools are flooding the market with people for whom there are no jobs.”

-- excerpted from the Jewish World Review, February 18, 1999

Checking for Understanding

1. According to Sowell, how does a lack of inventory control create the situation where there are too many PhDs?
2. Do you think the subjects university students study should be determined by economic concepts? Why or why not?
3. If you were in a position of authority on a college campus, how would you resolve the dilemma?

Answers to Checking for Understanding

1. There is little call for humanities PhDs in the job market, yet the number of humanities PhDs awarded continues to increase. If inventory control were applied to this situation, no more humanities PhDs would be awarded until there were enough people for whom there are no jobs.
2. Answers will vary. Ensure that students offer reasons for their answers.
3. Answers will vary. Ensure that students’ resolutions are realistic.
After the presentations are completed, groups will present their scenarios. Besides the actual manufacturing of a good, the production process for both types of goods involves several other operations. These include planning, purchasing, quality control, and inventory control. A fifth operation, product design, will be discussed in Chapter 11.

Planning
Planning includes choosing a location for the business and scheduling production. Where a business is located, or perhaps even more important today—how the business will get its products to consumers—is directly related to how successful the business will be. Among the location factors to consider are nearness to markets, raw materials, labor supply, and transportation facilities. For example, businesses that cater to young people should locate near teen hangouts, universities, and so on. See Figure 10.7.

Businesses that use coal should locate near their required raw material—coal fields. Businesses that require many unskilled workers should locate near urban areas with a large supply of labor. Finally, a business needs to have access to a means of delivering its products—highways, railroads, airlines, and pipelines. Scheduling production operations involves setting start and end times for each step in the production process. It includes checking the use of labor, machinery, and materials so that production moves smoothly.

Purchasing
In order to do business, a company obviously needs the raw materials to produce its goods or offer its services. It also, however, must have machinery, office supplies, telephones, and so on. The people who purchase goods for a business have to decide what to buy, from whom, and at what price. See Figure 10.8. To get the best deal for the company, purchasers must find answers to such questions as:

- Is this the best price?
- Are these goods made well? Will they last?
- Does this supplier offer such services as equipment repair?
- Who pays shipping and insurance costs, and how will goods be shipped?
- How much time is there between ordering goods and receiving them?

Quality Control
Quality control involves overseeing the grade or freshness of goods, their strength or workability, their construction or design, safety, adherence to federal or industry standards, and many other factors. Quality control systems can be as simple as testing one item per thousand produced or testing each product as it is finished. See Figure 10.9 on page 280.

Inventory Control
Almost all manufacturers and many service businesses, such as dry cleaners, need inventories of the materials they use in making their products or offering their services. A production line can come to a complete halt if inventory runs out. Manufacturers and businesses, such as supermarkets, also keep stockpiles of finished goods on hand for sale.

Cooperative Learning
Direct students to study the information on purchasing on pages 278–279. Then organize students into several groups, and have groups use this information to develop a format for interviewing purchasing agents about their decision-making procedures. Have each group conduct an interview with a purchasing agent at a company in the community. (Ensure that groups do not duplicate companies or types of businesses.) Have groups present the results of their interviews in brief reports. Encourage them to share and compare these reports.
CHAPTER 10
SECTION 3, Pages 277–281

3 Assess Meeting Lesson Objectives
Assign Section 3 Assessment as homework or an in-class activity. Use Interactive Tutor Self-Assessment Software to review Section 3.

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4 Close
Asks students to list the major financing and production decisions that businesses must make.

CHAPTER 10
SECTION 9, Pages 277–281

4 Quiz 10–3
Ask students to write a summary of the section using the Terms to Know.

Reading Essentials and Study Guide 10–3
Financing and Producing Goods

281

Independent Practice

L2 Creating Time Lines Have students work in small groups to create a time line showing how new technology has changed production methods in the United States. Suggest that groups make their time lines "overstated"—by taping together sheets of butcher paper. Also, have groups illustrate their time lines with sketches, photographs, charts, graphs, and other suitable visual materials. Direct groups to display their time lines along the classroom walls.

3 Assess Meeting Lesson Objectives
Assign Section 3 Assessment as homework or an in-class activity. Use Interactive Tutor Self-Assessment Software to review Section 3.

Visual Instruction FIGURE 10.9
ASK: What might less quality control lead to? Initially, it will lead to lower production costs and lower prices for consumers. However, it may also lead to a lowering of quality, and consumers may turn to other companies for products of higher quality.

Inventory Control Trade-offs When making decisions on how much inventory to keep on hand, inventory managers have other costs to consider. If a price of a particular good is expected to rise, the manager may stockpile it to keep down future costs. Often, a supplier will discount large orders, and these discounts may outweigh the other costs of keeping a large inventory.

Inventories are costly, however. There is an opportunity cost involved in maintaining inventories. The more inventory a business has, the less capital it has for other activities. For example, it costs money to warehouse and insure goods against fire and theft. Some goods such as film and medicines spoil if kept beyond a certain period of time. Other goods such as cars and stylish clothes become obsolete, or out of date, in time.

Technology and Production
Technology is the use of science to develop new products and new methods for producing and distributing goods and services. From the time of the Industrial Revolution in the late 1700s, technology has changed the methods of production.

Mechanization
The Industrial Revolution—the beginning of the factory system—came about through mechanization, which combines the labor of people and large powered-drivers. With the introduction of spinning and weaving machines in factories, entrepreneurs replaced skilled handwork with machines run by unskilled workers. The rate of output per labor hour greatly increased as a result.

The Assembly Line
An outgrowth of mechanization was the assembly line. An assembly line is a production system in which the good being produced moves on a conveyor belt past workers who perform individual tasks in assembling it. The Ford Motor Company developed the modern assembly-line process early in the twentieth century. Because the assembly line results in more efficient use of machines and labor, the costs of production drop.

Division of Labor
Assembly-line production is only possible with interchangeable parts made in standard sizes, and with the division of labor, or the breaking down of a job into small tasks. A different worker performs each task.

Automation
Mechanization combines the labor of people and machines. In automation, machines do the work and people oversee them. Automation is so common in American society that most of us don’t even think about the efficiency of automated traffic signals, doors, or tellers, machines anymore.

Economic Comparison to... Technology
In computer science terminology, a “robot” is a software program that can scan E-mail messages to locate key words and phrases and respond appropriately without any human input. Companies that do business on the Internet use robots for all types of customer-service tasks—everything from tracking orders to offering troubleshooting tips. Many computer engineers believe that robots soon will handle all routine customer questions. Waiting 20 minutes or longer on the telephone for a human customer-service representative may soon be a thing of the past.

Robotics
Robotics refers to sophisticated, computer-controlled machines that operates the assembly line. In some industries, robotics regulate every step of the manufacturing process—from the selection of raw materials to processing, packaging, and inventory control.

S E C T I O N 3
Assessment

Understanding Key Terms
1. Define production, consumer goods, mechanization, assembly line, division of labor, automation, robotics.
2. What are the most important steps in the production process?
3. Graphic Organizer Use a diagram like the one below to explain the factors that have changed production since the early 1800s.

Appling Economic Concepts
4. Productivity Imagine that you are financially prepared to open a small ice-cream cafe. Explain the steps you would follow to begin production. Include information about your planning, purchasing, quality control, and inventory control decisions in your explanation.

Critical Thinking Activity
5. Categorizing Information Make a spreadsheet listing the five advances in technology discussed in this section. For one week, be aware of and count examples of each type of technology. At the end of each day, input your totals in the appropriate column of your spreadsheet. Tabulate your totals at the end of the week. Share your spreadsheet with the rest of the class.

Production Methods Changed by

Production Methods

Extending the Content

Workbook, Level 2.
Teach

In 1998 and 1999, UPS was rated the "World's Most Admired" mail, package, and freight delivery company in a Fortune magazine survey. For this survey, the magazine polled senior executives and board members of leading corporations, as well as Wall Street analysts. They were asked to rate companies on such features as quality of management, product or service quality, innovation, financial strength, and commitment to community and the environment.

BusinessWeek Spotlight on the Economy
Going All Out to Pick Up a Gig

The challenge, however, was not in May, when the rock group Kiss played a Saturday night concert in Hamburg, it requested a new guitar on Friday—and got one, on time and in tune. Fender says the system will cut costs by 9% and delivery time from months to weeks. But life with a corporate-funded garage band is hard on some UPS guys. Says Kliger: "When they see a really nice guitar, they always have this urge to try it out and play a song."

—Reprinted from June 14, 1999 issue of Business Week

Check It Out! In this chapter you learned that businesses must make wise decisions when selecting a supplier to ship raw materials as well as finished goods. In this article, read to learn how the Fender guitar company made a wise decision when it outsourced a shipping agent.

W

Who says service is dead? When a big outfit like United Parcel Service is willing to hire a bunch of Dutch rockers to tune a client's guitars, you know that some companies still will do anything to keep a customer happy. UPS Worldwide Logistics began shipping famed Fender guitars to Europe in April. As happens with sourcing instruments, sometimes they arrived out of tune. Previously, the pricey guitars had been sent to 20 European distributors who tuned and tested them. But that was too costly and slow. So, to please Fender, UPS has hired four rock guitarists at its warehouse in Roermond, the Netherlands, to do the job. "We've checked disk drives for IBM, but this was a unique challenge," says UPS project manager Ronald Kliger.

Think About It
1. What did the supplier (UPS) do to help the client (Fender)?
2. By using UPS, how much in production costs is Fender saving?
3. How was Fender's delivery time improved?

SPOTLIGHT ON THE ECONOMY

SECTION 1
Investing in the Free Enterprise System

• Financing business operations and growth is an integral part of our free enterprise system. It all begins with people who save by depositing their funds in a financial institution.

• Financial institutions, in turn, make these deposits available to businesses to finance growth and expansion.

• Businesses usually perform a cost-benefit analysis before deciding whether to pursue financing for expansion.

• A cost-benefit analysis involves estimating costs, calculating expected revenues, calculating expected profits, and calculating the costs of borrowing.

SECTION 2
Types of Financing for Business Operations

• Raising money for a business through borrowing, or debt financing, can be divided into three categories based on length of time of repayment.

• Short-term financing is for those businesses that need funds to cover monthly or seasonal budget highs and lows.

• Borrowing money for 1 to 10 years to buy more land, buildings, or equipment is considered intermediate-term financing.

• Long-term financing, such as issuing stock and selling bonds, is used for major business expansion.

• Financial managers must examine interest costs, the market climate, and the financial condition of the company, as well as internal holders of common stock before obtaining financing.

SECTION 3
The Production Process

• Production is the process of changing resources into goods that satisfy the needs and wants of individuals and other businesses.

• Producing consumer goods and capital goods involves planning, purchasing, quality control, and inventory control.

• Planning includes choosing a location for the business and scheduling production.

• The people who purchase goods for a business have to decide what to buy, from whom, and at what price.

• Five major advances in technology—mechanization, the assembly line, the division of labor, automation, and robotics—have drastically affected the methods and costs of production.

Answers to Think About It
1. UPS hired a rock band to tune and test Fender guitars at its warehouse in the Netherlands, rather than sending the guitars out to 30 European distributors for tuning and testing.
2. Fender is saving 9 percent of its production costs by using UPS.
3. Delivery time was cut from months to weeks.
Assessment and Activities

ECONOMICS Online

Self-Check Quiz
Visit the Economics Today and Tomorrow Web site at ett.glencoe.com and click on Chapter 10—Self-Check Quizzes to prepare for the Chapter Test.

Identifying Key Terms
Write the letter of the definition in Column B that correctly defines each term in Column A.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. revenues</td>
<td>a. the money earned after subtracting costs from revenues</td>
</tr>
<tr>
<td>2. consumer goods</td>
<td>b. raising money for a business through borrowing</td>
</tr>
<tr>
<td>3. cost-benefit analysis</td>
<td>c. trade credit and promissory notes are involved in this kind of financing</td>
</tr>
<tr>
<td>4. debt financing</td>
<td>d. combining labor of people and machines</td>
</tr>
<tr>
<td>5. profits</td>
<td>e. process that looks at actions and their effects</td>
</tr>
<tr>
<td>6. short-term financing</td>
<td>f. total income from sales of output</td>
</tr>
<tr>
<td>7. intermediate-term financing</td>
<td>g. enables workers to perform individual tasks more efficiently</td>
</tr>
<tr>
<td>8. assembly line</td>
<td>h. sold directly to the public to be used as they are</td>
</tr>
<tr>
<td>9. mechanization</td>
<td>i. leasing is typical in this kind of financing</td>
</tr>
</tbody>
</table>

Thinking Critically
1. Categorizing Information
   Use a diagram like the one below to describe how a saver can be both a creditor and a debtor.

   ![Diagram of financial transactions]

   - Saver
   - Cooperator
   - Royalty
   - Stock
   - Dividend
   - Bond
   - Interest
   - Deposit
   - Salary
   - Wage
   - Profit
   - Loss

   - a. Issuing stocks
   - b. Issuing bonds
   - c. Issuing preferred stock

   - d. The money earned after subtracting costs from revenues
   - e. Raising money for a business through borrowing
   - f. Trade credit and promissory notes
   - g. Combining labor of people and machines
   - h. Process that looks at actions and their effects

   - i. Leasing is typical in this kind of financing

   - 1. How do individuals turn savings into investments?
   - 2. Outline the steps you would use in reaching a necessary financial decision.

   - 3. What are two reasons a business may need short-term financing?
   - 4. Issuing stocks is a form of what type of financing?
   - 5. Do holders of common stock have any rights in a corporation? Explain.
   - 6. Besides quality control, what other steps are involved in the production process?
   - 7. What does assembly-line production require?

Thinking Critically
2. Synthesizing Information
   Assume that you have to buy new inventory that you plan to sell off completely by the end of each month. Determine the most appropriate type of financing to use to buy this inventory.

Applying Economic Concepts

Making Financing Decisions
   Imagine that you own a business. List at least five business expansions you would like to make to your company that would require financing. Explain after each type of business expansion, such as buying 10 desktop computers, what the appropriate type of financing might be. Explain your choices.

Cooperative Learning Project
Organize into three groups, with each group working on one of the following topics. After the research is complete, each group will report its findings to the class.

A. Division of Labor
   The most famous example of the division of labor focuses on a pin factory, which Adam Smith discussed in his book The Wealth of Nations. Group A should do the following:
   1. Find the passage in the book about the pin factory.
   2. Develop a chart showing the elements of Adam Smith’s arithmetic example; and
   3. Calculate the percentage increase in productivity due to the division of labor.

B. Assembly-Line Techniques
   This group can divide into two smaller groups. Group B1 will report on how Henry Ford developed the assembly-line process. Group B2 will look at what Eli Whitney developed with the assembly-line process.

C. Robotics
   Group C will research how robots developed and how much of American manufacturing uses robotics.

Reviewing Skills

Making Generalizations
   Read the following excerpt, then make a generalization based on the reading.
   “Henry Ford introduced the first moving assembly line in 1913 at his Model T plant in Highland Park, Michigan. Different conveyor systems carried subcomponents to the main assembly line in a finely orchestrated manner. Before the advent of the assembly line, a Model T took more than 12 hours to produce and cost $950. By 1927, after numerous refinements, Model T’s were being turned out in less than half that time, with a price tag of $290 apiece.”
   —Business Week 100 Years of Innovation, Summer 1999

Technology Activity
Using the Internet
   The Small Business Administration (SBA) was designed to help small businesses with short-term financing. Obtain information about the SBA on the Internet. Write an informative brochure for potential small business owners, describing how the SBA can help them get started.

Analyzing the Global Economy

Technology Have students visit the Economics Today and Tomorrow Web site at ett.glencoe.com to review Chapter 10 and take the Self-Check Quiz.

CHAPTER 10
Assessment and Activities

Identifying Key Terms
1. 1 a 2 b 3 c 4 d 5 e
   6. short-term financing
   7. intermediate-term financing
   8. assembly line
   9. mechanization

Thinking Critically
1. A saver can be a creditor by depositing funds in a financial institution or by purchasing stocks or bonds. A saver can be a debtor by taking out a loan from a financial institution or by issuing stock or bonds in his or her company.
2. Answers will vary, but most students will suggest that trade credit is the best financing approach in this instance.

Analyzing the Global Economy

Technology Have students share their brochures with the rest of the class.

Analyzing the Global Economy
Have students present their findings in an illustrated report.

Chapter Bonus Test Question
ASK: Why might corporations issue bonds and preferred stock rather than common stock when overall economic growth is slow? Investors would find the fixed rate of return on bonds and preferred stock preferable to the uncertain return on common stock.
**Worldwide Advertising**

Each year the United States spends over $450 billion on advertising. The map below shows advertising expenditures for five countries whose economies are at different levels of development.

### China
- **Spending (billions)**
  - Television: 123.0
  - Radio: 82.5
  - Print: 324.5
  - Outdoor**: 10.5
  - Point of Purchase: 274.6
  - Promotions***: 535.7
  - Direct Mail: 197.8
  - Other: 249.4
  - **Total: $1.5 trillion**

### India
- **Spending (billions)**
  - Television: 89.3
  - Radio: 67.0
  - Print: 324.5
  - Outdoor**: 10.5
  - Point of Purchase: 274.6
  - Promotions***: 535.7
  - Direct Mail: 197.8
  - Other: 249.4
  - **Total: $1.5 trillion**

### Brazil
- **Spending (billions)**
  - Television: 118.3
  - Radio: 67.0
  - Print: 324.5
  - Outdoor**: 10.5
  - Point of Purchase: 274.6
  - Promotions***: 535.7
  - Direct Mail: 197.8
  - Other: 249.4
  - **Total: $1.5 trillion**

### Mexico
- **Spending (billions)**
  - Television: 96.2
  - Radio: 67.0
  - Print: 324.5
  - Outdoor**: 10.5
  - Point of Purchase: 274.6
  - Promotions***: 535.7
  - Direct Mail: 197.8
  - Other: 249.4
  - **Total: $1.5 trillion**

### Other countries
- **Spending (billions)**
  - Television: 78.4
  - Radio: 123.0
  - Print: 130.3
  - Outdoor**: 18.7
  - Point of Purchase: 374.6
  - Promotions***: 2,733.0
  - Direct Mail: 314.5
  - Other: 4,017.6
  - **Total: $11.1 trillion**

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### 1 Focus

Companies around the world spend well over a trillion dollars to market their goods and services. Fewer than 30 countries—most of them in Europe, the Pacific Rim, and North America—account for 90 percent of this spending. About one-third of all advertising dollars are spent by American companies.

### 2 Teach

Point out that each of the countries featured represents a particular level of exposure to advertising spending. Vietnam represents the lowest level, Kenya the next-to-lowest level, Egypt the intermediate level, Russia the next-to-highest level, and Singapore the highest level. (Mention that countries are graded on a per capita spending basis, not total spending.) Then have students compare spending categories among the countries. Ask them to explain why particular categories might be more widely used in some countries than in others.

### Did You Know

About one-third of all marketing dollars are spent on promotions—cents-off coupons, sweepstakes, give-aways, and so on—rather than regular advertising.

### 3 Assess

Have students answer the Thinking Globally questions.

### 4 Close

Have students use library resources and the Internet to gather similar statistics for the United States. Suggest that they present these statistics in table form.

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### Thinking Globally

1. What is the largest category of advertising for each country?
2. Which of the expenditures for specific countries surprised you the most? Explain your answer.

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### Extending the Content

Per capita spending on advertising varies widely between developed and less developed countries. In many of the less developed countries of Africa, Asia, and Latin America, less than $5 per person is spent on advertising. However, in Western Europe, the United States, Canada, Japan, and the stronger economies of the Pacific Rim, per capita spending on advertising stands at nearly $1,400. Japan spends the most per capita—$2,137—on advertising. Another Asian country, Laos, spends the least—just 41 cents.