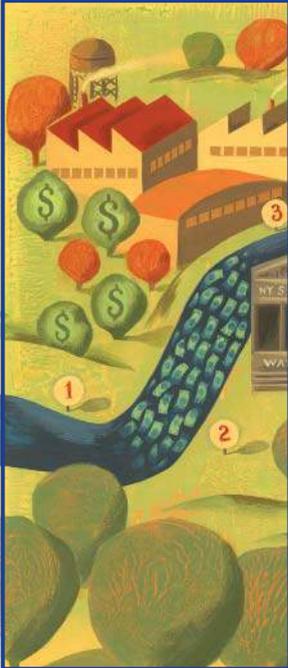


## CHAPTER OUTLINE

**Mergers and Acquisitions**

- Basic Definitions, Terminology, and Procedure

- The Antitrust Laws

- The Reasons Behind Mergers

- Holding Companies

- The History of Merger Activity in the United States

- Merger Analysis and the Price Premium

- Defensive Tactics

**Other Kinds of Takeovers—LBOs and Proxy Fights**

- Leveraged Buyouts (LBOs)

- Proxy Fights

**Divestitures**

- The Reasons for Divestitures

- Methods of Divesting Operations

**Bankruptcy and the Reorganization of Failed Businesses**

- Failure and Insolvency

- Bankruptcy—Concept and Objectives

- Bankruptcy Procedures—

- Reorganization, Restructuring, Liquidation

Corporate restructuring is a broad term that describes a number of the ways in which firms are reorganized. It refers to changes in capital structure (Chapter 14), changes in ownership, merging companies together or breaking them apart (divestitures), modification of asset structures, and certain changes in methods of doing business. In addition, business failure and bankruptcy usually result in some kind of restructuring.

In recent years, corporate mergers have been the most publicized restructuring activities. They occur when two or more firms combine under one ownership.

In this chapter, we'll examine several of the ways in which companies restructure, beginning with a fairly detailed look at mergers.

**MERGERS AND ACQUISITIONS**

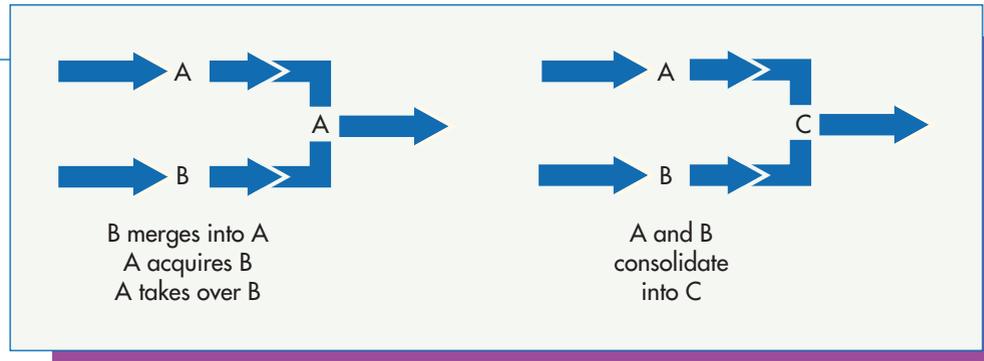
Mergers are an important force in modern business. They've reshaped American industry several times in the last century, and continue to have a significant effect on companies and financial markets.

**BASIC DEFINITIONS, TERMINOLOGY, AND PROCEDURE**

The terms “merger,” “acquisition,” and “consolidation” all mean the *combination* of two (or more) business units under a single controlling ownership. In day-to-day practice, the word “merger” is loosely used to mean any business combination, but technically, each term refers to a particular type of transaction.

Figure 17.1

## Basic Business Combinations



A **merger** is loosely defined as any **combination** of two or more businesses under **one ownership**.

In an **acquisition** or **takeover**, one firm acquires the stock of another called the **target**.

A **merger** is a combination of two or more businesses in which all but one legally cease to exist, and the combined organization continues under the original name of the one surviving firm. A **consolidation** occurs when *all* of the combining legal entities dissolve, and a new one with a new name is formed to continue into the future. These ideas are illustrated in Figure 17.1 for combinations involving two firms. The left side illustrates a merger of company B into company A, while the right side shows A and B consolidating into C.

The merger situation is also called an **acquisition**, because the stock of the firm that goes out of existence is usually acquired by the continuing firm. In the left diagram, A is the *acquiring firm* and B is the **target** of the acquisition. The word “**takeover**” is sometimes used to describe the combination, because most of the time company A literally takes over company B. That term tends to have a hostile meaning, implying that A takes over B against the wishes of B’s management.<sup>1</sup>

An important subtlety in all this is that the size of combining companies doesn’t determine the nature of the combination. As a general rule, A would be larger than B in the merger/acquisition shown on the left and the two would be about the same size in the consolidation shown on the right. However, that isn’t a requirement or always the case. There are many examples of smaller firms taking over larger ones.

## Relationships

It’s important to understand the relationships that come about when firms join together regardless of what the combination is called legally. In one situation, firms combine willingly, more or less as equals, even if there’s a difference in their sizes. This is the general situation implied by a consolidation.

In the other situation, one firm dominates the resulting relationship because it *acquires* the other’s stock. That’s the usual case in an acquisition or merger. The management of the acquired firm generally works for the management of the acquiring firm after the merger. It’s important to note that a merger can be accomplished with the friendly approval of the acquired firm’s management or against its wishes.

## Stockholders

Any merger or consolidation represents a change in ownership. In the merger shown on the left of Figure 17.1, company B goes out of existence. That means its stockholders

<http://>

Visit the Merger Network at <http://www.mergernetwork.com> for the latest developments in mergers and acquisitions.

1. “Takeover” is a fairly general term, simply implying that one group takes control from another. This can occur outside of a merger if one group of stockholders takes over control from another within a single company.

give up their shares (in B) for something else, usually either cash or stock in A. In the consolidation shown on the right, the stockholders of both A and B give up their shares for stock in C.

A **majority** of the **target's stockholders** must accept the price offered by the acquiring company.

No one can force the shareholders of a corporation *as a group* into a business combination. They have to be willing to give up their shares for the price offered in the deal. In the context of an acquisition, this means that a majority of the stockholders of the target (acquired) company must approve the price offered for their shares. (If a majority approves, dissenters may be forced to go along.)

The major issue in the analysis of mergers is the value given for the shares of the companies that go out of existence. For example, consider a merger (left diagram) in which A's stock was selling for \$10 a share and B's for \$5 just before merger talks began. Negotiations would have to start with an offer of at least \$10 or one share of A for every two shares of B. Anything less wouldn't interest B's shareholders.

### The Friendly Merger Procedure

In what follows we'll be primarily concerned with the merger (acquisition) situation shown on the left in Figure 17.1. The merger process generally begins with the would-be acquirer's management contacting the target's management and proposing the deal.

A *friendly merger* takes place when the management (and board of directors) of the target company agrees that the combination would be a good idea and cooperates with the acquirer. In such a case negotiations between the two management groups on the price to be paid for the target's stock and other issues proceed until an agreement is reached. After that the proposal is submitted to the stockholders for a vote, with a recommendation by the target's board for approval. The percentage required for approval depends on the corporate charter and state law.

If the stockholders approve the merger, each firm files the appropriate papers with the state in which it's incorporated, cash or new stock certificates are issued to the stockholders of the acquired company, and the deal is consummated.

### The Unfriendly Procedure

When a target firm's management and board are opposed to a merger, they refuse to take it to their stockholders. If the acquiring firm doesn't accept the refusal, it can approach the target's stockholders directly. The merger then becomes *hostile* or *unfriendly*. Sometimes the acquiring firm doesn't even try to deal with the target's management, but approaches its stockholders immediately in an effort to take the company's management by surprise.

In an unfriendly merger, the acquiring firm makes a *tender offer* to the target's shareholders. This is a special kind of a proposal made to buy stock. It offers to pay stockholders a fixed price for shares, but contains a provision stating that if the price isn't accepted on enough shares to gain control of the company, the deal is off. If the tender price is right, enough shares to gain control are offered and the acquiring firm takes over by purchasing them.

While all this is going on, the target company's management is likely to be contesting the proposal with what are known as *defensive measures*. Once an acquisition attempt is under way, these measures usually consist of efforts to convince shareholders not to sell to the acquirer. They generally have a limited effect if the price offered is fairly high. The target's management can also seek a preemptive merger with another acquirer it feels is more desirable. We'll talk more about these tactics later, along with defensive measures that managements can take before an acquirer comes along.

It's important to realize that the hostility in an unfriendly merger is between the managements or boards of directors of the two companies, not the stockholders. To

In a **friendly** merger, the target's management approves of the deal and **cooperates** with the acquiring company.

In an **unfriendly** merger, the target's management resists and may take **defensive** measures to stop the deal.

An acquiring firm can bypass a target's management by making a **tender offer** directly to shareholders.

most stockholders the target company is just an investment. If someone offers a high enough price for their stock, they'll sell without a second thought.

### Why Unfriendly Mergers Are Unfriendly

Mergers usually come up when an acquiring company shows an interest in a target. They can be congenial affairs or outright battles between the managements of the two companies.

To understand the difference, recall that most companies are run by professional managers, *theoretically* for the sole benefit of stockholders. In fact, however, managers run companies for their own benefit *as well as* for the good of stockholders. (Recall the agency problems discussed in Chapter 1, pages 16–17.)

There are two basic reasons that a target's management might resist a merger. One is that the deal offered by the acquiring firm doesn't give the target's stockholders enough value. The argument is that the market price of the company's stock is temporarily depressed, and the offer, which is always above the market price, doesn't represent what the stock is really worth. This reason is generally given publicly.

*The other reason is more self-serving. After mergers, it's common for the managements of acquired companies to lose a good deal of power and influence. In fact, key executives of target companies often lose their jobs within a short time. This phenomenon is a great incentive to resist being acquired, especially by a company with a history of treating its acquisitions ruthlessly.*

A target's **management may resist** a merger in its own **self-interest** or because the price offered is too low.

from the **CFO**

### Economic Classification of Business Combinations

A common method of classifying mergers<sup>2</sup> describes the relationship between the businesses of the merging firms. This relationship is important because it helps to define the economic impact of the transaction.

#### Vertical Merger

When a firm acquires one of its suppliers or one of its customers, the merger is said to be **vertical**. The idea is that the companies are at different stages along a vertical production process from raw materials to end product. An automobile manufacturer acquiring a steel mill, or a cereal maker acquiring a grocery distributor, would be an example of a vertical merger.

#### Horizontal Merger

A merger is said to be **horizontal** if the merging firms are in the same kind of business, usually as competitors. This kind of merger has the effect of reducing competition in the industry. For example, if one maker of personal computers acquired another, the merger would be horizontal.

#### Conglomerate Merger

A **conglomerate merger** occurs when the lines of business of the merging companies have nothing to do with one another. If an electronics company acquires a potato chip maker, the merger is conglomerate. A company that is made up of a collection of unrelated businesses is known as a *conglomerate*.

Merger relationships: **vertical**—suppliers and customers; **horizontal**—competitors; **conglomerate**—unrelated.

2. In the rest of this chapter, we'll use the term "merger" loosely to mean either a merger or a consolidation.

## The Role of Investment Banks

Recall that investment banks are organizations which help companies issue securities (Chapter 5, pages 171–172). They function between investors and companies issuing securities by undertaking the sale of the securities to the investing public.

Investment banks are also instrumental in mergers and acquisitions, typically acting as advisors to acquiring companies. They generally assist in establishing a value for the target company and help the acquiring firm raise the money to pay for the target's stock when that's necessary.

Investment banks also advise reluctant targets on defensive measures.

## THE ANTITRUST LAWS

The United States is committed to the maintenance of a *competitive economy* in which most industries consist of at least a few competing firms.

A competitive economy is characterized by opportunity and fair dealing. Opportunity exists because anyone with the right resources can enter any industry and compete with established firms. Fair dealing comes from the notion that consumers are assured of reasonable treatment because no single firm can raise its prices too high without losing business to rivals.

These ideas have been endorsed by the government to a greater extent in the United States than in most other industrialized nations, and are reflected in a body of legislation known as the antitrust laws.<sup>3</sup>

The antitrust laws were enacted between 1890 and the 1930s and have been amended from time to time since then. Their objective is to prohibit certain activities that can reduce the competitive character of the economy.

## The Antitrust Laws and Mergers

When the number of firms in an industry shrinks, the remaining firms become more powerful and competition is reduced. When that happens we say the industry becomes more *concentrated*. Because mergers combine two or more firms into a single unit, they clearly have the potential to increase concentration and reduce competition. As a result, they come under the purview of the **antitrust laws**.

It's fairly obvious that horizontal mergers combining two or more competitors have an anticompetitive effect, but vertical mergers can also be anticompetitive. They can act indirectly, doing things like locking an acquiring firm's competitors out of sources of supply.<sup>4</sup> Conglomerate mergers don't generally have significant anticompetitive effects.

The antitrust laws limit the freedom of companies to merge. Proposed mergers over a certain size must be reviewed by the federal government's Justice Department, which evaluates whether or not they constitute an excessive reduction in competition. If a court decides a merger's effect is too detrimental, the merger will be blocked by the government.

The **antitrust** laws prohibit mergers that significantly **reduce competition**.

3. A trust is a group of companies under a single control that acts like a monopoly. Therefore, antitrust means against monopoly or against the excessive concentration of economic power.

4. Suppose two competing firms buy a critical input from a low-cost supplier. Then one firm acquires the supplier and refuses to sell the cheap input to the other. The second firm has to use a more expensive substitute and is forced to raise prices to cover the increased cost. This gives the first firm a price advantage that could drive the second out of business.

## THE REASONS BEHIND MERGERS

Most mergers don't turn out to be as successful as expected when they're undertaken. That poor record makes it important to take a hard, critical look at why people put companies together in the first place.

### Synergies

The most persuasive reason for a merger is that for some reason the merged organization will perform better than the sum of the performances of the unmerged businesses. This means some extra value is available in the combination that can be shared by the owners of the two (or more) merging companies. This phenomenon is called **synergy**. It means that the whole is more than the sum of its parts. Here's an example.

Suppose one company makes lawnmowers and another makes snowblowers.<sup>5</sup> The lawnmower factory produces in the winter (for sale in the summer) and is idle in the summer. The snowblower plant produces in the summer (to be ready for the winter) and is idle in the winter. If these companies merge, their similarly manufactured products can be produced in one factory that operates year round, thus saving the cost of the second factory. This saving is a synergy available by combining the two businesses.

Synergies are usually cost-saving opportunities like the one we've just described. Less frequently they take the form of an enhancement of some kind. For example, suppose a breakfast cereal manufacturer with a recognized brand name acquires the maker of an unknown pancake mix. Marketing the acquired product under the cereal company's name might accelerate its success dramatically because of the recognition and acceptance accorded to the brand name.

*Synergies sound good, but in practice have proven difficult to find and harder to implement.*

### Growth

Companies can grow either internally or externally. *Internal growth* occurs when firms get larger by selling more in current businesses or starting new ventures. *External growth* refers to getting larger by acquiring other companies.

External growth is much faster than internal growth. A firm can become large in its own industry by acquiring a rival much more quickly than by taking market share from others in competitive battles. Similarly, a company can get into a new industry much more quickly by acquiring a firm already in that business than by starting its own entry from scratch. The quest for rapid growth is therefore a major reason for undertaking acquisitions.

### Diversification to Reduce Risk

A company that acquires other firms which aren't in exactly the same business is said to *diversify* itself. It becomes a collection of diverse businesses merged together under one control. Such a firm is generally less risky than a company in just one business when risk is defined as variation in financial performance.

A **synergy** exists when performance together is better than the sum of separate performances.

from the **CFO**

**External** growth through acquisition is usually much faster than **internal** growth.

5. For the benefit of our southern readers, we should explain that a snowblower is essentially a power snow shovel. It operates like a lawnmower, but instead of cutting grass it throws snow off sidewalks and driveways. The parts and processes used to manufacture snowblowers are similar to those used to make lawnmowers.

The reasoning behind this phenomenon is identical to the logic that leads us to diversify a portfolio of stocks (see Chapter 9). Each business unit's performance moves up and down over time, but they don't move entirely together. Variations tend to offset, and the organization's combined performance remains fairly steady.

This kind of stability is sometimes given as a reason to justify mergers. However, it isn't obvious that the logic is appropriate in that context. In fact, a strong counterargument can be summarized as follows.

When a company acquires another firm, it effectively diversifies the portfolios of its shareholders. The acquiring company becomes a combination of what it was before and the newly acquired business, so its stockholders have an interest in both firms and are exposed to the risks and returns associated with both.

But shareholders don't need or want the firms in which they've invested to do that. Suppose A is thinking about acquiring B. If A's stockholders want to invest in B, they can just sell some shares of A and buy B. In other words, shareholders can diversify their own portfolios. They don't need or want the companies in which they've invested to do it for them.

This logic leads to the conclusion that managements diversify through acquisition to stabilize their own positions rather than their stockholders' interests.

A firm with **diversified** operations is **more stable** than a company that does a single thing.

### Economies of Scale

Horizontal mergers can lead to a larger company that produces at a lower cost than any of the merging organizations do individually. Scale economies are a variation on the synergy idea.

### Guaranteed Sources and Markets

Vertical mergers can lock in a firm's sources of critical supplies or create captive markets for its product.

### Acquiring Assets Cheaply

A firm in need of certain assets can sometimes get them by buying a company that already owns them. This can occasionally be cheaper than purchasing the assets alone, either new or used. It usually occurs when the target firm isn't doing well and its stock is selling below book value.

### Tax Losses

A firm that's making a profit pays taxes on its earnings, but a firm that's losing money doesn't get a credit for its losses. In such a case merging the companies saves on total taxes paid. For example, consider the following possible combination of Rich Inc. and Poor Inc.

Acquiring a firm with a **tax loss** can **shelter** the acquirer's **earnings**.

	Rich Inc.	Poor Inc.	Merged
EBT	\$2,000	\$(1,000)	\$1,000
Tax (35%)	<u>700</u>	<u>0</u>	<u>350</u>
EAT	\$1,300	\$(1,000)	\$ 650

Operating independently, Rich pays tax of \$700 and Poor pays nothing for a total of \$700. Merged, however, Poor's loss can offset Rich's profit *before* the tax calculation is made, so the combined company pays only \$350 in tax. *However*, the IRS won't allow

the offset if the primary reason for the merger is tax avoidance. There have to be other demonstrable business reasons behind the combination for the favorable treatment to be allowed.

### Ego and Empire

Although it's impossible to prove, powerful people at the top of large organizations sometimes seem to make acquisitions for the sake of making their empires larger. Part of the reason may be that executive pay tends to be more a function of the size of the organization managed than of its success. It is argued that the ego/empire phenomenon has led to a number of acquisitions in which the prices paid for target companies were inflated far above what the firms were reasonably worth.<sup>6</sup> This phenomenon is a windfall for the stockholders of the target at the expense of the acquirer's owners.

## HOLDING COMPANIES

**Holding company** is a general term for a corporation that owns other corporations known as *subsidiaries*. The holding company is also called the *parent* of the subsidiaries, which are legally separate companies. When one firm is acquired by another, it can be integrated into the acquirer's operations or be held as a subsidiary.

The holding company/subsidiary form of organization can be advantageous if it makes sense to keep two or more business operations separate and distinct. For example, it's generally possible to keep the liabilities of different subsidiaries separate, so the failure of one doesn't financially affect the parent or the other subsidiaries.

The holding company organization has another advantage in that it can control a subsidiary without owning all of its stock. An interest as small as 10% can sometimes effectively control a widely held company in which no other single shareholder owns more than 1% or 2%. As a general rule, 25% ownership virtually guarantees control. This means that an "acquiring" company can in some ways control a target without expending the resources necessary to acquire it entirely.

On the other hand, holding companies don't make sense if the benefits of a merger depend on realizing synergies from combined operations.

Businesses acquired in conglomerate mergers are typically held as subsidiaries of a holding company.

## THE HISTORY OF MERGER ACTIVITY IN THE UNITED STATES

There have been four periods of intense merger activity in the United States in the last 110 years. They're often referred to as *merger waves*.

### Wave 1: The Turn of the Century, 1897–1904

The mergers at the turn of the century had a profound effect on the structure of American industry. They were largely horizontal and occurred in primary industries such as mining, metals production, food products, transportation, and energy.

The first merger wave transformed the country from a nation of small companies to one of industrial giants, which were in many cases virtual monopolies. For example, U.S. Steel was formed by the combination of 785 separate companies led by Carnegie

Critics maintain that **empire building** is behind many mergers that don't seem to make sense otherwise.

**Parent or holding companies** own **subsidiaries** as legally separate entities.

At the turn of the century a wave of **horizontal** mergers transformed the U.S. into a nation of industrial **giants**.

6. Richard Roll, "The Hubris Hypothesis of Corporate Takeovers." *Journal of Business*, 59, No. 2 (April 1986): 197–216.

Steel. Other emerging giants included Standard Oil, Eastman Kodak, American Tobacco, and General Electric.

The mergers of the first wave were characterized by large companies absorbing small ones, sometimes by means of unfair and even violent tactics. Large firms often used their power and wealth to force smaller rivals out of business, and then bought the ruined companies at a fraction of their original worth.

### Wave 2: The Roaring Twenties, 1916–1929

The second merger wave began during the First World War and ended with the stock market crash of 1929. It was fueled by postwar prosperity and the general boom climate of the 1920s. Mergers in this period also tended to be horizontal and resulted in the concentration of several industries into *oligopolies*.<sup>7</sup>

### Wave 3: The Swinging Sixties, 1965–1969

The late 1960s was the era of the *conglomerate merger*. Companies like ITT, Litton Industries, and LTV acquired firms in totally diverse fields that had absolutely nothing to do with one another.

The conglomerate mergers of the 1960s were financial phenomena rather than actions driven by operating business considerations. When a large company with a high P/E ratio (see Chapter 3, page 91) acquires a smaller firm with a lower P/E ratio, paying for the target with its own stock, the result can be an increase in the earnings per share (EPS) of the merged company. If the stock market attaches the same P/E to the acquiring firm after the acquisition than it did before, its stock price will rise even though there's no expectation of improved performance by either company. This happened a great deal in the 1960s and led to a large number of business combinations motivated by stock market games rather than by sound economic reasoning.

Because so much of this period's merger activity was conglomerate in nature, there was relatively little increase in concentration within industries. That is, the number of firms competing in particular industries didn't change much as a result of mergers. This was a contrast with the first two merger waves in which concentration increased substantially.

### An Important Development during the 1970s

Prior to the 1970s, hostile takeovers were viewed as somewhat unethical and large, reputable companies did not undertake them. If a large firm's merger overture was rejected by a target's board of directors, the effort was generally dropped. Further, reputable investment banks didn't participate in financing hostile takeovers.

All of that began to change in 1974 with the acquisition of ESB, the world's largest maker of batteries, by the Toronto-based International Nickel Company (INCO) assisted by Morgan Stanley, perhaps the most prestigious name in investment banking at the time.

That transaction and a few others established the *hostile takeover* as an acceptable financial maneuver.<sup>8</sup>

Many of the **conglomerate** mergers of the 1960s were **stock market** phenomena without economic substance.

The **hostile takeover** became an acceptable **financial** maneuver during the 1970s.

7. An oligopoly is an industry dominated by a few powerful firms (as opposed to a monopoly, an industry in which there's only one seller). The automobile industry is an oligopoly.

8. For a detailed treatment of the important developments of the 1970s, see Patrick A. Gaughan, *Mergers and Acquisitions* (New York: Harper Collins), 1991.

## Wave 4: Bigger and Bigger, 1981–?

Merger activity slacked off during the 1970s but resumed in the early 1980s and has been relatively intense ever since. It's important to notice that this latest period of heavy activity has lasted more than 25 years, far longer than any of the previous waves. And it isn't expected to end any time soon. Indeed, at midyear, 2006 is on track to be the biggest merger year ever.

There were three “ups and downs” during the 25+ year period prompting some analysts to define waves of shorter duration. The first of these took place during the late 1980s; the second occurred in the late 1990s. The third started in 2004, and continues to grow well into 2006. Despite these variations, we'll consider the entire period a single wave since activity during the recent low periods generally exceeds the peaks of the earlier three waves.

Recent merger activity has several distinguishing characteristics.

### Size

Very large mergers have become more common, often involving the leading firms in their respective industries. The term “megamerger” is sometimes used to refer to such combinations between industry titans.

### Global in Nature

Major mergers increasingly involve large corporations from different countries. Such combinations create incredibly powerful companies with global influence. The 1998 acquisition of Chrysler, the number three U.S. automaker, by Germany's Daimler-Benz, manufacturer of Mercedes-Benz, to form DaimlerChrysler AG is a familiar example.

### Horizontal Mergers and the Antitrust Laws

Recall that the best reason for a merger is generally a cost saving synergy, which is usually accomplished by combining firms that do the same or similar things and eliminating redundant overhead. For example, one factory might take the place of two, or one sales force might carry both products, or one purchasing department might buy all raw materials, etc.

That kind of saving usually comes from *horizontal* mergers, which are generally between competitors, and tend to reduce competition in the industry in question.

Traditionally, in enforcing the Antitrust Laws, the Justice Department and its counterpart authorities in other countries scrutinized horizontal mergers carefully and disallowed those that had anticompetitive effects. That made it difficult to find an economically successful merger.

Recently, however, the government has taken a much more relaxed attitude toward enforcing the antitrust rules, and has allowed mergers that almost certainly would have been struck down a few years ago. For example, household appliance maker Whirlpool was permitted to acquire the well-known Maytag Corp. not long ago. That transaction clearly took a major player out of the washing machine business reducing its competitiveness. Such a combination is unlikely to have been approved just a few years ago.<sup>9</sup>

### Easy Financing

A major contributing factor to the current blizzard of mergers is the fact that interest rates have remained at historically very low levels for a long time. That makes

Recent merger activity has been characterized by **very large** combinations frequently involving **industry leaders**.

9. Dennis K. Berman and Jason Singer, “Blizzard of Deals Heralds an Era of Megamergers,” *The Wall Street Journal*, June 27, 2006; A1, A16.

debt-financed acquisitions not only feasible but profitable. Further, financial institutions are awash with cash and aren't too worried about risk. That makes them willing to lend enough money to would-be acquirers to make the deals happen.

### Hostility

After the attitude change in the 1970s, hostile takeovers became common. The proportion of hostile actions is still small but has increased, especially at the large end of the spectrum. More important, the threat of hostile takeover now pervades corporate life. Few decisions are made at the tops of today's large corporations that don't include consideration of the risk of being taken over.

### Raiders

The *corporate raider* emerged as a new kind of player in high finance. A raider is a financier who makes his or her living (a very good one!) by mounting hostile takeovers. Raiders can make money whether the takeover is successful or not.

### Defenses

Defensive measures have emerged as a new field because of the prevalence of hostile takeover activity. They are things the target of a hostile takeover can do to avoid losing control. We'll discuss them in some detail later.

### Advisors

Investment bankers and lawyers have aggressively expanded their roles as merger advisors, earning very substantial fees in the process. Indeed, they're probably responsible for instigating much of the current merger activity. They advise acquiring companies as well as reluctant targets on defensive measures.

## Social, Economic, and Political Effects

The large mergers of the latest wave have some disturbing social and economic implications regarding the concentration of power and influence. The megamergers of the fourth wave have tended to involve major companies, often combining two or more of the top firms within an industry. Beyond the anticompetitive effect of such combinations, it's difficult to argue that they do not concentrate economic power into the hands of a few people who then have an inordinate level of influence over the direction of our society.

A more subtle characteristic of recent large mergers has been a tendency toward combinations among leading firms in *related* industries. For example, in 1995 the Disney organization, which makes movies (in addition to running theme parks), acquired the American Broadcasting Company (ABC), a major television network. Although these companies didn't compete directly, they both influence the viewing material placed before the public. The merger, therefore, puts a great deal of power over public opinion in the hands of the executives in charge of the combined company.

The long-term economic and political implications of today's megamergers are as yet unclear. On the one hand, it can be argued that the large and powerful companies being created are more efficient than the sum of the unmerged organizations would ever be, and therefore are better able to compete in an increasingly global marketplace. On the other hand, the massive accumulation of economic power currently taking place can be seen as having the potential to change the open and competitive nature of the economy for the worse. We won't know the bottom line for quite some time.

[http://](http://www.broadview.com)

*Jefferies Broadview is an investment banking firm specializing in mergers and acquisitions in the IT, communications, and media industries. Review a recent notable transaction at <http://www.broadview.com>*

## MERGER ANALYSIS AND THE PRICE PREMIUM

The question of price comes up immediately in any acquisition. In other words, what should an acquiring company be willing to pay for a particular target? The question is answered by a *merger analysis* that attempts to pin down what an acquisition is worth to an acquiring company.

In theory, merger analysis is a straightforward capital budgeting exercise. The acquiring firm makes a projection of the cash flows the target is expected to generate over the indefinite future, and does a standard capital budgeting analysis to determine whether the acquisition viewed as a project has a positive NPV. The price paid for the target's stock is the project's initial outlay.

As in any capital budgeting analysis, two estimating issues are involved. First, the project's cash flows have to be forecast. Second, an appropriate discount rate has to be chosen.

### Estimating Merger Cash Flows

Estimating the cash flows associated with a proposed merger should be a straightforward financial planning exercise with respect to the target company with two exceptions. The first exception involves making a provision in the analysis for any synergies that are expected as a result of the acquisition. The second requires that the cash flows recognized by the acquiring company be stated net of funds that will need to be reinvested in the business to provide for whatever growth is expected. We'll demonstrate these ideas in an example shortly.

In practice, however, estimating cash flows in a merger context is especially difficult. Remember all the things we said in earlier chapters about the accuracy of financial plans (Chapter 4) and cash flow estimates (Chapters 11 and 12). Our conclusion was that it's hard to project financial statements because of the inherent uncertainty of the future and because of the biases of the people making the estimates.

These problems are especially acute in a merger. The acquiring company has to do the analysis, but it generally doesn't have easy access to detailed information about either the target's future prospects or its past history. In a friendly merger, the target's management tends to be interested in pumping up the price, so information shared with the potential acquirer is biased optimistically. In an unfriendly merger, management won't share any internal data at all.

It's not unusual for these conditions to lead to terribly inaccurate cash flow estimates. The tendency is to overstate the value of the target. That mistake can turn an acquisition into a financial disaster for the acquiring company, because it pays too much for the acquired firm. Of course, the same transaction is a financial windfall for the stockholders of the target who get an unrealistically high price for their stock.

### The Appropriate Discount Rate

Because an acquisition is an equity transaction, it should be evaluated using a discount rate that reflects the cost of equity funds. Further, the target's equity rate should be used, not the acquiring firm's. That's because the risk in the project viewed from the perspective of the acquiring firm is inherently that of the target company.

### The Value to the Acquirer and the Per-Share Price

The acquiring firm's analysis yields a value (an NPV) for the target company. That value divided by the number of shares of stock the target has outstanding is an indication of the amount the acquiring company should be willing to pay, per share, to

**Merger pricing** is a **capital budgeting** exercise, but cash flows are **hard to estimate**, and there's a tendency to **overpay**.

make the acquisition. Anything less indicates a bargain for the acquirer and its stockholders; anything more represents an irrational transfer of wealth from the shareholders of the acquirer to those of the target.

### The Price Premium

It's important to realize that whether a merger is friendly or hostile, the price offered to the target's shareholders is generally higher than the stock's market price. To understand this point, consider that any firm's stockholders always have the option of selling their shares at the market price, but at any particular time only a few actually do sell. Most shareholders don't sell on any given day because the market price is less than the value of the stock *to them* at that time.

In an acquisition, the acquiring firm has to offer a price that will cause the owners of a majority of the shares outstanding to sell at once. That price obviously has to be above the current market price. The amount by which the price offered exceeds the target's market price before word of the acquisition gets out is called the *premium*. A major issue in acquisitions is choosing a price that's just high enough to attract a majority of shares but no higher. Anything above that level represents a waste of the acquirer's money.

It should be clear from this that for a merger to make financial sense, the value of the target *to the acquiring firm* must exceed the company's market value at that time.

### The Effect on Market Price

The fact that a premium over market price is virtually always paid for the stock of an acquired firm creates a speculative opportunity. If an investor buys the stock of a company that is acquired shortly afterward, he or she is virtually assured a quick profit because of the premium that will be associated with the acquisition.

This opportunity causes the market price of a company's stock to increase rapidly as soon as the fact that the firm is an acquisition target becomes known. Such a firm is said to be **in play**. The phenomenon clearly makes it advisable for the acquiring firm to keep merger negotiations secret.

Two other facts are important. First, it is illegal *insider trading* for people in any way associated with merger negotiations to make a short-term profit on price increases that come about as a result of the merger. This includes executives of the firms involved as well as peripheral players like the investment bankers and lawyers who advise on the transactions.

Second, an investment strategy has emerged in which people buy the stocks of firms that are likely acquisition targets, without knowledge of specific merger initiatives. Investors using this strategy are hoping that some of the firms whose stocks they buy will be placed in play in the near future.

### The Point of Negotiations

If a target company is indeed worth more than its market value to an acquiring company, a gain is available to the extent of the difference between the two values. Merger negotiations involve determining how that gain is to be distributed between the shareholders of the acquiring firm and those of the target.

The target's shareholders get their portion immediately in the form of the price premium paid for their stock. The remainder of the gain becomes incorporated into the value of the acquiring firm, and thereby accrues to its shareholders.

This means that in a friendly merger, the negotiations basically represent the dividing up of the gain between the two shareholder groups. In a hostile merger, the acquiring firm estimates the gain and offers a share of it to the target's stockholders in its tender offer price.

Most acquisitions are made at **price premiums**, which lead to speculation on **in play** stocks, which drives prices up.

It is **illegal** for **insiders** to make short-term profits on **price movements** from the **acquisition** process.

from the **CFO**

Keep in mind through all this that the gain is very difficult to estimate and particularly easy to overstate.



### Calculating a Price and the Problem of Terminal Values

From the acquirer’s perspective, merger analysis is a capital budgeting exercise using the NPV technique which we studied in Chapter 10. Recall equation 10.1, the definition of NPV, which we’ll repeat here for convenience.

$$(10.1) \quad NPV = C_0 + \frac{C_1}{(1+k)} + \frac{C_2}{(1+k)^2} + \dots + \frac{C_n}{(1+k)^n}$$

A project’s NPV is simply the sum of the present values of all the associated cash flows represented by  $C_0, C_1, C_2, \dots, C_n$ . Recall that  $C_0$  is the initial cash outlay required to get the project started. As an outflow, it is represented as a negative number. The subsequent  $C_s$  are generally positive and represent the project’s cash inflows over the next  $n$  years. [Division by the  $(1+k)^i$  factors just takes the present value of each  $C_i$ .]

In a merger analysis,  $C_0$  is the total amount the acquirer will pay for the target’s stock. The subsequent  $C_s$  are the sums of the yearly cash flows expected to be generated by the target plus any synergies management thinks will come from the combination of the companies.

Any project is worth doing only if it has a positive NPV. In a merger context, that means  $C_0$  must be less than the sum of the present values of the other  $C_s$ . Hence, that sum is the *most* an acquiring company should be willing to pay for the target’s stock. Dividing by the number of shares of stock the target has outstanding gives the maximum per-share price the acquirer should be willing to pay to make the acquisition.

**Example 17.1** Alpha Corp. is analyzing whether or not it should acquire Beta Corp. Alpha has determined that the appropriate interest rate for the analysis is 12%. Beta has 12,000 shares of stock outstanding, and its cash flows including synergies over the next three years are estimated to be (\$000) as follows.

Year	1	2	3
Cash flow	\$200	\$220	\$250

Alpha’s management is fairly conservative and feels the acquisition should be justified by cash flows projected over no more than three years. Management believes projections beyond that are too risky to be considered reliable. What is the maximum Alpha should pay for a share of Beta’s stock?

**SOLUTION:** The present value of Beta’s positive cash flows is calculated as follows:

Year	Cash Flow	PVF <sub>12,i</sub>	Present Value
1	\$200,000	.8929	\$178,580
2	220,000	.7972	175,384
3	250,000	.7118	177,950
			<u>\$531,914</u>

Hence, the maximum Alpha should pay for all of Beta's stock is \$531,914. This is the initial outlay ( $C_0$ ) in the NPV equation that would result in a zero NPV. At that price, Alpha would be indifferent to the acquisition.

Dividing by the number of shares outstanding gives the maximum per share price Alpha should be willing to pay.

$$\text{maximum acquisition price} = \$531,914 / 12,000 = \$44.33$$

Notice that in Example 17.1, the acquirer's management was financially conservative, and based the target's value on only three years of forecast cash flows. Unfortunately, acquirers are often not financially conservative, and are willing value targets based on long-term forecasts. This creates what can be called the *terminal value problem*.

As a merger analysis proceeds, detailed cash flow projections are generally made for a finite number of years, usually three to five. But most acquisitions are envisioned to last forever, and there's a tendency to project a stream of cash flows that goes on indefinitely after the three- to five-year detailed forecast, and to include it in the analysis. This tends to produce results that strongly favor doing the acquisition. The question is, how real are those results? A more realistic (and therefore more complex) example will make these ideas clear.

**Example 17.2** The Aldebron Motor Company is considering acquiring Arcturus Gear Works Inc. and has made a three-year projection of the firm's financial statements, including the following revenue and earnings estimate. Period 0 is the current year and not part of the forecast. All dollar figures are in millions, except per share amounts.

	Year			
	0	1	2	3
Revenue	\$1,500	\$1,650	\$1,815	\$2,000
EAT	95	106	117	130

Aldebron expects that synergies will net \$10 million after tax per year. It also expects that cash equal to depreciation will have to be reinvested to keep Arcturus's plant operating efficiently, and that 60% of the remaining cash generated by operations will need to be invested in growth opportunities. Otherwise, the balance sheet will remain relatively unchanged.

Results beyond three years become increasingly difficult to forecast in any detail, so Aldebron's plan simply assumes a 6% annual growth in all of the target's figures after the third year.

Currently 90-day treasury bills are yielding 8% and the market returns 13% on an average stock. Arcturus's beta is 1.8 and the firm has 20 million shares of stock outstanding, which closed at \$19 a share yesterday.

How much should Aldebron be willing to pay for Arcturus's stock? Discuss the quality of the estimate.

**SOLUTION:** First we'll compute the appropriate discount rate for the present value calculations. Recall that the target's return on equity is the appropriate rate (page 685). We'll estimate that

using the capital asset pricing model (CAPM) approach (see Chapter 9, page 398). The SML yields the following.

$$\begin{aligned}
 k_x &= k_{RF} + (k_M - k_{RF})b_x \\
 &= 8\% + (13\% - 8\%)1.8 \\
 &= 17\%
 \end{aligned}$$

Next we complete the rough cash flow estimate for the target for the first three years, using the information given.

**Arcturus Gear Works, Inc. Estimated Cash Flows (\$ millions)**

	Year			
	0	1	2	3
Revenue	\$1,500	\$1,650	\$1,815	\$2,000
EAT (unmerged)	\$ 95	\$ 106	\$ 117	\$ 130
Synergies	10	10	10	10
EAT/cash flow (merged)*	\$ 105	\$ 116	\$ 127	\$ 140
Reinvested (60%)	(63)	(70)	(76)	(84)
Cash flow to Aldebron	\$ 42	\$ 46	\$ 51	\$ 56

\*We haven't added back depreciation because of our assumption that cash equal to that amount must be reinvested to maintain the plant.

Cash flows after the periods planned in detail are often summarized in a single *terminal value* assumption.<sup>10</sup> In this case, Aldebron is assuming that the last year's flow, \$56 million, will grow at 6% per year indefinitely. The value of a known payment that will grow at a known rate can be calculated by using the constant growth (Gordon) stock valuation model we studied in Chapter 8 (page 335–337). Recall equation 8.10.

$$P_0 = \frac{D_0(1 + g)}{k - g}$$

In this application, we'll rewrite the equation replacing  $P_0$  with the terminal value (TV) we're looking for while  $D_0$  becomes the year 3 cash flow, which we'll call  $C_3$ . We've already calculated the discount rate,  $k$ , and  $g$  is the growth rate assumed after year 3 (\$ millions).

$$\begin{aligned}
 TV &= \frac{C_3(1 + g)}{k - g} = \frac{\$56(1.06)}{.17 - .06} \\
 &= \$540
 \end{aligned}$$

Hence, the cash flow stream in our capital budgeting calculation is as follows (\$M).

	Year		
	1	2	3
Operating cash flow	\$46	\$51	\$ 56
Terminal value			540
Total	\$46	\$51	\$596

10. We discussed terminal values in Chapter 11 pages 466–467.

Notice how large the terminal value is compared to the three annual cash flows. This is not unusual. Next we'll take the present value of the entire stream at the discount rate we calculated earlier. To make a point later on, we'll keep the three-year forecast and the terminal value calculation separate (\$ millions).

$$PV = \frac{\$46}{1.17} + \frac{\$51}{(1.17)^2} + \frac{\$56}{(1.17)^3} + \frac{\$540}{(1.17)^3}$$

$$PV = \$112 + \$337$$

$$PV = \$449$$

This procedure indicates that Arcturus is worth about \$449 million to Aldebron. Notice that approximately three-quarters of this figure comes from the terminal value assumption.

In other words, the absolute maximum that Aldebron should consider paying for Arcturus is \$449 million, which if there are 20 million shares outstanding is \$22.45 per share.

If the stock is currently selling at \$19.00, this represents an 18.2% premium over its market price calculated as follows.

$$(\$22.45 - \$19.00)/\$19.00 = 18.2\%$$

### The Quality of the Estimate

*It's important to understand how arbitrary the valuation process we've just illustrated can be, especially the terminal value calculation. Even though it represents the period about which we know the least (the distant future), the terminal value accounts for fully three quarters of the final valuation. That means our results are highly sensitive to the assumptions made about the long-term future. In other words, modest changes in those assumptions can make huge differences in total value.*

For example, suppose a more optimistic person did the forecast and decided that a 9% long-term growth rate was more appropriate for Arcturus. Under that assumption the terminal value is \$763 million and has a present value of \$476 million. The total value of the firm is then

$$PV = \$112 + \$476 = \$588$$

Notice that under this more aggressive but still reasonable assumption, the terminal value represents 81% of the target's final calculated value. The maximum acquisition price is then  $(\$588/20 =)$  \$29.40, which implies a premium of  $[(\$29.40 - \$19.00)/\$19.00 =]$  54.7%.

This means an enormous range of values can be calculated for the offering price in an acquisition like this one. Good judgment is called for to avoid basing a multimillion-dollar deal on too high a price.

Although premiums this big have been paid in some large and sophisticated acquisitions, it's hard to believe a company can be worth so much more than its market value.<sup>11</sup> The implication is that something else must be motivating the deal. Many observers have attributed such actions to sheer ego on the part of the executives in charge of the acquiring firms.

from the **CFO**

11. A number of truly excessive premiums were seen in the 1980s and 90s, some approaching 100% of market value. However, that practice seems to have moderated lately. In the most recent spate of mergers, acquirers are reported to be holding premiums in the neighborhood of 20%. See Berman and Singer, "Blizzard of Deals Heralds an Era of Megamergers," *The Wall Street Journal*, June 27, 2006; A1.

## Paying for the Acquisition—The Junk Bond Market

Acquiring a company involves giving its stockholders something of value in return for their shares. That something is generally one or a combination of three things: cash, stock in the acquiring firm, or debt of the acquiring firm.

For example, suppose the firms in Example 17.2 agreed to a price of \$25 for Arcturus's stock. At the same time suppose Aldebron's stock was selling for \$10 a share. The following are a few of the combinations that might be offered for 100 shares of Arcturus.

Cash	Aldebron Stock	Bond
\$2,500	—	—
—	250 shares	—
1,000	50	\$1,000
1,500	100	—

To the extent that cash is offered, the acquiring firm must either have it or be able to raise it. Investment banks have played an important role in the most recent merger wave by helping companies raise money to pay for acquisitions. In particular, the *junk bond market* was a product of the 1980s that helped acquirers borrow money to pay for acquisitions.

*Junk bonds* are low-quality bonds that pay high yields because the firms that issue them are risky. Prior to the 1980s, it was virtually impossible for any small, risky company to borrow regardless of the interest rate it offered on its bonds.

During that period, however, investment banks started pooling risky bonds into funds, claiming that the failure rate of risky companies was only a little higher than that of more reputable firms. Then it was argued that if the failure rate of risky companies is only 1% or 2% higher than that of stable companies, but the pool of their bonds pays 5% or 6% more interest, an investor is better off with a share of the risky pool than with a stable firm's bond.

Investors bought the idea, and suddenly high-risk ventures could borrow substantial sums of money. A prime use of that money was paying for the stock of target companies in risky acquisitions. In other words, the acquiring company would issue junk bonds and use the borrowed money to make acquisitions.

It turned out that the basic premise on which the junk bond market was founded wasn't true. Risky firms failed only slightly more often than higher rated firms *in good economic times*. In bad times, however, they failed a lot more often. A recession came along in the late 1980s, and the junk bond market collapsed.

The junk bond market was pioneered by an individual named Michael Milken who worked for the firm of Drexel Burnham Lambert. The firm later failed, and Milken spent some time in jail for his activities during the period. In the 1990's and early 2000s, high yield debt has reemerged as a source of financing.

## The Capital Structure Argument to Justify High Premiums

Recall that we came to the conclusion in Chapter 14 (page 559) that capital structure can effect the market price of stock. In particular, we said that replacing equity with debt where there was little or no debt to begin with can sometimes cause the company's stock price to rise.

**Junk bonds** are issued by **financially weak** firms and pay high interest rates. They are frequently used to **fund high-risk** acquisitions.



## PRACTICAL FINANCE

### How a Trendy Soft Drink Gave Cereal Giant Quaker Oats a \$1.4 Billion Case of Indigestion

On March 28, 1997, *The Wall Street Journal* carried the modest headline “Quaker Oats to Sell Its Snapple Business.” The article announced the end of a story that may be the most flagrant example ever of overpaying for an acquisition.

Only 2<sup>1</sup>/<sub>2</sub> years earlier Quaker paid \$1.7 billion for Snapple, a leader in “new age” soft drinks. The *WSJ* article reported that the business was being sold for a mere \$300 million, a loss of \$1.4 billion.

The loss amounted to \$8.40 per share of Quaker stock. To indicate its magnitude the newspaper noted that in the same quarter a year earlier, Quaker’s earnings were about \$0.23 per share. This might suggest that the Snapple disaster wiped out about  $(\$8.40/\$0.23 =)$  36 quarters or nine years of earnings!

Snapple caught on in the early 1990s with sales growing from \$95 million in 1991 to \$516 million in 1993. This blistering growth caught Quaker’s eye, and probably fueled the acquisition price of 20 times earnings, which was twice the P/E ratio of other beverage companies. Further, Quaker already marketed Gatorade, and probably expected big synergies with Snapple.

But there was trouble from the very beginning that Quaker should have anticipated. First, the long-term growth rate of the beverage industry was only about 3%. That meant Snapple’s super-normal growth couldn’t last forever. Second, other firms including Coke and Pepsi had aggressively entered the new age market. By the time of the acquisition, Snapple’s growth had stalled and its earnings estimates were dropping sharply.

It’s hard to imagine how Quaker could have made so great an error. Snapple’s 1993 earnings were about \$68 million. Quaker could have used the techniques of Example 17.2 to derive the kind of growth rate assumptions that would have been necessary to support an acquisition price of \$1.7 billion. For example, if Quaker’s required rate of return on the deal was only 15%, Snapple had to have been forecast to grow at about 11% *forever* to justify the price. That was incredibly optimistic when the overall beverage market was growing at just 3% and the competition included market savvy giants like Coke and Pepsi!

So why was Quaker willing to pay so much for Snapple? It’s hard to say. A *Business Week* article published about six months earlier observed that some investors felt it may have had something to do with the “excitement of a splashy deal.”

**Sources:** *The Wall Street Journal* (28 March 1997); *Business Week* (23 September 1996); Arthur J. Thompson and A. J. Strickland, *Strategic Management: Concepts and Cases*, 9th ed. (Chicago: Richard D. Irwin, 1996).

When the money used to buy out a target’s shareholders is raised by borrowing, the result is frequently a more leveraged firm with new owners. If this results in a market value increment, the increment is argued to be a justification for paying a high premium for the acquisition’s stock.

Even when this happens, it’s hard for a reasonable person to justify premiums in the neighborhood of 50% over market value.

## The Effect of Paying Too Much

An acquiring company that pays too much for an acquisition with either its stock or cash on hand transfers wealth from its own stockholders to those of the target. This represents a violation of the acquiring management's responsibility to act in the best interest of its stockholders, but isn't likely to cause problems beyond that.

On the other hand, paying too much with borrowed money results in a company that's heavily burdened with debt and the associated interest payments. That can cause the combined firm to perform poorly or fail in the future.

In the context of Example 17.2, if Aldebron borrows as much as \$592 million to buy Arcturus, and Arcturus's cash flows turn out to be less than expected, there won't be enough money available to service the debt. That can spell bankruptcy.

## DEFENSIVE TACTICS

**Defensive tactics** are things management can do to prevent a company from being acquired. They can be divided into two categories, things that can be done after a takeover attempt is under way and things that can be done in anticipation of such an attempt.

### Tactics after a Takeover Is Underway

After an acquiring firm has announced its intentions, a target's management can take the following actions.

#### Challenge the Price

By this tactic, management attempts to convince the stockholders that the acquirer's price is too low. This usually amounts to arguing that the market has temporarily undervalued the stock, and that the shareholders will do a lot better by holding on until the price rises above the amount offered.

#### Claim an Antitrust Violation

Management can approach the Justice Department and claim the merger is anticompetitive, hoping that the government will intervene.

#### Issue Debt and Repurchase Shares

This tends to drive up the stock's price, making the price offered by the acquirer less attractive. It also increases the firm's leverage, making the company less desirable from a capital structure point of view.

#### Seek a White Knight

Some acquirers are particularly unattractive because they have a history of treating the management and employees of acquired companies poorly. A target's management will sometimes try to find an alternate acquirer with a better reputation. Such an alternative suitor is known as a **white knight**.

#### Greenmail

Mergers are sometimes initiated when a powerful group acquires a substantial but minority interest in a company. This can signal its intention to acquire a controlling interest later. Managements have eliminated such threats by buying the group's shares at a price in excess of the stock's market value. Essentially management buys off the attacker with the company's money in a process known as paying **greenmail**. Other stockholders have been known to become upset over this practice and sue the board of directors.

A reluctant target's management can use **defensive tactics** to **avoid** being acquired.

A **white knight** is an alternate acquirer with a **better reputation** for its treatment of acquired firms.

## Tactics in Anticipation of a Takeover

Several things can be written into a corporation's charter and bylaws that make it difficult to acquire without the cooperation of management.

### Staggered Election of Directors

Companies are run by boards of directors which are normally elected annually by stockholders. The annual election of directors implies that if an outside party gains a controlling interest in the firm's stock, it can elect a new board and begin running the firm relatively promptly. However, if the elections of board members are staggered so that only, say, one-third are elected each year, it will take some time for a new controlling interest to take over the board and thereby control the company. That makes the acquisition less attractive.

### Approval by a Supermajority

Mergers have to be approved by shareholders owning a majority of the firm's stock. However, the definition of the majority required is written into the corporation's bylaws. Requiring approval by a supermajority, say 80%, of shareholders makes taking control of the company more difficult.

### Poison Pills

**Poison pills** are legal devices embedded in corporate bylaws that are designed to make it prohibitively expensive for outsiders to take control without the support of management. Conceptually, the acquirer commits financial suicide by swallowing the target along with its poison pill.

There are any number of poison pill arrangements, but there's also some uncertainty surrounding them. Some ideas can prove to be illegal and therefore aren't binding. Other arrangements can be discriminatory against certain groups of stockholders or can be shown to be an irresponsible squandering of the firm's resources. In such cases, the directors who approve the arrangements can be exposed to personal lawsuits by unhappy stockholders. The following are a few of the more common poison pill arrangements.

### Golden Parachutes

*Golden parachutes* are contracts between a company and its senior managers that guarantee exorbitant severance packages if those managers are fired after a takeover. In addition to making the managers rich, the cash drain can debilitate the company.

### Accelerated Debt

A firm can include a provision in its debt contracts that requires the principal amounts to become due immediately if the firm is taken over. Most firms don't have the cash available to make such a payment, so a takeover would put them into default. If that happens, the acquirer is forced to come up with enough cash to pay off all of the acquired firm's debt immediately after the acquisition. This is generally distasteful to acquiring firms.

### Share Rights Plans (SRPS)

A share rights plan is a complicated arrangement in which current shareholders are given *rights*, which are securities that enable them to buy shares in the merged company at a reduced price after a takeover. That means an acquiring company has to be willing not only to buy the stock of a target, but also to turn over a number of its own shares to the target's stockholders at, say, half price. This doesn't prevent an acquisition, but can make it very expensive.

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**Golden parachutes** are exorbitant severance packages for a target's management.

## OTHER KINDS OF TAKEOVERS—LBOs AND PROXY FIGHTS

So far we've associated takeovers with acquisitions of one firm by another. However, changes in ownership and control can occur outside of business combinations.

### LEVERAGED BUYOUTS (LBOs)

A **leveraged buyout (LBO)** is a transaction in which a publicly held company's stock is purchased by a group of investors through a negotiated deal or a tender offer. The company is then no longer publicly traded, but becomes a *private* or *closely held* firm owned by the group of investors, who are frequently the firm's management.

The investor group gets the money to buy the stock by contributing a relatively small amount of their own equity and borrowing the rest. The amount borrowed can turn out to be more than 95% of capital—hence, the term “leveraged” buyout. The borrowed funds usually come through *asset-based* financing, meaning the loans are secured by the firm's own assets.

LBOs tend to be very risky because of the high debt burden placed on the firm after the change in ownership. For example, imagine a firm that has no debt and \$100 million in equity whose stock is selling at book value. That is, the market value of the stock is also \$100 million. Now suppose the management team purchases the stock at book value, contributing \$5 million of its own money and borrowing the rest. The firm's capital structure before and after the LBO is as follows (\$ millions).

	Before LBO	After LBO
Debt	\$ 0	\$ 95
Equity	<u>100</u>	<u>5</u>
Capital	\$100	\$100

It's important to understand that nothing has changed with respect to the operating ability of the company to generate money. However, the post-LBO firm has to pay interest on debt of \$95 million, making it a very risky company.

Notice that the LBO is a *takeover but not a merger*. The company has been taken over by a group of investors, but it hasn't been merged with anything.

Specialized LBO companies help put together LBOs and assist in borrowing the necessary money. The best known of these is Kohlberg, Kravis, & Roberts (KKR), which is famous for its 1988 LBO of RJR Nabisco, a combined tobacco and food products company. Prior to the LBO, the firm's stock was trading at about \$55 per share. The deal was finally done at \$106 per share for a total of more than \$25 billion.

After an LBO is completed, the object is to reduce the debt load as quickly as possible. This can sometimes be accomplished by selling off divisions or assets and using the proceeds to pay down the debt.

LBOs have been criticized as profit-driven financial manipulations that can destroy sound companies. Our numerical illustration gives an indication of what is meant by this accusation. Before the LBO, the company was a conservatively financed firm, presumably with good operating prospects (otherwise the acquiring group wouldn't have been interested). After the LBO the same firm was in serious danger of collapse under the weight of its debt.

LBOs are less common today than they were in the mid-1980s, presumably because a number have failed as a result of their debt burden.

In a **leveraged buyout (LBO)** investors **take a company private** by buying its stock with borrowed money.

The **result** of an **LBO** is usually a **risky, debt-laden** company.

In a **proxy fight**, opposing groups solicit shareholders' **proxies** for the election of directors.

## PROXY FIGHTS

A *proxy* is a legal document that gives one person the right to act for another on a certain issue. When corporations elect boards of directors, management usually solicits its stockholders for their proxies to use in voting for directors. In other words, management asks stockholders for their proxies to vote for the board members it has proposed. There's generally no opposition, and the proxies are willingly granted by most of the shareholders.

However, sometimes a group of shareholders becomes dissatisfied with management and seeks to gain control of the board. Such a dissident group can also solicit the proxies of the other shareholders for the election of board members. If the dissidents win, they can elect their representatives to the board and take control of the firm.

A *proxy fight* occurs when more than one group simultaneously solicits shareholders' proxies for the election of directors. A takeover is said to occur if the dissident group wins.

Notice that no change in ownership is associated with a proxy fight. The same stockholders own the firm before and after the battle, but the controlling interest on the board changes.

## DIVESTITURES

A **divestiture** is the opposite of an acquisition. A company decides that for some reason it would be better off without a particular business operation, and gets rid of it in one of several ways.

### THE REASONS FOR DIVESTITURES

There are several reasons for divestitures.

#### Cash

The most straightforward reason to sell anything is a *need for cash*. A firm can simply sell off a noncritical piece of itself because it needs the money for something else.

After LBOs, firms tend to have huge debt burdens which can sometimes be partially paid down by selling assets or noncritical operations for cash.

Acquisition targets sometimes have operations which acquirers don't want but which can't be separated from the things they do want before the merger. It's relatively common to divest unwanted divisions shortly after the acquisition and use the money received to reduce the expense of the original takeover.

#### Strategic Fit

Sometimes companies have divisions or subsidiaries that don't fit into their long-term plans. This can be especially true if there's been a change in the firm's strategic thinking.

#### Poor Performance

Certain operations just never become acceptably profitable. Eventually even the most patient of managements will want to get rid of them.

### METHODS OF DIVESTING OPERATIONS

There are basically three ways to divest a business unit: sale, spinoff, and liquidation.

#### Sale for Cash and or Securities

An operation can be sold to another company or to an investor group. The first situation is a friendly acquisition of the operation by the other company. The second is usually an LBO.

Companies **divest** operations to **raise money**, or because of poor **performance** or lack of **strategic fit**.

A **spinoff** creates a **new company** owned by the same shareholders that can be **separately traded**.

### Spinoff

A **spinoff** occurs when two parts of a firm are recognized to be strategically incompatible, but there's no desire to get rid of either. In other words, management believes that it's in the stockholders' best interest to keep both pieces, but it's operationally better to separate them completely. A spinoff is accomplished by setting up the operation to be divested as a separate corporation and giving shareholders of the original company a share of the new firm for every share of the old firm they own.

After the spinoff the two companies are owned by exactly the same shareholders, who are then free to trade the shares separately. After a relatively short time, the ownership is usually no longer identical.

Here's an example. Suppose a stable company begins to acquire and develop a few riskier business divisions. After a few years the firm has two distinct sides, one conservative and one risky. However, many of the original stockholders invested in the company because it was stable, so they're not comfortable with its new risky side. It makes sense to spin off the risky section and let the unhappy stockholders sell their shares in it while maintaining or increasing their holdings in the conservative business.

### Liquidation

In a liquidation, the divested business is simply closed down and its assets are sold off piecemeal. Liquidation is generally a last resort to dispose of businesses that have failed badly.

## BANKRUPTCY AND THE REORGANIZATION OF FAILED BUSINESSES

Failure is an unpleasant but real fact of business life. More than 50,000 businesses fail each year, including some very substantial firms. We'll begin our discussion of the subject by defining exactly what business failure means.

### FAILURE AND INSOLVENCY

Business failure can be defined economically in a long-run sense or in more immediate commercial terms. We're primarily concerned with the commercial concept and its implications, but it's important to understand the economic idea and appreciate the distinction between the two.

A business fails economically if it is unable to provide an adequate return to its owners. For example, suppose a company consistently pays its bills and earns a profit, but never makes more than a 1% or 2% return on the equity invested by its stockholders. After a while, investors will seek to get their capital out of such a company, and it will be closed as a failure.

The economic failure we've just described is an issue between a business and its owners. Commercial failure, on the other hand, is an issue between a business and its *creditors*. A business fails commercially when it can't pay its debts. The condition is described by the term **insolvent**. A firm is said to be *technically insolvent* when it can't meet its short-term obligations as they come due. It is *legally insolvent* if its liabilities exceed its assets.

A commercial failure is generally also an economic failure, but a business can be an economic failure without ever failing in the legal or commercial sense.

### Potential Actions by Creditors Against an Insolvent Company

Imagine that an insolvent company owes money to a number of creditors. Then suppose one creditor sues and manages to take possession of the firm's producing assets to satisfy its debt.

A firm is **insolvent** and a **commercial failure** if it can't pay its near-term debts.

This would be good for the suing creditor, but would be very bad for everyone else involved. If the insolvent firm loses its production equipment, it probably goes out of business immediately. In most cases that means all the employees lose their jobs and the firm's stockholders lose their entire investments. Further, because the company no longer has the ability to earn money, none of the other creditors are likely to be paid anything.

In most cases it would be better for the firm to continue in business and use its earnings to pay off its debts slowly. That implies it has to stop doing whatever made it insolvent in the first place if that's possible. The problem is that each creditor is looking out for itself and wants to have its debts satisfied out of the firm's assets before they're paid out to someone else.

## BANKRUPTCY—CONCEPT AND OBJECTIVES

**Bankruptcy** is a legal proceeding designed to preclude the situation we've just described. When an insolvent firm goes into bankruptcy, the court protects it from lawsuits by its creditors and at the same time determines whether it should be kept running or closed down.

A firm can be insolvent because its business has gone bad to the point of failure or because it has too much debt in an otherwise survivable situation. In the first case it's better to shut the company down before it loses any more money, and salvage as many of its assets as possible to pay off its debts. In the second case, the firm may be able to make good on all of its debts if it's given enough time, so it may be appropriate to keep it running if whatever made it insolvent in the first place can be changed. Of course, some situations are combinations of both conditions, a fact that makes the judgment a tough call.

If an insolvent company appears to be worth more as a going concern than the value of its assets, it goes through a *reorganization* under the supervision and protection of the court. This involves a *restructuring* of its debt and a plan to pay everyone off as fairly as possible.

If the court decides that the company is a lost cause, worth more dead than alive, it orders a **liquidation**. In a liquidation, the firm's assets are sold under the court's supervision and the proceeds are used to pay creditors in accordance with a schedule of priorities included in the bankruptcy laws.

In summary, bankruptcy is a federal legal procedure designed to save as much pain and loss as possible when firms fail. A firm isn't *bankrupt* or *in bankruptcy* until the action is filed in court. Until that time it's just insolvent. A bankrupt firm *emerges from* or *comes out of* bankruptcy after a reorganization in which its creditors agree to some settlement of their claims.

## BANKRUPTCY PROCEDURES—REORGANIZATION, RESTRUCTURING, LIQUIDATION

A *bankruptcy petition* can be initiated by either the insolvent company itself or by its creditors. When the debtor firm itself files the petition, the bankruptcy is said to be *voluntary*. When creditors do the filing, the action is *involuntary*. It takes only a group of three unsecured creditors who are owed a total of \$5,000 to place a firm in involuntary bankruptcy. Once either petition is filed, the firm is protected from creditors' further legal actions related to its debts until the bankruptcy is resolved.

Normally, a firm in bankruptcy is permitted to continue in business. To prevent it from doing so would usually cause the kinds of losses described in the last section. However, there may be a concern that the company's management will cause a further deterioration in its financial position during the proceedings. There's also a concern that assets will be removed during this period, leaving an empty shell to satisfy creditors. To guard against these dangers, the court may appoint a **trustee** to oversee the

A **bankruptcy** proceeding protects a failing firm from creditors until a resolution is reached to close or continue it.

A **trustee** oversees the operation of a firm in bankruptcy to **protect** the interests of **creditors**.

company's operation while it's in bankruptcy. When a trustee isn't considered necessary, the bankrupt company continues to own and operate its business, and is called a Debtor in Possession (of its assets).

## Reorganization

A **reorganization** is a plan under which an insolvent firm **continues to operate** while attempting to pay off its debts.

A **reorganization** is a business plan under which the firm can continue to operate and pay off its debts. Management and the company's stockholders invariably favor reorganization over liquidation, because there's generally little or nothing left for stockholders after a liquidation. Once the bankruptcy petition is filed, management has 120 days to come up with an acceptable reorganization plan.

Reorganization plans are judged on two general criteria, *fairness* and *feasibility*. *Fairness* implies that claims are satisfied in accordance with an order of priorities that's part of the bankruptcy laws. We'll talk about those priorities later. *Feasibility* refers to the likelihood that the plan will actually come true. It's important to realize that a reorganization plan is a business/financial plan just like those we discussed in Chapter 14. As such it's based on a set of assumptions that may or may not be realistic. A court is unlikely to approve a plan that's based on unrealistic assumptions.

To be accepted, a reorganization plan has to be approved by the firm's creditors and its stockholders and by the bankruptcy court. A court-approved plan can be forced on reluctant creditors by the court in a *cramdown*. Once a reorganization plan is accepted, the firm can emerge from bankruptcy and proceed to implement the plan. It's sometimes the responsibility of a court-appointed trustee to oversee the plan's implementation.

## Debt Restructuring

The heart of most reorganization plans is a **restructuring** of the firm's debt. Keep in mind that insolvent firms are bankrupt because they couldn't pay their debts. Therefore, they aren't likely to be able to work themselves out of their troubles under the debt payment schedules that existed before the bankruptcy petition was filed. What's generally necessary is some kind of a reduction in payments. Restructuring the firm's debt makes such a reduction possible.

Debt restructuring can be accomplished in two ways. The simplest is an *extension* whereby creditors agree to give the firm a longer time to repay its obligations. A temporary deferral of principal and sometimes interest payments is quite common. The second approach is a *composition* in which creditors agree to settle for less than the full amount owed them.

It's important to understand the position of creditors in a bankruptcy case. If they demand immediate payment of the full amounts of their debts, the bankrupt firm will fail and they'll receive only a small fraction of what they're owed. On the other hand, if they accept less in terms of either the amount paid or its timing, they may stand to get a great deal more money in the long run. Therefore, they have an incentive to compromise and make concessions.

A common method of accomplishing a debt restructuring is the conversion of debt into equity. Creditors give up their debt claims (loans, bonds, accounts receivable) in return for stock in the bankrupt company. This immediately reduces the debt service burden on the company in trouble and eases its cash flow problems (assuming it doesn't pay dividends on the new equity).

After such a conversion, creditors have equity positions in the troubled company. These aren't worth much initially, but if the firm survives and perhaps prospers, in the

**Debt restructuring** involves concessions that **lower** an insolvent firm's **payments** so it can continue in business.

**Extensions, compositions, and debt to equity** conversions are common approaches to **restructuring**.

long run they can be worth more than the debt given up. Notice that in a conversion the original stockholders receive a benefit in terms of the forgiveness of some of their company's debt. In return their ownership is diluted.

**Example 17.3** The Adcock Company has 50,000 shares of common stock outstanding at a book value of \$40, pays 10% interest on its debt, and is in the following financial situation.

### Adcock Company Selected Financial Information (\$000)

Income and Cash Flow		Capital	
EBIT	\$ 200	Debt	\$6,000
Interest	<u>600</u>	Equity	<u>2,000</u>
EBT	\$ (400)	Total capital	\$8,000
Tax	<u>—</u>		
EAT	\$ (400)		
Depreciation	200		
Principal repayment	<u>(100)</u>		
Cash flow	\$ (300)		

Notice that although the company has a positive EBIT, it doesn't earn enough to pay its interest let alone repay principal on schedule. Without help of some kind it will fail shortly. Devise a composition involving a debt for equity conversion that will keep the firm afloat.

**SOLUTION:** Suppose the creditors (perhaps a number of bondholders) are willing to convert \$3 million in debt to equity at the \$40 book value of the existing shares. This would require the firm to issue 75,000 new shares, resulting in the following financial situation.

### Adcock Company Selected Financial Information After Debt to Equity Conversion (\$000)

Income and Cash Flow		Capital	
EBIT	\$ 200	Debt	\$3,000
Interest	<u>300</u>	Equity	<u>5,000</u>
EBT	\$(100)	Total capital	\$8,000
Tax	<u>—</u>		
EAT	\$(100)		
Depreciation	200		
Principal repayment	<u>(50)</u>		
Cash flow	\$ 50		

Notice that the company now has a slightly positive cash flow and can at least theoretically continue in business indefinitely. *However*, the creditors now own a controlling interest in the firm.



## ETHICS

### Has Bankruptcy Been Too Easy For Too Long? The Bankruptcy Reform Act of 2005

Many people, especially creditors, have long considered bankruptcy unethical, unfair, and too easy. The issue has been around as long as bankruptcy laws have existed. Here's a quote from the work of the famous French author Honore de Balzac written more than 170 years ago:

"What is a bankrupt, father?" asked Eugenie.

"A bankrupt," replied her father, "is guilty of the most dishonourable action that can dishonour a man . . . A bankrupt . . . is a thief whom the law unfortunately takes under its protection . . . A bankrupt is worse than a highwayman . . ."

Honore de Balzac, Eugenie Grandet 108 (1833)

Basically, Eugenie's father was saying that people who declare bankruptcy are stealing from those who have loaned them money. Most creditors feel the same way today. They think it's unfair to let debtors off the hook for just obligations they might be able to pay if they tried harder. Creditors have long decried bankruptcies of convenience and popular guide books on how to use court procedures to escape debts. They claim that bankruptcy has become a financial planning tool. In other words, they see bankruptcy as legalized theft from those who extend credit in good faith.

There's undoubtedly an ethical issue in bankruptcy. Is it right to allow people or companies to escape their debts and start over scot-free? Creditors feel it isn't and lobbied Congress for years to toughen bankruptcy laws.

After several near misses the creditor lobby succeeded in getting Congress to pass the Bankruptcy Reform Act of 2005. That's shorthand for the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA). The key words in the title are *Abuse Prevention*; the Act keeps bankrupts from abusing court procedures to casually avoid debts. It primarily affects individual rather than corporate bankruptcies.

The new law makes it harder to get a liquidation judgment under which the bankrupt party must give up most of his assets but in return has virtually all of his debts wiped away. That was a good deal for bankrupts, since they usually don't have many assets anyway.

The rules now force most bankrupts into reorganization plans under which they have to pay off a good deal of their debt over a several year period. Only after they've done that will the remaining debt be expunged. This is a more painful process than the quick and easy liquidation.

The new law comes down hard on bankruptcy lawyers too. They now have to personally certify that the statements their clients make about income and assets are true. If they aren't the bankrupt's lawyer can be sanctioned and fined by the court. This means lawyers are probably going to have to hire investigators to verify their clients' statements, a practice that will run the cost of legal representation in bankruptcy up a lot.

Consumer advocacy groups vigorously opposed the new law claiming that its biggest proponents are credit card companies that lose money when overextended cardholders escape into bankruptcy. Their point is that the credit card companies create their own problems by issuing millions of cards without doing credit checks. The credit card companies were further accused of advertising deceptively low interest rates and hiding the excessive fees they charge when payments are late or missed. These unethical practices are alleged to trick unsuspecting consumers into running up big bills they can't pay leading to bankruptcy.

So which argument is right and which is wrong? Was bankruptcy too easy; or is it now too hard? Or have sleazy, unethical lenders made us a nation of credit junkies, sadly over our heads in consumer debt? And did those sleaze-ball lenders deserve to get stuck from time to time? And . . . did our government do the right thing or the wrong thing by making it tougher to get a "fresh start" through bankruptcy?

### Liquidation

involves **closing** a troubled firm and selling its assets.

Unauthorized **transfers out** of a bankrupt firm can be **recovered** by the trustee.

The **bankruptcy code** contains **priorities** for the **distribution** of assets among claimants.

**Secured creditors** are paid out of the proceeds of the sale of **pledged assets**.

## Liquidation

When the court decides that a bankrupt business isn't worth continuing, it orders a **liquidation**, which involves selling off the firm's assets and using the proceeds to pay off as many of its debts as possible. The process is conceptually simple but can be administratively involved.

The liquidation is accomplished by a court-appointed trustee who first looks for and attempts to recover any unauthorized transfers out of the firm around the time of the bankruptcy filing. This is an important step. When business owners anticipate bankruptcy they frequently try to remove assets from the company. Doing that is illegal because those assets should rightly be used to satisfy creditors' claims. It's the trustee's job to find and recover such articles and payments, which are called *fraudulent transfers*. It's also illegal to make payments to certain preferred creditors without proportionate payments to others. These are called preferences and should also be recovered by the trustee.

Next the trustee supervises the sale of the business's assets, gathering the proceeds into a pool of funds that can be used to satisfy creditor's claims. Finally the trustee distributes the available funds to the various claimants.

It's important to realize that claimants aren't just lenders in the traditional sense. They include vendors who sold to the company on credit, employees who are owed wages, customers who may have put down deposits on merchandise, the government which may be owed taxes, and the people and organizations that are part of the bankruptcy proceeding. This last group includes lawyers and the court itself, which are owed fees for their services. In addition, the company's stockholders are claimants to the extent of whatever is left over after everyone else is satisfied.

## Distribution Priorities

The distribution of funds in bankruptcy follows an order of priority laid down by the bankruptcy code. This order is used to determine the sequence of payment in liquidation and as the basis for the fairness judgment in evaluating reorganization plans. Basically the priority rule says that all claimants are not equal in the eyes of the law.

It's important to understand the implications of this rule. The funds available from liquidation usually amount to a fraction of the value of the claims against the company. For example, a firm with total claims of \$1 million might end up with a pool of funds from liquidation of \$300,000. The priority rule says that the claimants do not all get 30 cents on the dollar for their debt. Some get more and some get less.

## Secured Debt

The first distinction made among claimants is between *secured* and *unsecured creditors*. A secured creditor's debt is guaranteed by a specific asset. For example, when money is borrowed to buy a car, the loan is generally secured by the automobile itself. That means if the loan isn't paid, the car is sold and the money from the sale must be used to satisfy that debt before any other. Unsecured debts aren't tied to particular assets and just rely on the general creditworthiness of the borrower.

Each secured obligation is paid out of the proceeds of the sale of the related assets before the liquidation pool is established. To the extent that any individual secured debt is more or less than the value of its securing asset, the difference becomes unsecured debt or an addition to the pool, depending on whether the debt or the value of the asset is larger.

### Priorities for Payment of Claims

After all secured debts are paid, unsecured claims are paid out of the remaining pool of funds in the following order.

1. Administrative expenses of the bankruptcy proceedings
2. Certain business expenses incurred *after* the bankruptcy petition is filed<sup>12</sup>
3. Certain unpaid wages
4. Certain unpaid contributions to employee benefit plans
5. Certain customer deposits<sup>13</sup>
6. Unpaid taxes
7. Unsecured creditors
8. Preferred stockholders
9. Common stockholders

Clearly common stockholders receive only the bankrupt firm's residual value after all other obligations have been paid. That's often nothing at all.

### Terminology—Bankruptcy Code Chapters 7 and 11

The federal bankruptcy code is divided into chapters. Reorganization is governed by Chapter 11 and liquidation by Chapter 7.

People frequently refer to firms in reorganization proceedings as being “in Chapter 11.” When firms voluntarily enter bankruptcy, it's common to say that they've “declared Chapter 11” or “gone into Chapter 11.” References to other chapters aren't as common in everyday language.

### QUESTIONS

1. The Highland Instrument Company has revenues of about \$300 million per year. Its management is interested in expanding into a new type of product manufactured primarily by Lowland Gauge Inc., a firm with sales of about \$200 million annually. Both firms are publicly held with a broad base of stockholders. That is, no single interest holds a large percentage of the shares of either firm. Describe the types of business combination that might be available for the two firms. Include ideas like merger, consolidation, acquisition, friendly, and hostile. How would Highland's management get started? Do the relative sizes of the two firms have any implications for the kinds of combination that are possible or likely?
2. Hostile acquisitions create animosities between the stockholders of the acquired and acquiring companies. Comment on the truth of this statement.
3. Define vertical, horizontal, and conglomerate mergers and describe the economic effects of each.

12. The high priority of postfiling expenses is aimed at keeping bankrupt firms in business until the proceedings are resolved. Without it, no one would do business with a firm in bankruptcy without being fully paid in advance.

13. Claims 3 through 5 clearly reflect a legislative intent to protect individuals over companies.

4. Industry A is dominated by 10 large firms, each with sales of approximately \$500 million per year. A proposal to merge two of these firms was approved by the Justice Department as not violating the antitrust laws. Industry B is locally defined and much smaller. It is dominated by three small firms, each selling about \$50 million per year. A merger between two of these companies was prohibited under the antitrust laws. Explain the logic under which the merger of two \$500 million giants can be allowed while the relatively insignificant merger of two small companies is disallowed.
5. Suppose an industry is dominated by three firms, one of which is twice as large as the other two, which are about the same size. Could a merger of the two smaller firms actually increase competition in the industry?
6. Clarington Corp. has a division that's been performing well but doesn't fit into the company's current long-term strategic plans. Describe the methods through which it can divest the operation.
7. The Blivitt Company has been losing money and experiencing serious cash flow problems lately. The main problem is a large debt to the First National Bank that was incurred to purchase a computer that's now obsolete. Bill Blivitt, the firm's owner, has stated his intention to declare bankruptcy to rid the company of the loan. He expects to go in and out of Chapter 11 in a few weeks and emerge essentially as before but without the loan. Write a note to Bill explaining bankruptcy procedures and why this is probably an unrealistic approach on his part.

### BUSINESS ANALYSIS

1. The Cranston Company would like to acquire the Lamont Company, but overtures made to management have been emphatically rebuffed. Forty-five percent of Lamont's stock is owned by five investors who were involved in the company's founding and continue to be active in its management. Charlie Hardnose, Cranston's director of corporate development, has suggested a hostile takeover that would bypass Lamont's management. Could this work, and does it seem to be a very good idea in this situation?
2. You're a seasoned financial executive who's recently been hired as the CFO of the Pilaster Corporation. The firm has just finished two years in which its financial performance has been clearly below par. The company isn't in danger of failing, but it's clear that earnings and growth could be much better. The market price of Pilaster's stock reflects this lukewarm performance. It is currently selling for \$32, down substantially from its peak of \$48 a little over two years ago. (The market has been generally flat in the last two years.)

Several observers have blamed the lackluster performance on the firm's CEO, Gerald Beanweather, and his top assistants. This team installed some new technological and managerial methods several years ago that haven't worked out well. Recently, they've been talking about returning to the old, time-tested methods that most people feel will bring the firm back to its usual performance levels. In fact, your hiring was part of the turnaround effort.

It's currently seven o'clock on a cold, bleak Monday morning in February. On the previous evening the CEO's secretary phoned the entire executive team to tell them an emergency meeting was set for this morning. The group is now assembled waiting to hear what's going on.

At 7:01 Gerry walks into the room, obviously upset. He says that yesterday afternoon he received a call from Harvey Highroller, the CEO of Marble Inc., the leading firm in the industry. Marble is interested in acquiring Pilaster and is willing to offer \$37 a share for its stock, a premium of more than 15%. Marble has a history of making both friendly and unfriendly acquisitions.

- a. What kind of combination is Marble currently proposing?
  - b. What is likely to happen if Pilaster's management rejects Marble's offer?
  - c. Is Marble likely to be successful over management's objections?
  - d. Why is Gerry so personally upset?
  - e. Should you be personally upset?
  - f. Is Marble's offer a good deal for Pilaster's stockholders?
  - g. What should Pilaster's management do to avoid acquisition by Marble?
  - h. Do you think Marble is likely to be successful in an unfriendly merger attempt over Pilaster's defenses?
  - i. If Marble is not successful, what can the Beanweather team do to reduce the chances of a similar attack in the future?
3. The Blue Tag Company and the Pink Label Corporation both make packaging and labeling equipment. The following facts are relevant.
- Both firms use similar production and sales methods.
  - Pink Label has been losing money for years, while Blue Tag has been and is expected to continue to be profitable.
  - There is a great deal of overhead in label making.
  - The industry is dominated by the much larger Yellow Marker Co., which is difficult to compete with because of its size advantage.

The managements of the two companies are considering a merger. What arguments can be made in favor of such a combination?

4. The Phlanders Flange Company has been doing quite well lately and would like to accelerate its growth within the flange industry. Harry Flatiron, the firm's CEO, has become interested in growth through acquisition because of some exciting articles in the business press. In particular he's interested in a friendly acquisition of the Framingham Flange Factory whose general manager, Jack Daniels (a major stockholder in Framingham), he's known for some time.

Harry is prone to quick action based on brief analyses that he does himself. In the past his instincts have been pretty good, and this style has not as yet caused any major mistakes. Harry has taken Framingham's own estimate of its future cash flows and long-term growth rate along with synergies he and Jack have estimated to come up with a projected value for the company. All this has led to a proposal to offer Framingham's stockholders a 60% premium on the price of their stock.

You're Phlanders's CFO, but Harry has done all this on his own. He's about ready to make a verbal offer to Framingham's management, and has asked you to check over his figures. His arithmetic is correct, but you're very concerned about the validity of his assumptions.

Prepare a short memo to Harry outlining the risks associated with value estimates in mergers and the consequences of a mistake. Include advice on how to proceed.

5. You're the CFO of the Littleton Lighting Company. Joan Brightway, the president, has approached you and the firm's other senior executives with a proposal to take the company private through an LBO. She says that this is a good time to do it because the economic outlook is shaky and the firm's stock price is depressed,

so it will take less money to acquire control. You agree that the weak outlook has depressed the stock's price, but aren't sure that this doesn't argue against an LBO at this time. You also suspect that some fundamental weakness is developing in the demand for the firm's product.

Certain successful LBOs have received a lot of favorable press lately, and you're concerned that Joan and the other nonfinancial executives may not appreciate the risks involved in the procedure. Prepare a memo outlining what's involved in an LBO and why the maneuver is risky, especially with respect to the business's performance in the immediate future. Make a recommendation on the analyses that should be undertaken prior to going forward.

### PROBLEMS

1. The target of an acquisition generates cash flows of \$8 million per year with a risk level consistent with a return on equity of 16%.
  - a. How much should an acquirer be willing to pay if it won't consider more than five years of future earnings in setting a price?
  - b. What is the per-share price if the target has 300,000 shares of common stock outstanding?
  - c. Assume the acquirer intends to pay for the acquisition with its own stock, which is currently selling for \$36 per share. How many shares must be offered for each share of the target's stock?
2. Harrison Ltd. is considering acquiring Pugs International Inc. Pugs had cash flows of \$15 million last year and has 2.5 million shares outstanding which are currently selling at \$29 per share. The discount rate for analysis has been correctly estimated at 14%.
  - a. How much should Harrison be willing to pay for Pugs in total and per share if the firm is not expected to grow significantly and management insists that acquisitions be justified by no more than ten years of projected cash flows?
  - b. Make the same calculations assuming management will consider an indefinite stream of cash flows.
  - c. Make the calculations once again assuming management is very aggressive and is willing to assume Pugs' income will go on forever growing at a rate of 3% per year.
  - d. Comment on the results of parts a, b, and c.
3. Moser Materials Inc. is considering acquiring Newkirk Products, which produces a number of products that would enhance Moser's product line. Last year, Newkirk reported a \$30 million loss. Moser has estimated that Newkirk will break even in the fourth year after acquisition. The improvement in performance will come in four equal steps. Assuming Moser can demonstrate that the acquisition is not simply for tax purposes, calculate the present value of the tax savings that will result during the four-year period at a 12% discount rate. Assume Moser has EBT far exceeding \$30 million and is subject to a 40% marginal tax rate.
4. The Johnson Machine Tool Company is thinking of acquiring Lansing Gear Works Inc. Lansing is a stable company that produces cash flows of \$525,000 per year. That figure isn't expected to change in the near future, and no synergies are expected from the acquisition. Johnson's management has estimated that the

appropriate risk-adjusted discount rate for pricing calculations is 15%. Lansing has 200,000 shares of common stock outstanding.

- a. What is the most Johnson should be willing to pay for Lansing if management is financially conservative and insists that an acquisition must justify itself within 10 years? State the price in total and per share.
  - b. How much should Johnson be willing to pay, in total and per share, if management takes a more aggressive position and will consider Lansing's income as continuing forever? (*Hint: Estimate Lansing's value as a perpetuity starting immediately.*)
  - c. What total and per-share prices are implied if Johnson's executives are financially very aggressive and assume that their management will transform Lansing into a better company that will grow at 3% per year indefinitely?
  - d. Comment briefly on the differences in your answers to parts (a), (b), and (c).
5. Grandma's Cookies Inc. is considering acquiring Mother's Baked Goods Inc. After consideration of all benefits, synergies, and tax effects, Grandma (originally a finance major) has estimated that the incremental cash flows from the acquisition will be about \$150,000 per year for 15 years. (Grandma is financially conservative and reluctant to base decisions on benefits projected farther into the future.) She has also estimated the project's discount rate, appropriately adjusted for risk, at 12%. Mother's is a privately owned firm with 20,000 shares of stock outstanding. Grandma is confident that the owners will sell for \$50 a share, but not for less. Should Grandma acquire Mother's?
6. Sourdough Mills has considered acquiring Mrs. Baird's Bakery as an expansion strategy. Mrs. Baird's Bakery generated positive cash flows of \$5.3 million last year, and cash flows are expected to increase by 4% per year in the foreseeable future. Mrs. Baird's has 1.3 million shares outstanding, and the appropriate discount rate is 11%.
- a. If Sourdough assumes this level of cash flow will continue forever, what is the most that it should pay for each share of Mrs. Baird's Bakery?
  - b. If Sourdough wants the investment justifiable considering only five years of cash flow, what is the most it should pay for the stock?
  - c. What if it will consider a 10-year planning period?
  - d. If Mrs. Baird's Bakery stock is currently selling for \$35 per share, what would you do if you were Sourdough Mills?
7. Hirschler Motors is considering making a takeover bid for the chain of Richard's Auto Superstores. Richard's has 800,000 shares of stock outstanding, which is trading at \$18 per share. Richard's generated \$2.5 million in cash last year, and cash flows are expected to increase by 6% per year for at least 10 years. Assume the appropriate discount rate is 12%. What percent premium can Hirschler afford to offer for Richard's stock if management wants to justify the investment over 10 years? 9 years? 8 years?
8. Benson's Markets is a five-store regional supermarket chain that has done very well by using modern management and distribution techniques. Benson competes with Foodland Inc., a larger chain with 10 stores. However, Foodland has not kept pace with technological and merchandising developments, and has been losing money lately. Foodland's owners are interested in retiring and have approached Benson's with a proposal to sell the chain for \$50 million.
- Within each chain, individual stores perform uniformly. Typical results for an average store in each company are as follows.

**Typical Single-Store Results Benson's and Foodland Supermarkets (\$000)**

	<b>Benson's</b>	<b>Foodland</b>
Revenue	\$45,000	\$38,000
Cost of product	38,500	33,500
Store overhead: Depreciation	400	300
Other	4,600	4,700
EBT	\$ 1,500	\$ (500)
Tax	600	—
EAT	\$ 900	\$ (500)

If Benson were to make the acquisition, it would immediately close three of Foodland's stores that are located close to its own markets and sell the buildings for about \$1 million each. The remaining stores would operate at their current loss levels for about two years, during which time they would be upgraded to Benson's operating standards. The upgrades would cost \$3 million per store, spread over the first two years. After that, the acquired stores would have about the same operating performance as Benson's other stores. Benson's CFO feels that a discount rate of 12% is appropriate for the risk associated with the proposition. Benson's marginal tax rate is 40%.

- a. Calculate the value of the acquisition to Benson's, assuming there is no impact on any of Benson's five original stores. Assume that the incremental cash flow from the acquired stores goes on forever but does not grow. Should Benson pay Foodland's price? If not, does the deal look good enough to negotiate for a better price? What is the most Benson should be willing to pay?
  - b. (No calculations—just ideas.) Are there reasons beyond the calculations in part (a) that argue in favor of the acquisition? (*Hint*: Think along two lines about the competitive situation. First, what will happen if Benson doesn't buy Foodland? Second, what effect will the acquisition have on Benson's existing stores?)
  - c. Could the ideas in part (b) be quantified into adjustments to the results in part (a)? Make your own estimate of the impact of such ideas on the price Benson should be willing to pay.
9. Frozen North Outfitters Inc. makes thermal clothing for winter sports and outdoor work. It is considering acquiring Downhill Fashions Corp., which manufactures and sells ski clothing. Downhill is about one-quarter of Frozen's size and manufactures its entire product line in a small rented factory on a mountaintop in Colorado. It costs about \$1 million a year in overhead to operate in that factory. Frozen produces its output in a less romantic but more practical southern location. Its factory has at least 50% excess capacity. Frozen's plan is to acquire Downhill and combine production operations in its southern factory, but otherwise run the companies separately.

Downhill's beta is 2.0, treasury bills currently yield 5%, and the Standard and Poor's 500 Index is yielding 9%. The marginal combined federal and state income tax rate for both firms is 40%. Because Downhill will no longer be maintaining its own production facilities, only a minimal amount of cash will have to be reinvested to keep its equipment current and for future growth. This

amount is estimated at \$100,000 per year. Selected financial information for Downhill follows.

Revenue	\$12,500,000
EAT	1,300,000
Depreciation	600,000

- Calculate the appropriate discount rate for evaluating the Downhill acquisition.
  - Determine the annual cash flow expected by Frozen from Downhill if the acquisition is made (don't forget to include the synergy).
  - Calculate the value of the acquisition to Frozen assuming the benefits last for (1) 5 years, (2) 10 years, and (3) 15 years.
  - Downhill has 250,000 shares of stock outstanding. Calculate the maximum price Frozen should be willing to pay per share to acquire the firm under the three assumptions in part (c).
  - If Frozen is willing to assume the benefits of the Downhill acquisition will last indefinitely but not grow, what should it be willing to pay per share?
- In the last problem, assume the cash flow from the Downhill acquisition grows at 10% from its initial value for one year and then grows at 5% indefinitely (starting in the third year). Calculate the value of the firm and the implied stock price under these conditions. Use a terminal value at the beginning of the period of 5% growth. What price premium is implied, in dollars and as a percentage, if Downhill's stock is currently selling at \$62? Comment on the range of values in the results of this and the last problem.
  - Lattig Corp. had a \$2.0 million cash flow last year and projects that figure to increase by \$200,000 per year for the next five years (to \$3.0 million). After that, Lattig expects an annual growth rate of 6% forever. Assume the discount rate is 12%.
    - What percent of the total present value of Lattig's projected cash flows comes from its terminal value assumption for cash flows after the first five years?
    - Recalculate the result in part (a) if Lattig raises its terminal value growth rate forecast to 7% and then to 8%.
    - What other terminal value related issues should be considered by anyone thinking about acquiring Lattig? (Words only.)
  - Integrity Group, an association of venture capitalists, is considering using a leveraged buyout to purchase Schrag Co., a well-established high-tech firm. Schrag has long-term debt with a book value of \$15 million and a debt to equity ratio of 1:10. The firm's stock is currently selling at 120% of book value. Integrity Group has \$25 million to contribute to the buyout and feels that it will have to offer a 25% premium over the stock's current market price in order to make the deal work. Estimate Schrag's capital structure after the leveraged buyout.
  - Lee & Long, a clothing manufacturer, is considering filing for bankruptcy. The firm has EBIT of \$1.4 million and long-term debt of \$40 million on which it pays interest at an average rate of 8.5%. It also has fixed assets (gross) totaling \$60 million. Depreciation averages 5% of gross fixed assets per year, and the long-term debt matures evenly over the next 20 years.
    - Calculate Lee & Long's current cash flow.
    - Assume that Lee & Long's management can convince its creditors to convert 25% of its debt into equity by exchanging their bonds for newly issued stock at book value. Calculate Lee & Long's cash flow after the debt restructure.

14. Garwood Industries has filed for bankruptcy and will probably be liquidated. The firm's balance sheet (\$ millions) is shown below:

Current Assets	\$ 6.5	Current Liabilities	\$ 8.5
Fixed Assets (net)	<u>30.8</u>	Long-Term Debt	16.5
Total Assets	<u>\$37.3</u>	Equity	<u>12.3</u>
		Total Liabilities and Equity	<u>\$37.3</u>

The administrative costs of bankruptcy total \$1.6 million. Current assets can be sold for 60% of book value and fixed assets for 25% of book value. Twenty percent of the long-term debt is secured. All of the remaining debt is unsecured. Assume there are no additional costs. How many cents on the dollar will unsecured creditors (including trade creditors) receive on the money owed them?

15. The Hamilton Corp. has 35,000 shares of common stock outstanding with a book value of \$20 per share. It owes creditors \$1.5 million at an interest rate of 12%. Selected financial results are as follows.

Income and Cash Flow		Capital	
EBIT	\$ 80,000	Debt	\$1,500,000
Interest	<u>180,000</u>	Equity	<u>700,000</u>
EBT	<u>\$(100,000)</u>		<u>\$2,200,000</u>
Tax	<u>0</u>		
EAT	<u>\$(100,000)</u>		
Depreciation	50,000		
Principal repayment	<u>(75,000)</u>		
Cash flow	<u>\$(125,000)</u>		

Restructure the financial line items shown assuming a composition in which creditors agree to convert two-thirds of their debt into equity at book value. Assume Hamilton will pay tax at a rate of 15% on income after the restructuring, and that principal repayments are reduced proportionately with debt. Who will control the company, and by how big a margin after the restructuring?

### INTERNET PROBLEM

16. Using a search engine such as Yahoo, Google, or AltaVista, look up bankruptcy and find out how many business bankruptcies occurred in the United States last calendar year. Then try to break down these bankruptcies by type (retail, restaurant, etc.). Finally, find out whether the trend for bankruptcies (both in absolute number and as a percent of businesses in existence) is up or down.