How Corporations Issue Securities

In Chapter 11 we encountered Marvin Enterprises, one of the most remarkable growth companies of the twenty-first century. It was founded by George and Mildred Marvin, two high-school dropouts, together with their chum Charles P. (Chip) Norton. To get the company off the ground the three entrepreneurs relied on their own savings together with personal loans from a bank. However, the company's rapid growth meant that they had soon borrowed to the hilt and needed more equity capital. Equity investment in young private companies is generally known as *venture capital.* Such venture capital may be provided by investment institutions or by wealthy individuals who are prepared to back an untried company in return for a piece of the action. In the first part of this chapter we will explain how companies like Marvin go about raising venture capital.

Venture capital organizations aim to help growing firms over that awkward adolescent period before they are large enough to go public. For a successful firm such as Marvin, there is likely to come a time when it needs to tap a wider source of capital and therefore decides to make its first public issue of common stock. The next section of the chapter describes what is involved in such an issue in the United States. We explain the process for registering the offering with the Securities and Exchange Commission and we introduce you to the underwriters who buy the issue and resell it to the public. We also see that new issues are generally sold below the price at which they subsequently trade. To understand why that is so, we need to make a brief sortie into the field of auction procedures.

A company's first issue of stock is seldom its last. In Chapter 14 we saw that corporations face a persistent financial deficit that they meet by selling securities. We therefore look at how established corporations go about raising more capital. In the process we encounter another puzzle: When companies announce a new issue of stock, the stock price generally falls. We suggest that the explanation lies in the information that investors read into the announcement.

If a stock or bond is sold publicly, it can then be traded on the securities markets. But sometimes investors intend to hold on to their securities and are not concerned about whether they can sell them. In these cases there is little advantage to a public issue, and the firm may prefer to place the securities directly with one or two financial institutions. At the end of this chapter we explain how companies arrange a private placement.

15-1 Venture Capital

On April 1, 2022, George and Mildred Marvin met with Chip Norton in their research lab (which also doubled as a bicycle shed) to celebrate the incorporation of Marvin Enterprises. The three entrepreneurs had raised $100,000 from savings and personal bank loans and had purchased one million shares in the new company. At this *zero-stage* investment, the company's assets were $90,000 in the bank ($10,000 had been spent for legal and other expenses

of setting up the company), plus the *idea* for a new product, the household gargle blaster. George Marvin was the first to see that the gargle blaster, up to that point an expensive curiosity, could be commercially produced using microgenetic refenestrators.

Marvin Enterprises' bank account steadily drained away as design and testing proceeded. Local banks did not see Marvin's idea as adequate collateral, so a transfusion of equity capital was clearly needed. Preparation of a *business plan* was a necessary first step. The plan was a confidential document describing the proposed product, its potential market, the underlying technology, and the resources (time, money, employees, and plant and equipment) needed for success.

Most entrepreneurs are able to spin a plausible yarn about their company. But it is as hard to convince a venture capitalist that your business plan is sound as to get a first novel published. Marvin's managers were able to point to the fact that they were prepared to put their money where their mouths were. Not only had they staked all their savings in the company but they were mortgaged to the hilt. This *signaled* their faith in the business.

First Meriam Venture Partners was impressed with Marvin's presentation and agreed to buy one million new shares for $1 each. After this *first-stage* financing, the company's market-value balance sheet looked like this:

Marvin Enterprises' First-Stage Balance Sheet (Market Values in $ Millions)

Cash from new equity	$1	$1	New equity from venture capital
Other assets, mostly intangible	1	1	Original equity held by entrepreneurs
Value	$2	$2	Value

By agreeing to pay $1 a share for Marvin's stock, First Meriam placed a value of $1 million on the entrepreneurs' original shareholdings. This was First Meriam's estimate of the value of the entrepreneurs' original idea and their commitment to the enterprise. If the estimate was right, the entrepreneurs could congratulate themselves on a $900,000 paper gain over their original $100,000 investment. In exchange, the entrepreneurs gave up half their company and accepted First Meriam's representatives to the board of directors.[1]

The success of a new business depends critically on the effort put in by the managers. Therefore venture capital firms try to structure a deal so that management has a strong incentive to work hard. That takes us back to Chapters 1 and 12, where we showed how the shareholders of a firm (who are the principals) need to provide incentives for the managers (who are their agents) to work to maximize firm value.

If Marvin's management had demanded watertight employment contracts and fat salaries, they would not have found it easy to raise venture capital. Instead the Marvin team agreed to put up with modest salaries. They could cash in only from appreciation of their stock. If Marvin failed they would get nothing, because First Meriam actually bought *preferred* stock designed to convert automatically into common stock when and if Marvin Enterprises succeeded in an initial public offering or consistently generated more than a target level of earnings. But if Marvin Enterprises had failed, First Meriam would have been first in line to claim any salvageable assets. This raised even further the stakes for the company's management.[2]

Venture capitalists rarely give a young company up front all the money it will need. At each stage they give enough to reach the next major checkpoint. Thus in spring 2024,

[1] Venture capital investors do not necessarily demand a majority on the board of directors. Whether they do depends, for example, on how mature the business is and on what fraction they own. A common compromise gives an equal number of seats to the founders and to outside investors; the two parties then agree to one or more additional directors to serve as tie-breakers in case a conflict arises. Regardless of whether they have a majority of directors, venture capital companies are seldom silent partners; their judgment and contacts can often prove useful to a relatively inexperienced management team.

[2] Notice the trade-off here. Marvin's management is being asked to put all its eggs into one basket. That creates pressure for managers to work hard, but it also means that they take on risk that could have been diversified away.

having designed and tested a prototype, Marvin Enterprises was back asking for more money for pilot production and test marketing. Its *second-stage* financing was $4 million, of which $1.5 million came from First Meriam, its original backers, and $2.5 million came from two other venture capital partnerships and wealthy individual investors. The balance sheet just after the second stage was as follows:

Marvin Enterprises' Second-Stage Balance Sheet (Market Values in $ Millions)

Cash from new equity	$4	$4	New equity, second stage
Fixed assets	1	5	Equity from first stage
Other assets, mostly intangible	9	5	Original equity held by entrepreneurs
Value	$14	$14	Value

Now the after-the-money valuation was $14 million. First Meriam marked up its original investment to $5 million, and the founders noted an additional $4 million paper gain.

Does this begin to sound like a (paper) money machine? It was so only with hindsight. At stage 1 it wasn't clear whether Marvin would ever get to stage 2; if the prototype hadn't worked, First Meriam could have refused to put up more funds and effectively closed down the business.[3] Or it could have advanced stage 2 money in a smaller amount on less favorable terms. The board of directors could also have fired George, Mildred, and Chip and gotten someone else to try to develop the business.

In Chapter 14 we pointed out that stockholders and lenders differ in their cash-flow rights and control rights. The stockholders are entitled to whatever cash flows remain after paying off the other security holders. They also have control over how the company uses its money, and it is only if the company defaults that the lenders can step in and take control of the company. When a new business raises venture capital, these cash-flow rights and control rights are usually negotiated separately. The venture capital firm will want a say in how that business is run and will demand representation on the board and a significant number of votes. The venture capitalist may agree that it will relinquish some of these rights if the business subsequently performs well. However, if performance turns out to be poor, the venture capitalist may automatically get a greater say in how the business is run and whether the existing management should be replaced.

For Marvin, fortunately, everything went like clockwork. Third-stage *mezzanine financing* was arranged,[4] full-scale production began on schedule, and gargle blasters were acclaimed by music critics worldwide. Marvin Enterprises went public on February 3, 2028. Once its shares were traded, the paper gains earned by First Meriam and the company's founders turned into fungible wealth. Before we go on to this initial public offering, let us look briefly at the venture capital markets today.

The Venture Capital Market

Most new companies rely initially on family funds and bank loans. Some of them continue to grow with the aid of equity investment provided by wealthy individuals known as *angel investors*. However, like Marvin, many adolescent companies raise capital from specialist venture-capital firms, which pool funds from a variety of investors, seek out fledgling companies to invest in, and then work with these companies as they try to grow. In addition, some large technology firms, such as Intel and Johnson & Johnson, act as *corporate venturers* by providing equity capital to new innovative companies.

[3] If First Meriam had refused to invest at stage 2, it would have been an exceptionally hard sell convincing another investor to step in in its place. The other outside investors knew they had less information about Marvin than First Meriam and would have read its refusal as a bad omen for Marvin's prospects.

[4] Mezzanine financing does not necessarily come in the third stage; there may be four or five stages. The point is that mezzanine investors come in late, in contrast to venture capitalists who get in on the ground floor.

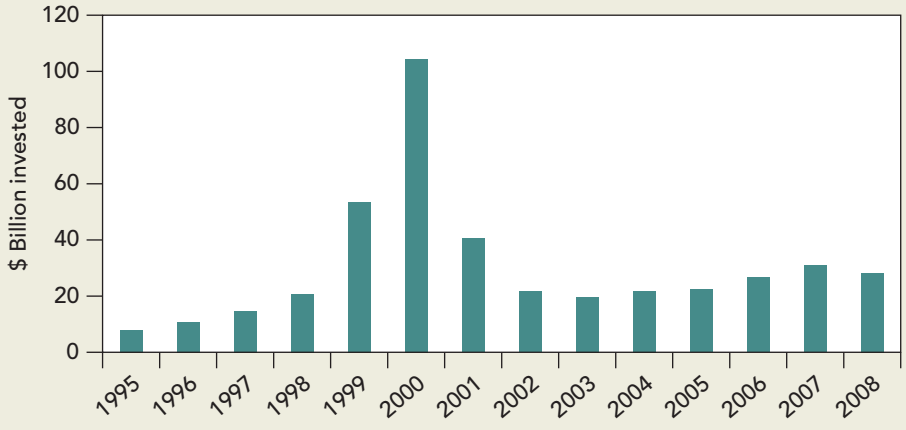

FIGURE 15.1

Venture capital investment in the United States.

Sources: PricewaterhouseCoopers/Venture Economics/National Venture Capital Association Money Tree™. (See www.pwcmoneytree.com). © 2009 PricewaterhouseCoopers. All rights reserved.

Figure 15.1 shows the changing level of venture capital investment. During the giddy days of 2000 funds invested over $100 billion, but with the end of the dot.com boom, venture capital investment slumped.

Most venture capital funds are organized as limited private partnerships with a fixed life of about 10 years. Pension funds and other investors are the limited partners. The management company, which is the general partner, is responsible for making and overseeing the investments, and in return receives a fixed fee and a share of the profits, called the *carried interest.*[5] You will find that these venture capital partnerships are often lumped together with similar partnerships that provide funds for companies in distress or that buy out whole companies or divisions of public companies and then take them private. The general term for these activities is *private equity investing.*

Venture capital firms are not passive investors. They tend to specialize in young high-tech firms that are difficult to evaluate and they monitor these firms closely. They also provide ongoing advice to the firms that they invest in and often play a major role in recruiting the senior management team. Their judgment and contacts can be valuable to a business in its early years and can help the firm to bring its products more quickly to market.[6]

Venture capitalists may cash in on their investment in two ways. Generally, once the new business has established a track record, it may be sold out to a larger firm. However, many entrepreneurs do not fit easily into a corporate bureaucracy and would prefer instead to remain the boss. In this case, the company may decide, like Marvin, to go public and so provide the original backers with an opportunity to "cash out," selling their stock and leaving the original entrepreneurs in control. A thriving venture capital market therefore needs an active stock exchange, such as Nasdaq, that specializes in trading the shares of young, rapidly growing firms.[7]

During the late 1990s the venture capital market in Europe was helped by the formation of new European stock exchanges that modeled themselves on Nasdaq and specialized in trading the stocks of young fast-growing firms. In three years the Neuer Markt exchange in Frankfurt listed over 300 new companies, more than half of which were backed by venture

[5] A typical arrangement might be for the management company to receive a fee of 2% *plus* 20% of the profits.

[6] For evidence on the role of venture capitalists in assisting new businesses, see T. Hellman and M. Puri, "The Interaction between Product Market and Financial Strategy: The Role of Venture Capital," *Review of Financial Studies* 13 (2000), pp. 959–984; and S. N. Kaplan and P. Stromberg, "Contracts, Characteristics and Actions: Evidence from Venture Capitalist Analyses," *Journal of Finance* 59 (October 2004), pp. 2177–2210.

[7] This argument is developed in B. Black and R. Gilson, "Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets," *Journal of Financial Economics* 47 (March 1998), pp. 243–277.

capital firms. But then the exchange was hit by scandal as one high-tech firm, Comroad, revealed that most of its claimed $94 million of revenue was fictitious. As the dot.com boom fizzled out, stock prices on the Neuer Markt fell by 95% and the exchange was finally closed down.

Very few new businesses make it big, but venture capitalists keep sane by forgetting about the many failures and reminding themselves of the success stories—the investors who got in on the ground floor of firms like Federal Express, Genentech, and Intel. For every 10 first-stage venture capital investments, only two or three may survive as successful, self-sufficient businesses. From these statistics come two rules for success in venture capital investment. First, don't shy away from uncertainty; accept a low probability of success. But don't buy into a business unless you can see the *chance* of a big, public company in a profitable market. There's no sense taking a long shot unless it pays off handsomely if you win. Second, cut your losses; identify losers early, and if you can't fix the problem—by replacing management, for example—throw no good money after bad.

How successful is venture capital investment? Since you can't look up the value of new start-up businesses in *The Wall Street Journal*, it is difficult to say with confidence. However, *Venture Economics*, which tracks the performance of a large sample of venture capital funds, calculated that in the 20 years to the end of 2008 investors in these funds would have earned an average annual return of 17% after expenses.[8] That is nearly 10% more a year than they would have earned from investing in the stocks of large public corporations. We do not know whether this compensates for the extra risks of investing in venture capital.

15-2 The Initial Public Offering

There comes a stage in the life of many young companies when they decide to make an **initial public offering** of stock, or **IPO.** This may be a *primary* offering, in which new shares are sold to raise additional cash for the company. Or it may be a *secondary* offering, where the existing shareholders decide to cash in by selling part of their holdings.

Secondary offerings are not confined to small, immature businesses. For example, in 1998 Du Pont sold off a large part of its holding in Conoco for $4.4 billion. The biggest secondary offerings occur when governments sell their shareholdings in companies. For example, the British government raised $9 billion from its sale of British Gas stock, while the 1985 initial offering by the Japanese government of a 12.5% stake in NTT brought in $15 billion. Even these two issues were dwarfed by the 2006 IPO of the state-owned Industrial and Commercial Bank of China, which raised $22 billion.

We have seen that companies may make an IPO to raise new capital or to enable shareholders to cash out, but, as you can see from Figure 15.2, there may be other benefits to going public. For example, the company's stock price provides a readily available yardstick of performance, and allows the firm to reward the management team with stock options. And, because information about the company becomes more widely available, the company can diversify its sources of finance and reduce its borrowing cost.

While there are advantages to having a market for your shares, we should not give the impression that firms everywhere aim to go public. In many countries it is common for large businesses to remain privately owned. For example, Italy has only about a tenth as many listed companies as the U.K. although the economies are roughly similar in size.

Even in the United States many businesses choose to remain as private, unlisted companies. They include some very large operations, such as Bechtel, Cargill, and Levi Strauss. Also you should not think of the issue process in the United States as a one-way street;

[8] Gompers and Lerner, who studied the period 1979–1997, found somewhat higher returns. P. A. Gompers and J. Lerner, "Risk and Reward in Private Equity Investments: The Challenge of Performance Assessment," *Journal of Private Equity,* Winter 1997, pp. 5–12.

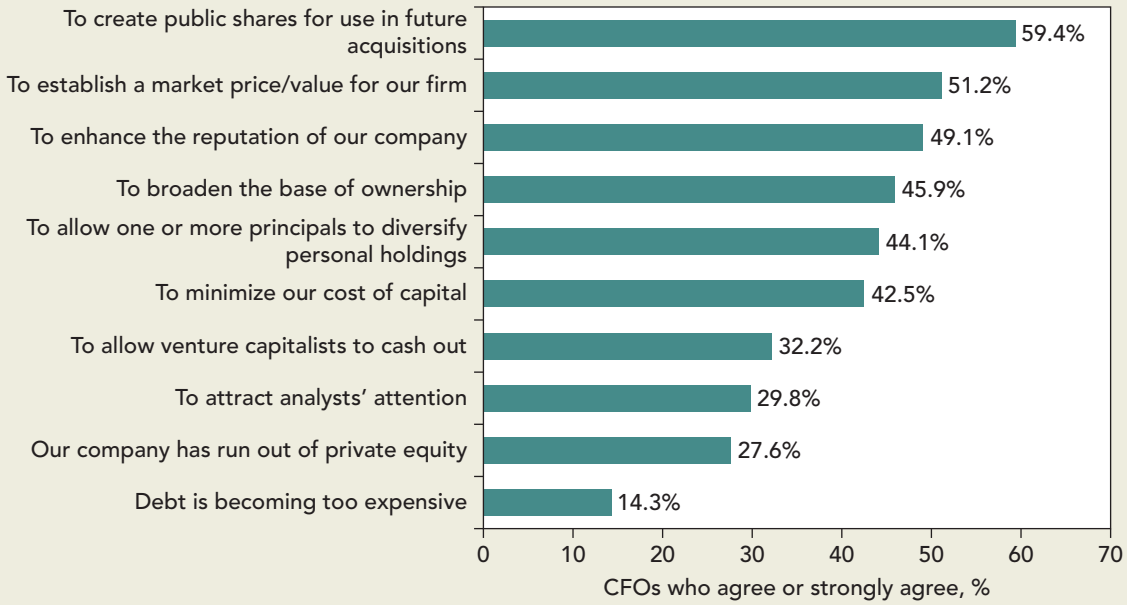

FIGURE 15.2

Survey evidence on the motives for going public.

Source: J. C. Brau and S. E. Fawcett, "Evidence on What CFOs Think about the IPO Process: Practice, Theory and Managerial Implications," *Journal of Applied Corporate Finance* 18 (Summer 2006), pp. 107–117. © 2006 Blackwell Publishers.

public firms often go into reverse and return to being privately owned. For a somewhat extreme example, consider the food service company, Aramark. It began life in 1936 as a private company and went public in 1960. In 1984 a management buyout led to the company going private and it remained private until 2001, when it had its second public offering. But the experiment did not last long, for five years later Aramark was once again the object of a buyout that took the company private again.

Managers often chafe at the red tape involved in running a public company and at the costs of communicating with shareholders. These complaints have become more vocal since the passage of the Sarbanes-Oxley Act. This act sought to prevent a repeat of the corporate scandals that brought about the collapse of Enron and WorldCom, but, as the nearby box suggests, a consequence has been an increased reporting burden on small public companies and an apparent increase in their readiness to go private.[9]

Arranging an Initial Public Offering

Let us now look at how Marvin arranged to go public. By 2028 the company had grown to the point at which it needed still more capital to implement its second-generation production technology. At the same time the company's founders were looking to sell some of their shares.[10] In the previous few months there had been a spate of IPOs by high-tech companies and the shares had generally sold like hotcakes. So Marvin's management hoped that investors would be equally keen to buy the company's stock.

[9] There has also been an increase in the number of firms that have reduced the regulatory and reporting burden by "going dark." In this case the company must have less than 300 shareholders and must not be listed on a public exchange.

[10] First Meriam also wanted to cash in on its investment, but venture capital companies usually believe that selling out at the time of the IPO would send a bad signal to investors. Therefore First Meriam planned to wait until well after the IPO and then either sell its holding or distribute its shares in Marvin to the investors in the First Meriam fund.

The Urge to Go Private

Recent years have seen a boom in U.S. companies choosing to go private. The following passage from *The Wall Street Journal* argues that the boom was accentuated by more burdensome regulation of public companies:

> At least part of the strength of private equity is a direct result of the problems besetting public markets. Public-to-private deals are in fact lengthy, costly and can lead to unpleasantness with shareholders—often via lawsuits. The fact that so many companies have nonetheless been willing to take the plunge speaks volumes about how eager they are to escape the increasing burdens of public-company regulation.
>
> Sarbanes-Oxley has been the last straw for some, with its auditing and reporting requirements imposing major new costs, especially on smaller companies. The Securities and Exchange Commission is promising Sarbox reform, though its recent noises suggest it won't exempt smaller companies from the rules. It might want to consider International Strategy & Investment Group data showing that 191 public companies—worth $146 billion in deal value—have gone private since June 30, 2002, shortly before Sarbox went into effect. Daniel Clifton, executive director of the American Shareholders Association, notes that the big spike came right after Sarbox's implementation, yet the dollar amount of the deals didn't rise equivalently—suggesting it was mainly smaller firms doing the exiting.
>
> Mr. Clifton has also been studying the surging costs of regulation for public companies and has found that, while in 1999 regulatory costs were about 4.8% of market capitalization, by 2002 the ratio was 9.9%. It has fallen some since. But these costs are a double whammy for smaller companies, which have fewer resources to devote to compliance costs and "it is also money that they can't use for the investments that they need make grow," says Mr. Clifton.
>
> The relentless pressure of quarterly earnings is also a tyranny that some managers would prefer to avoid. Such targets have their uses in holding managers accountable. But even capable executives who fail to meet Wall Street expectations, or suffer an unexpected bump in the road, have to worry that they'll get hit with shareholder suits for even a temporary stock price dip. It may not be a coincidence that, according to a recent survey from Booz Allen Hamilton, 15.3% of CEOs at the world's 2,500 largest public companies left office in 2005, many of them fleeing to private companies that can afford the luxury of a longer-run view.*

*"Hot Topic: Going Private," *The Wall Street Journal*, June 3, 2006, p. A.7.

Management's first task was to select the *underwriters*. Underwriters act as financial midwives to a new issue. Usually they play a triple role: First they provide the company with procedural and financial advice, then they buy the issue, and finally they resell it to the public.

After some discussion Marvin settled on Klein Merrick as the managing underwriter and Goldman Stanley as the comanager. Klein Merrick then formed a syndicate of underwriters who would buy the entire issue and reoffer it to the public.

In choosing Klein Merrick to manage its IPO, Marvin was influenced by Merrick's proposals for making an active market in the stock in the weeks after the issue.[11] Merrick also planned to generate continuing investor interest in the stock by distributing a major research report on Marvin's prospects.[12] Marvin hoped that this report would encourage investors to hold its stock.

[11] On average the managing underwriter accounts for 40% to 60% of trading volume in the stock during the first 60 days after an IPO. See K. Ellis, R. Michaely, and M. O'Hara, "When the Underwriter Is the Market Maker: An Examination of Trading in the IPO Aftermarket," *Journal of Finance* 55 (June 2000), pp. 1039–1074.

[12] The 40 days after the offer are designated as a *quiet period*. Merrick is obliged to wait until after this period before commenting on the valuation of the company. Survey evidence suggests that, in choosing an underwriter, firms place considerable importance on its ability to provide follow-up research reports. See L. Krigman, W. H. Shaw, and K. L. Womack, "Why Do Firms Switch Underwriters?" *Journal of Financial Economics* 60 (May–June 2001), pp. 245–284.

Together with Klein Merrick and firms of lawyers and accountants, Marvin prepared a **registration statement** for the approval of the Securities and Exchange Commission (SEC).[13] This statement is a detailed and somewhat cumbersome document that presents information about the proposed financing and the firm's history, existing business, and plans for the future.

The most important sections of the registration statement are distributed to investors in the form of a **prospectus.** In the appendix to this chapter we have reproduced the prospectus for Marvin's first public issue of stock. Real prospectuses would go into much more detail on each topic, but this example should give you some feel for the mixture of valuable information and redundant qualification that characterizes these documents. The Marvin prospectus also illustrates how the SEC insists that investors' eyes are opened to the dangers of purchase (see "Certain Considerations" of the prospectus). Some investors have joked that if they read each prospectus carefully, they would not dare buy any new issue.

In addition to registering the issue with the SEC, Marvin needed to check that the issue complied with the so-called *blue-sky laws* of each state that regulate sales of securities within the state.[14] It also arranged for its newly issued shares to be traded on the Nasdaq exchange.

The Sale of Marvin Stock

While the registration statement was awaiting approval, Marvin and its underwriters began to firm up the issue price. First they looked at the price–earnings ratios of the shares of Marvin's principal competitors. Then they worked through a number of discounted-cash-flow calculations like the ones we described in Chapters 4 and 11. Most of the evidence pointed to a market price in the region of $74 to $76 a share and the company therefore included this provisional figure in the preliminary version of the prospectus.[15]

Marvin and Klein Merrick arranged a *road show* to talk to potential investors. Mostly these were institutional investors, such as managers of mutual funds and pension funds. The investors gave their reactions to the issue and indicated to the underwriters how much stock they wished to buy. Some stated the maximum price that they were prepared to pay, but others said that they just wanted to invest so many dollars in Marvin at whatever issue price was chosen. These discussions with fund managers allowed Klein Merrick to build up a book of potential orders.[16] Although the managers were not bound by their responses, they knew that, if they wanted to keep in the underwriters' good books, they should be careful not to go back on their expressions of interest. The underwriters also were not obliged to treat all investors equally. Some investors who were keen to buy Marvin stock were disappointed in the allotment that they subsequently received.

Immediately after it received clearance from the SEC, Marvin and the underwriters met to fix the issue price. Investors had been enthusiastic about the story that the company had to tell and it was clear that they were prepared to pay more than $76 for the stock. Marvin's managers were tempted to go for the highest possible price, but the underwriters were more cautious. Not only would they be left with any unsold stock if they overestimated investor demand but they also argued that some degree of underpricing was needed to tempt

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[13] The rules governing the sale of securities derive principally from the Securities Act of 1933. The SEC is concerned solely with disclosure and it has no power to prevent an issue as long as there has been proper disclosure. Some public issues are exempt from registration. These include issues by small businesses and loans maturing within nine months.

[14] In 1980, when Apple Computer Inc. went public, the Massachusetts state government decided the offering was too risky and barred the sale of the shares to individual investors in the state. The state relented later after the issue was out and the price had risen. Needless to say, this action was not acclaimed by Massachusetts investors.

States do not usually reject security issues by honest firms through established underwriters. We cite the example to illustrate the potential power of state securities laws and to show why underwriters keep careful track of them.

[15] The company is allowed to circulate a preliminary version of the prospectus (known as a *red herring*) before the SEC has approved the registration statement.

[16] The managing underwriter is therefore often known as the *bookrunner.*

investors to buy the stock. Marvin and the underwriters therefore compromised on an issue price of $80. Potential investors were encouraged by the fact that the offer price was higher than the $74 to $76 proposed in the preliminary prospectus and decided that the underwriters must have encountered considerable enthusiasm for the issue.

Although Marvin's underwriters were committed to buy only 900,000 shares from the company, they chose to sell 1,035,000 shares to investors. This left the underwriters short of 135,000 shares or 15% of the issue. If Marvin's stock had proved unpopular with investors and traded below the issue price, the underwriters could have bought back these shares in the marketplace. This would have helped to stabilize the price and would have given the underwriters a profit on these extra shares that they sold. As it turned out, investors fell over themselves to buy Marvin stock and by the end of the first day the stock was trading at $105. The underwriters would have incurred a heavy loss if they had been obliged to buy back the shares at $105. However, Marvin had provided underwriters with a *greenshoe* option that allowed them to buy an additional 135,000 shares from the company. This ensured that the underwriters were able to sell the extra shares to investors without fear of loss.

The Underwriters

Marvin's underwriters were prepared to enter into a firm commitment to buy the stock and then offer it to the public. Thus they took the risk that the issue might flop and they would be left with unwanted stock. Occasionally, where the sale of common stock is regarded as particularly risky, the underwriters may be prepared to handle the sale only on a best-efforts basis. In this case the underwriters promise to sell as much of the issue as possible but do not guarantee to sell the entire amount.[17]

Successful underwriting requires financial muscle and considerable experience. The names of Marvin's underwriters are of course fictitious, but Table 15.1 shows that underwriting is dominated by the major investment banks and large commercial banks. Foreign players are also heavily involved in underwriting securities that are sold internationally.

Underwriting is not always fun. In April 2008 the British bank, HBOS, offered its shareholders two new shares at a price of £2.75 for each five shares that they currently held.[18] The underwriters to the issue, Morgan Stanley and Dresdner Kleinwort, guaranteed that at the end of eight weeks they would buy any new shares that the stockholders did not want. At the time of the offer HBOS shares were priced at about £5, so the underwriters felt confident that they would not have to honor their pledge. Unfortunately, they reckoned without the turbulent market in bank shares that year. The bank's shareholders worried that the money they were asked to provide would largely go to bailing out the bondholders and depositors. By the end of the eight weeks the price of HBOS stock had slumped below the issue price, and the underwriters were left with 932 million unwanted shares worth £3.6 billion.

Companies get to make only one IPO, but underwriters are in the business all the time. Wise underwriters, therefore, realize that their reputation is on the line and will not handle an issue unless they believe the facts have been presented fairly to investors. So, when a new issue goes wrong, the underwriters may be blamed for overhyping the issue and failing in their "due diligence." For example, in December 1999 the software company Va Linux went public at $30 a share. The next day trading opened at $299 a share, but then the price began to sag. Within two years it had fallen below $2. Disgruntled Va Linux investors sued the underwriters, complaining that the prospectus was "materially false." These underwriters

[17] The alternative is to enter into an *all-or-none* arrangement. In this case, either the entire issue is sold at the offering price or the deal is called off and the issuing company receives nothing.

[18] This arrangement is known as a *rights issue*. We describe rights issues later in the chapter.

	Value of Issues ($ billions)	Number of Issues
J.P. Morgan	$455	1,210
Barclays Capital	401	1,041
Citigroup	309	986
Deutsche Bank	309	807
Merrill Lynch	241	852
Goldman Sachs	228	584
Morgan Stanley	220	661
RBS	214	712
Credit Suisse	205	682
UBS	204	867

TABLE 15.1

The top managing underwriters, January–December 2008. Values include global debt and equity issues.

Source: Thomson Reuters (www.thomsonreuters.com).

had plenty of company, for following the collapse of the dot.com stocks in 2000, investors in many other high-tech IPOs sued the underwriters. As the nearby box explains, there was further embarrassment when it emerged that several well-known underwriters had engaged in "spinning"—that is, allocating stock in popular new issues to managers of their important corporate clients. The underwriter's seal of approval for a new issue no longer seemed as valuable as it once had.

Costs of a New Issue

We have described Marvin's underwriters as filling a triple role—providing advice, buying the new issue, and reselling it to the public. In return they received payment in the form of a *spread;* that is, they were allowed to buy the shares for less than the *offering price* at which the shares were sold to investors.[19] Klein Merrick as syndicate manager kept 20% of this spread. A further 25% of the spread was used to pay those underwriters who bought the issue. The remaining 55% went to the firms that provided the salesforce.

The underwriting spread on the Marvin issue amounted to 7% of the total sum raised from investors. Since many of the costs incurred by underwriters are fixed, you would expect that the percentage spread would decline with issue size. This in part is what we find. For example, a $5 million IPO might carry a spread of 10%, while the spread on a $300 million issue might be only 5%. However, Chen and Ritter found that for almost every IPO between $20 and $80 million the spread was exactly 7%.[20] Since it is difficult to believe that there are no scale economies, this clustering at 7% is a puzzle.[21]

In addition to the underwriting fee, Marvin's new issue entailed substantial administrative costs. Preparation of the registration statement and prospectus involved management, legal counsel, and accountants, as well as the underwriters and their advisers. In addition, the firm had to pay fees for registering the new securities, printing and mailing costs, and so on. You can see from the first page of the Marvin prospectus (see this chapter's appendix) that these administrative costs totaled $820,000 or just over 1% of the proceeds.

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[19] In the more risky cases the underwriter usually receives some extra noncash compensation, such as warrants to buy additional common stock in the future.

[20] H. C. Chen and J. R. Ritter, "The Seven Percent Solution," *Journal of Finance* 55 (June 2000), pp. 1105–1132.

[21] Chen and Ritter argue that the fixed spread suggests the underwriting market is not competitive and the Justice Department was led to investigate whether the spread constituted evidence of price-fixing. Robert Hansen disagrees that the market is not competitive. Among other things, he provides evidence that the 7% spread is not abnormally profitable and argues that it is part of a competitive and efficient market. See R. Hansen, "Do Investment Banks Compete in IPOs?: The Advent of the 7% Plus Contract," *Journal of Financial Economics* 59 (2001) pp. 313–346.

How Scandal Hit the Investment Banking Industry

Nineteen ninety-nine looked to be a wonderful year for investment banks. Not only did they underwrite a near-record number of IPOs, but the stocks that they sold leapt by an average of 72% on their first day of trading, earning the underwriters some very grateful clients. Just three years later the same investment banks were in disgrace. Probing by New York State Attorney General Eliot Spitzer uncovered a chronicle of unethical and shameful behavior during the boom years.

As the dot.com stock market boom developed, investment banking analysts had begun to take on the additional role of promoters of the shares that they analyzed, in the process becoming celebrities with salaries to match. The early run-up in the stock price of dot.com IPOs therefore owed much to hype by the underwriters' analysts, who strongly promoted stocks that they sometimes privately thought were overpriced. One superstar Internet analyst was revealed in internal e-mails to have believed that stocks he was peddling to investors were "junk" and "piece[s] of crap." In many cases the stocks were indeed junk, and the underwriters who had puffed the IPOs soon found themselves sued by disgruntled investors who had bought at the inflated prices.

The underwriters' troubles deepened further when it was disclosed that in a number of cases they had allocated stock in hot new issues to the personal brokerage accounts of the CEOs of major corporate clients. This stock could then be sold, or "spun," for quick profits. Five senior executives of leading telecom companies were disclosed to have received a total of $28 million in profits from their allocation of stocks in IPOs underwritten by one bank. Over the same period the bank was awarded over $100 million of business from these five companies. Eliot Spitzer argued that such lucrative perks were really attempts by the banks to buy future business and that the profits therefore belonged to the companies' shareholders rather than the executives. Soon top executives of several other companies were facing demands from disgruntled shareholders that they return to their companies the profits that they had pocketed from hot initial public offerings.

These scandals that engulfed the investment banking industry resulted in a $1.4 billion payout by the banks and an agreement to separate investment banking and research departments, hire independent consultants, and select independent research providers. But the revelations also raised troubling questions about ethical standards and the pressures that can lead employees to unscrupulous behavior.

Underpricing of IPOs

Marvin's issue was costly in yet another way. Since the offering price was less than the true value of the issued securities, investors who bought the issue got a bargain at the expense of the firm's original shareholders.

These costs of *underpricing* are hidden but nevertheless real. For IPOs they generally exceed all other issue costs. Whenever any company goes public, it is very difficult to judge how much investors will be prepared to pay for the stock. Sometimes the underwriters misjudge dramatically. For example, when the prospectus for the IPO of eBay was first published, the underwriters indicated that the company would sell 3.5 million shares at a price between $14 and $16 each. However, the enthusiasm for eBay's Web-based auction system was such that the underwriters increased the issue price to $18. The next morning dealers were flooded with orders to buy eBay; over 4.5 million shares traded and the stock closed the day at a price of $47.375.

We admit that the eBay issue was unusual.[22] But researchers have found that investors who buy at the issue price on average realize very high returns over the following days. For

[22] It does not, however, hold the record. That honor goes to Va Linux.

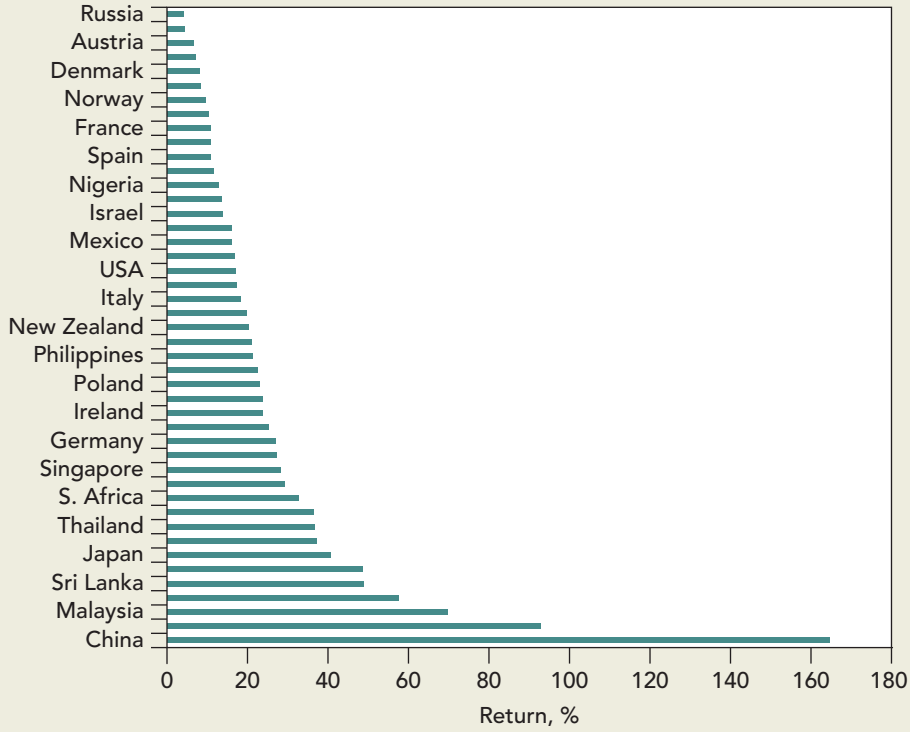


FIGURE 15.3

Average initial returns from investing in IPOs in different countries.

Source: T. Loughran, J. R. Ritter, and K. Rydqvist, "Initial Public Offerings: International Insights," *Pacific Basin Finance Journal* 2 (1994), pp. 165–199, extended and updated on **bear.cba.ufl.edu/ritter**. © 1994 Elsevier Science. Reprinted with permission.

example, one study of nearly 12,000 U.S. IPOs from 1960 to 2008 found average underpricing of 16.9%.[23]

Figure 15.3 shows that the United States is not the only country in which IPOs are underpriced. In China the gains from buying IPOs have averaged 165%.[24]

You might think that shareholders would prefer not to sell stock in their company for less than its market price, but many investment bankers and institutional investors argue that underpricing is in the interests of the issuing firm. They say that a low offering price on an IPO raises the price when it is subsequently traded in the market and enhances the firm's ability to raise further capital.

There is another possible reason that it may make sense to underprice new issues. Suppose that you successfully bid for a painting at an art auction. Should you be pleased? It is true that you now own the painting, which was presumably what you wanted, but everybody else at the auction apparently thought that the painting was worth less than you did. In other words, your success suggests that you may have overpaid. This problem is known as the *winner's curse.* The highest bidder in an auction is most likely to have overestimated the object's value and, unless bidders recognize this in their bids, the buyer will on average overpay. If bidders are aware of the danger, they are likely to adjust their bids down correspondingly.

The same problem arises when you apply for a new issue of securities. For example, suppose that you decide to apply for every new issue of common stock. You will find that you have no difficulty in getting stock in the issues that no one else wants. But, when the issue

[23] Our figure is an equally weighted average of first-day returns and is calculated from data on **bear.cba.ufl.edu/ritter**. As we saw in Chapter 13, there is some evidence that these early gains are not maintained and in the five years following an IPO the shares underperform the market.

[24] The Chinese returns are for A shares, which are traded only domestically.

is attractive, the underwriters will not have enough stock to go around, and you will receive less stock than you wanted. The result is that your money-making strategy may turn out to be a loser. If you are smart, you will play the game only if there is substantial underpricing on average. Here then we have a possible rationale for the underpricing of new issues. Uninformed investors who cannot distinguish which issues are attractive are exposed to the winner's curse. Companies and their underwriters are aware of this and need to underprice on average to attract the uninformed investors.[25]

These arguments could well justify some degree of underpricing, but it is not clear that they can account for underpricing of 100% or more. Skeptics point out that such underpricing is largely in the interests of the underwriters, who want to reduce the risk that they will be left with unwanted stock and to court popularity by allotting stock to favored clients.

If the skeptics are right, you might expect issuing companies to rebel at being asked to sell stock for much less than it is worth. Think back to our example of eBay. If the company had sold 3.5 million shares at the market price of $47.375 rather than $18, it would have netted an additional $103 million. So why weren't eBay's existing shareholders hopping mad? Loughran and Ritter suggest that the explanation lies in behavioral psychology and argue that the cost of underpricing may be outweighed in shareholders' minds by the happy surprise of finding that they are wealthier than they thought. EBay's largest shareholder was Pierre Omidyar, the founder and chairman, who retained his entire holding of 15.2 million shares. The initial jump in the stock price from $18 to $47.375 added $447 million to Mr. Omidyar's wealth. This may well have pushed the cost of underpricing to the back of his mind.[26]

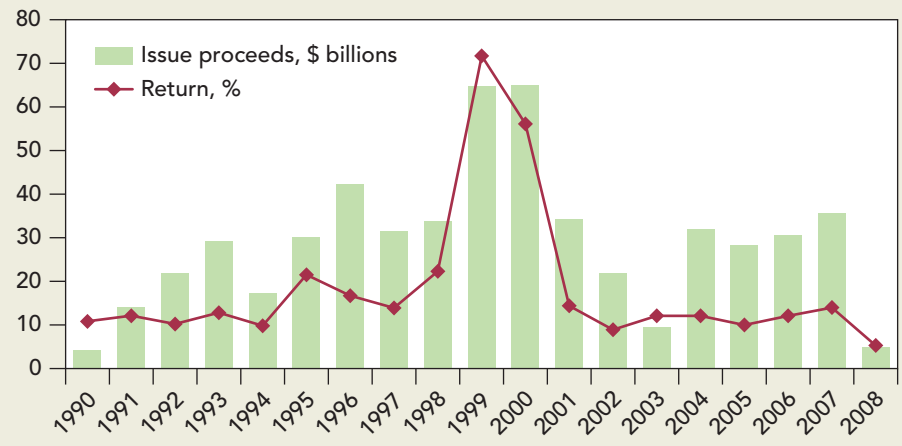
Hot New-Issue Periods

Figure 15.4 shows that the degree of underpricing fluctuates sharply from year to year. In 1999, around the peak of the dot.com boom, new issues raised $65 billion and the average first-day return on IPOs was 72%. Nearly $37 billion was left on the table that year. But, as the number of new issues slumped, so did the amount of underpricing. The year 2008 saw just 21 IPOs and the average first-day return was a measly 6.4%.

FIGURE 15.4

IPO proceeds in the United States and average first-day returns, 1990–2008.

Source: J. R. Ritter, "Some Factoids about the 2008 IPO Market," February 6, 2009, bear.cba.ufl.edu/ritter.



[25] Notice that the winner's curse would disappear if only investors knew what the market price was going to be. One response is to allow trading in a security before it has been issued. This is known as a *gray market* and in the U.S. is most common for debt issues. Investors can observe the price in the gray market and can be more confident that they are not overbidding when the actual issue takes place.

[26] T. Loughran and J. Ritter, "Why Don't Issuers Get Upset about Leaving Money on the Table in IPOs?" *Review of Financial Studies* 15 (2002), pp. 413–443.

Some observers believe that these hot new-issue periods arise because investors are prone to periods of excessive optimism and would-be issuers time their IPOs to coincide with these periods. Other observers stress the fact that a fall in the cost of capital or an improvement in the economic outlook may mean that a number of new or dormant projects suddenly become profitable. At such times, many entrepreneurs rush to raise new cash to invest in these projects.[27]

15-3 Alternative Issue Procedures for IPOs

Table 15.2 summarizes the main steps involved in making an initial public offering of stock in the United States. You can see that Marvin's new issue was a typical IPO in almost every respect. In particular most IPOs in the United States use the *bookbuilding* method in which the underwriter builds a book of likely orders and uses this information to set the issue price.

The bookbuilding method is in some ways like an auction, since potential buyers indicate how many shares they are prepared to buy at given prices. However, these indications are not binding, and are used only as a guide to fix the price of the issue. The advantage of the bookbuilding method is that it allows underwriters to give preference to those investors whose bids are most helpful in setting the issue price and to offer them a reward in the shape of underpricing.[28] Critics of bookbuilding point to the abuses of the 1990s, and emphasize the dangers of allowing the underwriter to decide who is allotted stock.

Bookbuilding has rapidly gained popularity throughout the world, but it is not the only way to sell new stock. One alternative is to conduct an open auction. In this case investors are invited to submit their bids, stating how many shares they wish to buy and the price. The securities are then sold to the highest bidders. Most governments, including the U.S. Treasury, sell their bonds by auction. In the United States auctions of common stock have accounted for only 1% of IPOs in the 10 years to 2009. However, in 2004, Google simultaneously raised eyebrows and $1.7 billion in the world's largest initial public offering to be sold by auction.[29]

Fans of auctions often point to countries such as France, Israel, and Japan, where auctions were once commonly used to sell new issues of stock. Japan is a particularly interesting case, for the bookbuilding method was widely used until it was revealed that investment banks had been allocating shares in hot IPOs to government officials. In 1989 the finance

TABLE 15.2
The main steps involved in making an initial public offering of stock in the United States.

1. Company appoints managing underwriter (bookrunner) and comanager(s). Underwriting syndicate formed.
2. Arrangement with underwriters includes agreement on spread (typically 7% for medium-sized IPOs) and on greenshoe option (typically allowing the underwriters to increase the number of shares bought by 15%).
3. Issue registered with SEC and preliminary prospectus (red herring) issued.
4. Roadshow arranged to market the issue to potential investors. Managing underwriter builds book of potential demand.
5. SEC approves registration. Company and underwriters agree on issue price.
6. Underwriters allot stock (typically with overallotment).
7. Trading starts. Underwriters cover short position by buying stock in the market or by exercising greenshoe option.
8. Managing underwriter makes liquid market in stock and provides research coverage.

[27] For examples of these explanations, see A. P. Ljungqvist, V. Nanda, and R. Singh, "Hot Markets, Investor Sentiment, and IPO Pricing," *Journal of Business* 79 (July 2006), pp. 1667–1702; and L. Pastor and P. Veronesi, "Rational IPO Waves," *Journal of Finance* 60 (2005), pp. 1713–1757.

[28] See L. M. Benveniste and P. A. Spindt, "How Investment Bankers Determine the Offer Price and Allocation of New Issues," *Journal of Financial Economics* 24 (1989), pp. 343–362; and F. Cornelli and D. Goldreich, "Bookbuilding and Strategic Allocation," *Journal of Finance* 56 (December 2001), pp. 2337–2369.

[29] Google's issue was followed in 2005 by a $140 million auction of stock by Morningstar.

ministry responded to this scandal by ruling that in the future all IPOs were to be auctioned. This resulted in a sharp fall in underpricing. However, in 1997 the restrictions were lifted, bookbuilding returned to favor, and the level of underpricing increased.[30]

Types of Auction: A Digression

Suppose that a government wishes to auction four million bonds and three would-be buyers submit bids. Investor A bids $1,020 each for one million bonds, B bids $1,000 for three million bonds, and C bids $980 for two million bonds. The bids of the two highest bidders (A and B) absorb all the bonds on offer and C is left empty-handed. What price do the winning bidders, A and B, pay?

The answer depends on whether the sale is a *discriminatory auction* or a *uniform-price auction*. In a discriminatory auction every winner is required to pay the price that he or she bid. In this case A would pay $1,020 and B would pay $1,000. In a uniform-price auction both would pay $1,000, which is the price of the lowest winning bidder (investor B).

It might seem from our example that the proceeds from a uniform-price auction would be lower than from a discriminatory auction. But this ignores the fact that the uniform-price auction provides better protection against the winner's curse. Wise bidders know that there is little cost to overbidding in a uniform-price auction, but there is potentially a very high cost to doing so in a discriminatory auction.[31] Economists therefore often argue that the uniform-price auction should result in higher proceeds.[32]

Sales of bonds by the U.S. Treasury used to take the form of discriminatory auctions so that successful buyers paid their bid. However, in 1998 the government switched to a uniform-price auction.[33]

15-4 Security Sales by Public Companies

A company's first public issue of stock is seldom its last. As the firm grows, it is likely to make further issues of debt and equity. Public companies can issue securities either by offering them to investors at large or by making a rights issue that is limited to existing stockholders. We begin by describing general cash offers, which are now used for almost all debt and equity issues in the United States. We then describe rights issues, which are widely used in other countries for issues of common stock.

General Cash Offers

When a corporation makes a general cash offer of debt or equity in the United States, it goes through much the same procedure as when it first went public. In other words, it registers the issue with the SEC[34] and then sells the securities to an underwriter (or a syndicate of underwriters), who in turn offers the securities to the public. Before the price of the issue is fixed the underwriter will build up a book of likely demand for the securities just as in the case of Marvin's IPO.

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[30] T. Kaneko and R. Pettway, "Auctions versus Bookbuilding of Japanese IPOs," *Pacific Basin Journal* 11 (2003), pp. 439–462.

[31] In addition, the price in the uniform-price auction depends not only on the views of B but also on those of A (for example, if A had bid $990 rather than $1,020, then both A and B would have paid $990 for each bond). Since the uniform-price auction takes advantage of the views of both A and B, it reduces the winner's curse.

[32] Sometimes auctions reduce the winner's curse by allowing uninformed bidders to enter noncompetitive bids, whereby they submit a quantity but not a price. For example, in U.S. Treasury auctions investors may submit noncompetitive bids and receive their full allocation.

[33] Experience in the United States with uniform-price auctions suggests that they do indeed reduce the winner's curse problem and realize higher prices for the seller. See D. Goldreich, "Underpricing in Discriminatory and Uniform-Price Auctions," *Journal of Financial and Quantitative Analysis* 42 (June 2007), pp. 443–466.

[34] In 2005 the SEC created a new category of firm termed "a well-known seasoned issuer" (or WKSI). These firms are exempt from certain filing requirements.

The SEC's Rule 415 allows large companies to file a single registration statement covering financing plans for up to three years into the future. The actual issues can then be done with scant additional paperwork, whenever the firm needs the cash or thinks it can issue securities at an attractive price. This is called *shelf registration*—the registration statement is "put on the shelf," to be taken down and used as needed.

Think of how you as a financial manager might use shelf registration. Suppose your company is likely to need up to $200 million of new long-term debt over the next year or so. It can file a registration statement for that amount. It then has prior approval to issue up to $200 million of debt, but it isn't obligated to issue a penny. Nor is it required to work through any particular underwriters; the registration statement may name one or more underwriters the firm thinks it may work with, but others can be substituted later.

Now you can sit back and issue debt as needed, in bits and pieces if you like. Suppose Merrill Lynch comes across an insurance company with $10 million ready to invest in corporate bonds. Your phone rings. It's Merrill Lynch offering to buy $10 million of your bonds, priced to yield, say, 8½%. If you think that's a good price, you say OK and the deal is done, subject only to a little additional paperwork. Merrill then resells the bonds to the insurance company, it hopes at a higher price than it paid for them, thus earning an intermediary's profit.

Here is another possible deal: Suppose that you perceive a window of opportunity in which interest rates are temporarily low. You invite bids for $100 million of bonds. Some bids may come from large investment banks acting alone; others may come from ad hoc syndicates. But that's not your problem; if the price is right, you just take the best deal offered.[35]

Not all companies eligible for shelf registration actually use it for all their public issues. Sometimes they believe they can get a better deal by making one large issue through traditional channels, especially when the security to be issued has some unusual feature or when the firm believes that it needs the investment banker's counsel or stamp of approval on the issue. Consequently, shelf registration is less often used for issues of common stock or convertible securities than for garden-variety corporate bonds.

International Security Issues

Instead of borrowing in their local market, companies often issue bonds in another country's domestic market, in which case the issue will be governed by the rules of that country.

A second alternative is to make an issue of *eurobonds,* which is underwritten by a group of international banks and offered simultaneously to investors in a number of countries. The borrower must provide a prospectus or offering circular that sets out the detailed terms of the issue. The underwriters will then build up a book of potential orders, and finally the issue will be priced and sold. Very large debt issues may be sold as *global bonds,* with one part sold internationally in the eurobond market and the remainder sold in the company's domestic market.

Equity issues too may be sold overseas. In fact some companies' stocks do not trade at all in their home country. For example, in 2009 Changyou.com, the Chinese online game company, raised $120 million by an IPO in the United States. Its stock was not traded in China. Presumably, the company thought it could get a better price and more active follow-on trading by listing overseas.

Traditionally New York has been the natural home for such issues, but in recent years many companies have preferred to list in London or Hong Kong. This has led many U.S. observers to worry that New York may be losing its competitive edge to other financial centers that have more flexible regulatory systems and fewer corporate lawsuits.

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[35] These two deals are examples of *accelerated underwritings.* For a good description of such issues, see B. Bortolotti, W. Megginson, and S. B. Smart, "The Rise of Accelerated Seasoned Equity Underwritings," *Journal of Applied Corporate Finance*, 20 (Summer 2008), pp. 35–57.

TABLE 15.3

Gross underwriting spreads of selected issues. Spreads are percentages of gross proceeds.

Type	Company	Issue Amount, $ millions	Underwriter's Spread (%)
Common Stock:			
IPO	American Water Works	$1,250	7.0%
IPO	Rosetta Stone	129.4	7.0
IPO	Energy Recovery	119.0	7.0
IPO	Arc Sight	61.2	7.0
IPO	Heritage-Crystal Clean	22.0	7.0
Seasoned	Ford Motor	1,425	3.00
Seasoned	Express Scripts	1,403	1.68
Seasoned	Newmont Mining	1,110	1.17
Seasoned	American Express	500	3.30
Seasoned	Brookdale Senior Living	143	4.75
Debt:			
2.25% global notes, 2011	Hewlett-Packard	$1,000	.15%
3.2% global notes, 2014	Wal-Mart Stores	1,000	.35
8% global notes, 2014	Starwood Hotel & Resorts	500	1.38
3% convertible senior notes, 2012	Newmont Mining	450	2.50
11.75% global notes, 2016	Mariner Energy	300	1.91

The Costs of a General Cash Offer

Whenever a firm makes a cash offer of securities, it incurs substantial administrative costs. Also the firm needs to compensate the underwriters by selling them securities below the price that they expect to receive from investors. Table 15.3 lists underwriting spreads for a few issues in 2008–2009.

Notice that the underwriting spreads for debt securities are lower than for common stocks, less than 1% for many issues. Larger issues tend to have lower spreads than smaller issues. This may partly stem from the fact that there are fixed costs to selling securities, but large issues are generally made by large companies, which are better known and easier for the underwriter to monitor. So do not assume that a small company could make a jumbo issue at a negligible percentage spread.[36]

Figure 15.5 summarizes a study of total issue costs (spreads plus administrative costs) for several thousand issues between 2004 and 2008.

Market Reaction to Stock Issues

Economists who have studied seasoned issues of common stock have generally found that announcement of the issue results in a decline in the stock price. For industrial issues in the United States this decline amounts to about 3%. While this may not sound overwhelming, the fall in market value is equivalent, on average, to nearly a third of the new money raised by the issue.

What's going on here? One view is that the price of the stock is simply depressed by the prospect of the additional supply. On the other hand, there is little sign that the extent of

[36] This point is emphasized in O. Altinkilic and R. S. Hansen, "Are There Economies of Scale in Underwriting Fees? Evidence of Rising External Financing Costs," *Review of Financial Studies* 13 (Spring 2000), pp. 191–218.

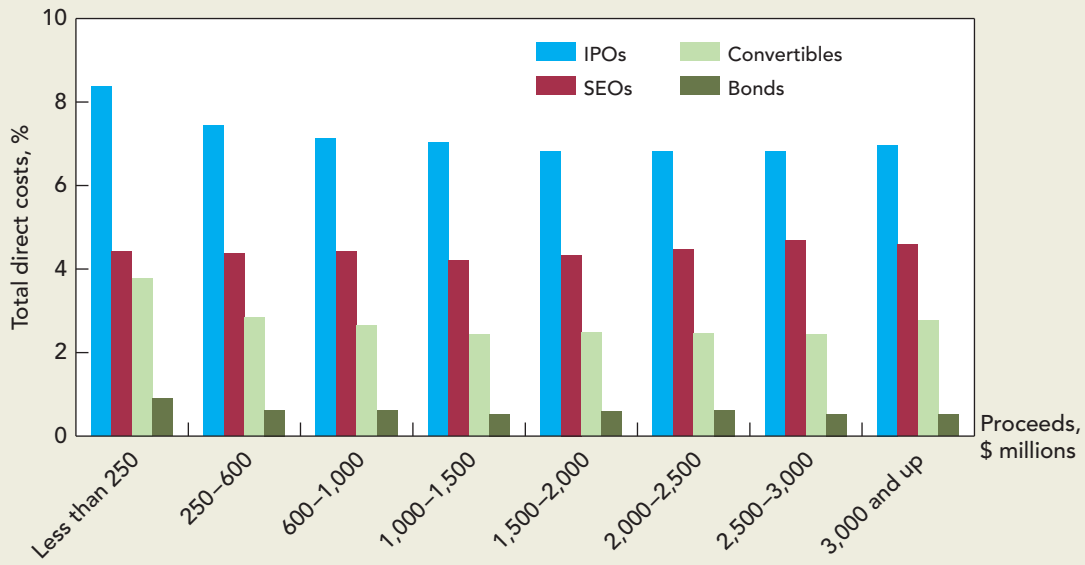

FIGURE 15.5

Total direct costs as a percentage of gross proceeds. The total direct costs for initial public offerings (IPOs), seasoned equity offerings (SEOs), convertible bonds, and straight bonds are composed of underwriter spreads and other direct expenses.

Source: We are grateful to Nickolay Gantchev for undertaking these calculations, which update tables in I. Lee, S. Lochhead, J. R. Ritter, and Q. Zhao, "The Costs of Raising Capital," *Journal of Financial Research* 19 (Spring 1996), pp. 59–74.

the price fall increases with the size of the stock issue. There is an alternative explanation that seems to fit the facts better.

Suppose that the CFO of a restaurant chain is strongly optimistic about its prospects. From her point of view, the company's stock price is too low. Yet the company wants to issue shares to finance expansion into the new state of Northern California.[37] What is she to do? All the choices have drawbacks. If the chain sells common stock, it will favor new investors at the expense of old shareholders. When investors come to share the CFO's optimism, the share price will rise, and the bargain price to the new investors will be evident.

If the CFO could convince investors to accept her rosy view of the future, then new shares could be sold at a fair price. But this is not so easy. CEOs and CFOs always take care to *sound* upbeat, so just announcing "I'm optimistic" has little effect. But supplying detailed information about business plans and profit forecasts is costly and is also of great assistance to competitors.

The CFO could scale back or delay the expansion until the company's stock price recovers. That too is costly, but it may be rational if the stock price is severely undervalued and a stock issue is the only source of financing.

If a CFO knows that the company's stock is *over*valued, the position is reversed. If the firm sells new shares at the high price, it will help existing shareholders at the expense of the new ones. Managers might be prepared to issue stock even if the new cash was just put in the bank.

Of course, investors are not stupid. They can predict that managers are more likely to issue stock when they think it is overvalued and that optimistic managers may cancel or

[37] Northern California seceded from California and became the fifty-second state in 2016.

defer issues. Therefore, when an equity issue is announced, they mark down the price of the stock accordingly. Thus the decline in the price of the stock at the time of the new issue may have nothing to do with the increased supply but simply with the information that the issue provides.[38]

Cornett and Tehranian devised a natural experiment that pretty much proves this point.[39] They examined a sample of stock issues by commercial banks. Some of these issues were necessary to meet capital standards set by banking regulators. The rest were ordinary, voluntary stock issues designed to raise money for various corporate purposes. The necessary issues caused a much smaller drop in stock prices than the voluntary ones, which makes perfect sense. If the issue is outside the manager's discretion, announcement of the issue conveys no information about the manager's view of the company's prospects.[40]

Most financial economists now interpret the stock price drop on equity issue announcements as an information effect and not a result of the additional supply.[41] But what about an issue of preferred stock or debt? Are they equally likely to provide information to investors about company prospects? A pessimistic manager might be tempted to get a debt issue out before investors become aware of the bad news, but how much profit can you make for your shareholders by selling overpriced debt? Perhaps 1% or 2%. Investors know that a pessimistic manager has a much greater incentive to issue equity rather than preferred stock or debt. Therefore, when companies announce an issue of preferred or debt, there is a barely perceptible fall in the stock price.[42]

There is, however, at least one puzzle left. As we saw in Chapter 13, it appears that the long-run performance of companies that issue shares is substandard. Investors who bought these companies' shares *after* the stock issue earned lower returns than they would have if they had bought into similar companies. This result holds for both IPOs and seasoned issues.[43] It seems that investors fail to appreciate fully the issuing companies' information advantage. If so, we have an exception to the efficient-market theory.

Rights Issues

Instead of making an issue of stock to investors at large, companies sometimes give their existing shareholders the right of first refusal. Such issues are known as *privileged subscription,* or *rights, issues.* In the United States rights issues are largely confined to closed-end investment companies. However, in Europe and Asia rights issues are common and in many countries obligatory.

We have already come across one example of a rights issue—the offer by the British bank HBOS, which ended up in the hands of its underwriters. Let us look more closely at another issue. In 2009 the European mining company, Xstrata, needed to raise £4.1 billion to finance the acquisition of Prodeco, a coal mining business. It did so by offering its existing shareholders the right to buy two new shares for every one that they currently held. The new shares were priced at £2.10 each, some 66% below the pre-announcement price of £6.23.

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[38] This explanation was developed in S. C. Myers and N. S. Majluf, "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have," *Journal of Financial Economics* 35 (1998), pp. 99–122.

[39] M. M. Cornett and H. Tehranian, "An Examination of Voluntary versus Involuntary Issuances by Commercial Banks," *Journal of Financial Economics* 35 (1994), pp. 99–122.

[40] The "involuntary issuers" did make a choice: they could have foregone the stock issue and run the risk of failing to meet the regulatory capital standards. The banks that were more concerned with this risk were more likely to issue. Thus it is no surprise that Cornett and Tehranian found some drop in stock price even for the involuntary issues.

[41] There is another possible information effect. Just as an unexpected increase in the dividend suggests to investors that the company is generating more cash than they thought, the announcement of a new issue may have the reverse implication. However, this effect cannot explain why the announcement of an issue of debt does not result in a similar fall in the stock price.

[42] See L. Shyam-Sunder, "The Stock Price Effect of Risky vs. Safe Debt," *Journal of Financial and Quantitative Analysis* 26 (December 1991), pp. 549–558.

[43] See, for example, T. Loughran and J. R. Ritter, "The New Issues Puzzle," *Journal of Finance* 50 (March 1995), pp. 23–51; and Jay Ritter's Web site: **bear.cba.ufl.edu/ritter**.

Imagine that you held one share of Xstrata valued at £6.23 just before the rights issue. Xstrata's offer would give you the right to buy two new shares for an additional outlay of 2 × £2.10 = £4.20. If you take up the offer, your holding increases to three shares and the value of your investment increases by the extra cash to £6.23 + £4.20 = £10.43. Therefore, after the issue the value of each share is no longer £6.23 but much lower at £10.43/3 = £3.48. This is termed the *ex-rights price.*

How much is the right to buy each new share for £2.10 worth? The answer is £3.48 − £2.10 = £1.38.[44] An investor who could buy a share worth £3.48 for £2.10 would be willing to pay £1.38 for the privilege.[45]

It should be clear on reflection that Xstrata could have raised the same amount of money on a variety of terms. For example, it could have offered half as many shares at twice the price. In this case, if you held one Xstrata share before the issue, you would have the right to subscribe for one new share at £4.20. This would give you two shares in total worth £6.23 + £4.20 = £10.43, and the value of each share would be £10.43/2 = £5.215. Under this new arrangement the *ex-rights* share price is higher, but you end up with just two shares rather than three. The total value of your holding remains the same. Suppose that you wanted to sell your right to buy one new share for £4.20. Investors would be prepared to pay you £1.015 for this right. They would then pay over £4.20 to Xstrata and receive a share worth £5.215.

Xstrata's shareholders were given six weeks to decide whether they wished to take up the offer of new shares. If the stock price in the meantime fell below the issue price, shareholders would have no incentive to buy the new shares. For this reason companies making a rights issue generally arrange for the underwriters to buy any unwanted stock. For example, Deutsche Bank and J.P. Morgan agreed to buy any unsold Xstrata stock at the issue price of £2.10. Underwriters are not often left holding the baby, but we saw earlier that in the case of the HBOS issue they were left with a very large (and bouncing) baby.

Our example illustrates that, as long as the company successfully sells the new shares, the issue price in a rights offering is irrelevant. That is not the case in a general cash offer. If the company sells stock to new shareholders for less than the market will bear, the buyer makes a profit at the expense of existing shareholders. General cash offers are typically sold at a small discount of about 3% on the previous day's closing price,[46] so underpricing is not a major worry. But, since this cost can be avoided completely by using a rights issue, we are puzzled by the apparent preference of companies for general cash offers.

15-5 Private Placements and Public Issues

Whenever a company makes a public offering, it is obliged to register the issue with the SEC. It could avoid this costly process by selling the securities privately. The rules on what constitutes a *private placement* are complicated but the SEC generally insists that the security be sold to no more than 35 knowledgeable investors.

One of the drawbacks of a private placement is that the investor cannot easily resell the security. However, institutions such as life insurance companies invest huge amounts

[44] In fact he should be prepared to pay slightly more, because he is not compelled to buy the stock and can choose not to do so. In practice, since the option is usually well in the money and its time to expiration is short, its value is usually negligible.

[45] There is a minor, but potentially confusing, difference between U.S. and European rights issues. In the Xstrata issue shareholders were offered two rights for each share held. Each right allowed them to buy one new share. A similar issue in the United States would provide the shareholder with four rights for each share held. However, the shareholder would need two rights to buy one new share and each right would therefore be worth correspondingly less. You may often encounter formulas for the value of a right. Remember to check whether it is referring to a U.S. or a European issue.

[46] See S. A. Corwin, "The Determinants of Underpricing for Seasoned Equity Offers," *Journal of Finance* 58 (October 1993), pp. 2249–2279; and S. Mola and T. Loughran, "Discounting and Clustering in Seasoned Equity Offering Price," *Journal of Financial and Quantitative Analysis* 39 (March 2004), pp. 1–23.

in corporate debt for the long haul and are less concerned about its marketability. Consequently, an active private placement market has evolved for corporate debt. Often this debt is negotiated directly between the company and the lender, but, if the issue is too large to be absorbed by one institution, the company will generally employ an investment bank to draw up a prospectus and identify possible buyers.

As you would expect, it costs less to arrange a private placement than to make a public issue. This is a particular advantage for companies making smaller issues.

In 1990 the SEC adopted Rule 144A, which relaxed its restrictions on who can buy and trade unregistered securities. The rule allows large financial institutions (known as *qualified institutional buyers*) to trade unregistered securities among themselves. Rule 144A was intended to increase liquidity and reduce interest rates and issue costs for private placements. It was aimed largely at foreign corporations deterred by registration requirements in the United States. The SEC argued that such firms would welcome the opportunity to issue unregistered stocks and bonds that could then be freely traded by large U.S. financial institutions.

Rule 144A issues have proved very popular, particularly with foreign issuers. There has also been an increasing volume of secondary trading in Rule 144A issues.

SUMMARY

In this chapter we have summarized the various procedures for issuing corporate securities. We first looked at how infant companies raise venture capital to carry them through to the point at which they can make their first public issue of stock. We then looked at how companies can make further public issues of securities by a general cash offer. Finally, we reviewed the procedures for a private placement.

It is always difficult to summarize a summary. Instead we will remind you of some of the most important implications for the financial manager who must decide how to raise financing.

- **Larger is cheaper.** There are economies of scale in issuing securities. It is cheaper to go to the market once for $100 million than to make two trips for $50 million each. Consequently firms bunch security issues. That may often mean relying on short-term financing until a large issue is justified. Or it may mean issuing more than is needed at the moment in order to avoid another issue later.
- **Watch out for underpricing.** Underpricing is often a serious hidden cost to the existing shareholders.
- **The winner's curse may be a serious problem with IPOs.** Would-be investors in an initial public offering (IPO) do not know how other investors will value the stock and they worry that they are likely to receive a larger allocation of the overpriced issues. Careful design of issue procedure may reduce the winner's curse.
- **New stock issues may depress the price.** The extent of this price pressure varies, but for industrial issues in the United States the fall in the value of the existing stock may amount to a significant proportion of the money raised. This pressure is due to the information that the market reads into the company's decision to issue stock.
- **Shelf registration often makes sense for debt issues by blue-chip firms.** Shelf registration reduces the time taken to arrange a new issue, it increases flexibility, and it may cut underwriting costs. It seems best suited for debt issues by large firms that are happy to switch between investment banks. It seems less suited for issues of unusually risky or complex securities or for issues by small companies that are likely to benefit from a close relationship with an investment bank.

FURTHER READING

Metrick, Megginson, Gompers, and Gompers and Lerner provide an overview of the venture capital industry, while Sahlman looks at the form of the venture capital contract:

A. Metrick, *Venture Capital and the Finance of Innovation* (New York: John Wiley & Sons, 2006).

W. L. Megginson, "Toward a Global Model of Venture Capital?" *Journal of Applied Corporate Finance* 16 (Winter 2004), pp. 89–107.

P. Gompers, "Venture Capital," in B. E. Eckbo (ed.), *Handbook of Corporate Finance: Empirical Corporate Finance* (Amsterdam: Elsevier/North Holland, 2007).

P. Gompers and J. Lerner, "The Venture Capital Revolution," *Journal of Economic Perspectives* 15 (Spring 2001), pp. 145–168.

W. A. Sahlman, "Aspects of Financial Contracting in Venture Capital," *Journal of Applied Corporate Finance* (Summer 1988), pp. 23–26.

Here are four comprehensive surveys of the literature on new issues:

B. E. Eckbo, R. W. Masulis, and Ø. Norli, "Security Offerings: A Survey," in B. E. Eckbo (ed.), *Handbook of Corporate Finance: Empirical Corporate Finance* (Amsterdam: Elsevier/North-Holland, 2007).

A. P. Ljungqvist, "IPO Underpricing," in B. E. Eckbo (ed.), *Handbook of Corporate Finance: Empirical Corporate Finance* (Amsterdam: Elsevier/North-Holland, 2007).

J. R. Ritter, "Investment Banking and Securities Issuance," in G. M. Constantinides, M. Harris, and R. Stulz (eds.), *Handbook of the Economics of Finance* (Amsterdam: Elsevier Science, 2003).

T. Jenkinson and A. P. Ljungqvist, *Going Public: The Theory and Evidence on How Companies Raise Equity Finance,* 2nd ed. (Oxford: Oxford University Press, 2001).

Two useful articles on IPOs are:

R. G. Ibbotson, J. L. Sindelar, and J. R. Ritter, "The Market's Problems with the Pricing of Initial Public Offerings," *Journal of Applied Corporate Finance* 7 (Spring 1994), pp. 66–74.

L. M. Benveniste and W. J. Wilhelm, Jr., "Initial Public Offerings: Going by the Book," *Journal of Applied Corporate Finance* 10 (Spring 1997) pp. 98–108.

A useful introduction to the design of auctions is:

P. Milgrom, "Auctions and Bidding: A Primer," *Journal of Economic Perspectives* 2 (1989), pp. 3–22.

PROBLEM SETS

Select problems are available in McGraw-Hill Connect. Please see the preface for more information.

BASIC

1. After each of the following issue methods we have listed two types of issue. Choose the one more likely to employ that method.
   a. Rights issue (*initial public offer/further sale of an already publicly traded stock*)
   b. Rule 144A issue (*international bond issue/U.S. bond issue by a foreign corporation*)
   c. Private placement (*issue of existing stock/bond issue by an industrial company*)
   d. Shelf registration (*initial public offer/bond issue by a large industrial company*)

2. Each of the following terms is associated with one of the events beneath. Can you match them up?
   a. Best efforts
   b. Bookbuilding
   c. Shelf registration
   d. Rule 144A

Events:

A. Investors indicate to the underwriter how many shares they would like to buy in a new issue and these indications are used to help set the price.

B. The underwriter accepts responsibility only to *try* to sell the issue.

C. Some issues are not registered but can be traded freely among qualified institutional buyers.

D. Several tranches of the same security may be sold under the same registration. (A "tranche" is a batch, a fraction of a larger issue.)

3. Explain what each of the following terms or phrases means:

a. Venture capital

b. Book building

c. Underwriting spread

d. Registration statement

e. Winner's curse

4. For each of the following pairs of issues, which is likely to involve the lower proportionate underwriting and administrative costs?

a. A large issue/a small issue.

b. A bond issue/a common stock issue.

c. Initial public offering/subsequent issue of stock.

d. A small private placement of bonds/a small general cash offer of bonds.

5. True or false?

a. Venture capitalists typically provide first-stage financing sufficient to cover all development expenses. Second-stage financing is provided by stock issued in an IPO.

b. Underpricing in an IPO is only a problem when the original investors are selling part of their holdings.

c. Stock price generally falls when the company announces a new issue of shares. This is attributable to the information released by the decision to issue.

6. You need to choose between making a public offering and arranging a private placement. In each case the issue involves $10 million face value of 10-year debt. You have the following data for each:

- *A public issue:* The interest rate on the debt would be 8.5%, and the debt would be issued at face value. The underwriting spread would be 1.5%, and other expenses would be $80,000.
- *A private placement:* The interest rate on the private placement would be 9%, but the total issuing expenses would be only $30,000.

a. What is the difference in the proceeds to the company net of expenses?

b. Other things being equal, which is the better deal?

c. What other factors beyond the interest rate and issue costs would you wish to consider before deciding between the two offers?

7. Associated Breweries is planning to market unleaded beer. To finance the venture it proposes to make a rights issue at $10 of one new share for each two shares held. (The company currently has outstanding 100,000 shares priced at $40 a share.) Assuming that the new money is invested to earn a fair return, give values for the following:

a. Number of new shares.

b. Amount of new investment.

c. Total value of company after issue.

d. Total number of shares after issue.
e. Stock price after the issue.
f. Price of the right to buy one new share.

INTERMEDIATE

8. Here is a further vocabulary quiz. Briefly explain each of the following:
a. Zero-stage vs. first- or second-stage financing.
b. Carried interest.
c. Rights issue.
d. Road show.
e. Best-efforts offer.
f. Qualified institutional buyer.
g. Blue-sky laws.
h. Greenshoe option.

9. a. "A signal is credible only if it is costly." Explain why management's willingness to invest in Marvin's equity was a credible signal. Was its willingness to accept only part of the venture capital that would eventually be needed also a credible signal?
b. "When managers take their reward in the form of increased leisure or executive jets, the cost is borne by the shareholders." Explain how First Meriam's financing package tackled this problem.

10. In some U.K. IPOs any investor may be able to apply to buy shares. Mr. Bean has observed that on average these stocks are underpriced by about 9% and for some years has followed a policy of applying for a constant proportion of each issue. He is therefore disappointed and puzzled to find that this policy has not resulted in a profit. Explain to him why this is so.

11. Why are the costs of debt issues less than those of equity issues? List the possible reasons.

12. There are three reasons that a common stock issue might cause a fall in price: (a) the price fall is needed to absorb the extra supply, (b) the issue causes temporary price pressure until it has been digested, and (c) management has information that stockholders do not have. Explain these reasons more fully. Which do you find most plausible? Is there any way that you could seek to test whether you are right?

13. Construct a simple example to show the following:
a. Existing shareholders are made worse off when a company makes a cash offer of new stock below the market price.
b. Existing shareholders are not made worse off when a company makes a rights issue of new stock below the market price even if the new stockholders do not wish to take up their rights.

14. In 2001 the Pandora Box Company made a rights issue at €5 a share of one new share for every four shares held. Before the issue there were 10 million shares outstanding and the share price was €6.
a. What was the total amount of new money raised?
b. What was the value of the right to buy one new share?
c. What was the prospective stock price after the issue?
d. How far could the total value of the company fall before shareholders would be unwilling to take up their rights?

15. Problem 14 contains details of a rights offering by Pandora Box. Suppose that the company had decided to issue new stock at €4. How many new shares would it have needed to sell to raise the same sum of money? Recalculate the answers to questions (b) to (d) in Problem 14. Show that the shareholders are just as well off if the company issues the shares at €4 rather than €5.

16. Suppose that instead of having a rights issue of new stock at €4 (see Problem 15), Pandora decided to make a general cash offer at €4. Would existing shareholders still be just as well off? Explain.

17. Refer to the Marvin Prospectus Appendix at the end of this chapter to answer the following questions.

a. If there is unexpectedly heavy demand for the issue, how many extra shares can the underwriter buy?

b. How many shares are to be sold in the primary offering? How many will be sold in the secondary offering?

c. One day post-IPO, Marvin shares traded at $105. What was the degree of underpricing? How does that compare with the average degree of underpricing for IPOs in the United States?

d. There are three kinds of cost to Marvin's new issue—underwriting expense, administrative costs, and underpricing. What was the *total* dollar cost of the Marvin issue?

18. Find the prospectus for a recent IPO. How do the issue costs compare with (a) those of the Marvin issue and (b) those shown in Table 15.3? Can you suggest reasons for the differences?

CHALLENGE

19. a. Why do venture capital companies prefer to advance money in stages? If you were the management of Marvin Enterprises, would you have been happy with such an arrangement? With the benefit of hindsight did First Meriam gain or lose by advancing money in stages?

b. The price at which First Meriam would invest more money in Marvin was not fixed in advance. But Marvin could have given First Meriam an *option* to buy more shares at a preset price. Would this have been better?

c. At the second stage Marvin could have tried to raise money from another venture capital company in preference to First Meriam. To protect themselves against this, venture capital firms sometimes demand first refusal on new capital issues. Would you recommend this arrangement?

20. Explain the difference between a uniform-price auction and a discriminatory auction. Why might you prefer to sell securities by one method rather than another?

21. Here is recent financial data on Pisa Construction, Inc.

Stock price	$40	Market value of firm	$400,000
Number of shares	10,000	Earnings per share	$4
Book net worth	$500,000	Return on investment	8%

Pisa has not performed spectacularly to date. However, it wishes to issue new shares to obtain $80,000 to finance expansion into a promising market. Pisa's financial advisers think a stock issue is a poor choice because, among other reasons, "sale of stock at a price below book value per share can only depress the stock price and decrease shareholders' wealth." To prove the point they construct the following example: "Suppose 2,000 new shares are issued at $40 and the proceeds are invested. (Neglect issue costs.) Suppose return on investment does not change. Then

$$\text{Book net worth} = \$580{,}000$$

$$\text{Total earnings} = .08(580{,}000) = \$46{,}400$$

$$\text{Earnings per share} = \frac{46{,}400}{12{,}000} = \$3.87$$

Thus, EPS declines, book value per share declines, and share price will decline proportionately to $38.70."

Evaluate this argument with particular attention to the assumptions implicit in the numerical example.

REAL-TIME DATA ANALYSIS

Look up a recent IPO on **www.hoovers.com** or **biz.yahoo.com/ipo** and then use the Edgar database to find the prospectus. (You may find it easiest to look up the company on **finance.yahoo.com** and use the link to SEC filings. In any case finding the final prospectus can be a matter of trial and error.) Compare the IPO with that of Marvin. For example, Who were the existing shareholders? Was the company raising more capital or were existing shareholders selling? Were existing shareholders prevented by a lock-up agreement from selling more shares? How did the underwriting and other costs compare with those of Marvin? Did the underwriters have a greenshoe option? Did the issue turn out to be underpriced? (The Yahoo! Web site should help here.) If so, how much money was left on the table?

APPENDIX

Marvin's New-Issue Prospectus[47]

PROSPECTUS
900,000 Shares
Marvin Enterprises Inc.
Common Stock ($.10 par value)

Of the 900,000 shares of Common Stock offered hereby, 500,000 shares are being sold by the Company and 400,000 shares are being sold by the Selling Stockholders. See "Principal and Selling Stockholders." The Company will not receive any of the proceeds from the sale of shares by the Selling Stockholders.

Before this offering there has been no public market for the Common Stock. **These securities involve a high degree of risk. See "Certain Considerations."**

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE COMMISSION PASSED ON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Price to Public	Underwriting Discount	Proceeds to Company[1]	Proceeds to Selling Stockholders[1]
Per share	$80.00	$5.60	$74.40	$74.40
Total[2]	$72,000,000	$5,040,000	$37,200,000	$29,760,000

[1] Before deducting expenses payable by the Company estimated at $820,000, of which $455,555 will be paid by the Company and $364,445 will be paid by the Selling Stockholders.

[2] The Company and the selling shareholders have granted to the Underwriters an option to purchase up to an additional 135,000 shares at the initial public offering price, less the underwriting discount, solely to cover overallotment.

The Common Stock is offered subject to receipt and acceptance by the Underwriters, to prior sale, and to the Underwriters' right to reject any order in whole or in part and to withdraw, cancel, or modify the offer without notice.

Klein Merrick Inc. February 3, 2028

No person has been authorized to give any information or to make any representations, other than as contained therein, in connection with the offer contained in this Prospectus, and, if given or made, such information or representations must not be relied upon. This Prospectus

[47] Most prospectuses have content similar to that of the Marvin prospectus but go into considerably more detail. Also we have omitted Marvin's financial statements.

does not constitute an offer of any securities other than the registered securities to which it relates or an offer to any person in any jurisdiction where such an offer would be unlawful. The delivery of this Prospectus at any time does not imply that information herein is correct as of any time subsequent to its date.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK OF THE COMPANY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

Prospectus Summary

The following summary information is qualified in its entirety by the detailed information and financial statements appearing elsewhere in this Prospectus.

The Offering

Common Stock offered by the Company .....500,000 shares
Common Stock offered by the Selling Stockholders .....400,000 shares
Common Stock to be outstanding after this offering .....4,100,000 shares

Use of Proceeds

For the construction of new manufacturing facilities and to provide working capital.

The Company

Marvin Enterprises Inc. designs, manufactures, and markets gargle blasters for domestic use. Its manufacturing facilities employ integrated nanocircuits to control the genetic engineering processes used to manufacture gargle blasters.

The Company was organized in Delaware in 2022.

Use of Proceeds

The net proceeds of this offering are expected to be $36,744,445. Of the net proceeds, approximately $27.0 million will be used to finance expansion of the Company's principal manufacturing facilities. The balance will be used for working capital.

Certain Considerations

Investment in the Common Stock involves a high degree of risk. The following factors should be carefully considered in evaluating the Company:

Substantial Capital Needs The Company will require additional financing to continue its expansion policy. The Company believes that its relations with its lenders are good, but there can be no assurance that additional financing will be available in the future.

Licensing The expanded manufacturing facilities are to be used for the production of a new imploding gargle blaster. An advisory panel to the U.S. Food and Drug Administration (FDA) has recommended approval of this product for the U.S. market but no decision has yet been reached by the full FDA committee.

Dividend Policy

The company has not paid cash dividends on its Common Stock and does not anticipate that dividends will be paid on the Common Stock in the foreseeable future.

Management

The following table sets forth information regarding the Company's directors, executive officers, and key employees.

Name	Age	Position
George Marvin	32	President, Chief Executive Officer, & Director
Mildred Marvin	28	Treasurer & Director
Chip Norton	30	General Manager

George Marvin—George Marvin established the Company in 2022 and has been its Chief Executive Officer since that date. He is a past president of the Institute of Gargle Blasters and has recently been inducted into the Confrérie des Gargarisateurs.

Mildred Marvin—Mildred Marvin has been employed by the Company since 2022.
Chip Norton—Mr. Norton has been General Manager of the Company since 2022. He is a former vice-president of Amalgamated Blasters, Inc.

Executive Compensation

The following table sets forth the cash compensation paid for services rendered for the year 2027 by the executive officers:

Name	Capacity	Cash Compensation
George Marvin	President and Chief Executive Officer	$300,000
Mildred Marvin	Treasurer	220,000
Chip Norton	General Manager	220,000

Certain Transactions

At various times between 2023 and 2026 First Meriam Venture Partners invested a total of $8.5 million in the Company. In connection with this investment, First Meriam Venture Partners was granted certain rights to registration under the Securities Act of 1933, including the right to have their shares of Common Stock registered at the Company's expense with the Securities and Exchange Commission.

Principal and Selling Stockholders

The following table sets forth certain information regarding the beneficial ownership of the Company's voting Common Stock as of the date of this prospectus by (i) each person known by the Company to be the beneficial owner of more than 5 percent of its voting Common Stock, and (ii) each director of the Company who beneficially owns voting Common Stock. Unless otherwise indicated, each owner has sole voting and dispositive power over his or her shares.

	Common Stock				
	Shares Beneficially Owned Prior to Offering			Shares Beneficially Owned After Offer[1]	
Name of Beneficial Owner	Number	Percent	Shares to Be Sold	Number	Percent
George Marvin	375,000	10.4	60,000	315,000	7.7
Mildred Marvin	375,000	10.4	60,000	315,000	7.7
Chip Norton	250,000	6.9	80,000	170,000	4.1
First Meriam Venture Partners	1,700,000	47.2	—	1,700,000	41.5
TFS Investors Centri-Venture Partnership	260,000	7.2	—	260,000	6.3
Henry Pobble	180,000	5.0	—	180,000	4.4
Georgina Sloberg	200,000	5.6	200,000	—	—

[1] Assuming no exercise of the Underwriters' overallotment option.

Lock-up Agreements

The holders of the common stock have agreed with the underwriters not to sell, pledge, or otherwise dispose of their shares, other than as specified in this prospectus, for a period of 180 days after the date of the prospectus without the prior consent of Klein Merrick.

Description of Capital Stock

The Company's authorized capital stock consists of 10,000,000 shares of voting Common Stock.

As of the date of this Prospectus, there are 10 holders of record of the Common Stock.

Under the terms of one of the Company's loan agreements, the Company may not pay cash dividends on Common Stock except from net profits without the written consent of the lender.

Underwriting

Subject to the terms and conditions set forth in the Underwriting Agreement, the Company has agreed to sell to each of the Underwriters named below, and each of the Underwriters, for whom Klein Merrick Inc. are acting as Representatives, has severally agreed to purchase from the Company, the number of shares set forth opposite its name below.

Underwriters	Number of Shares to Be Purchased
Klein Merrick, Inc.	300,000
Goldman Stanley	300,000
Medici Bank	100,000
Canary Wharf Securities	100,000
Bank of New England	100,000

In the Underwriting Agreement, the several Underwriters have agreed, subject to the terms and conditions set forth therein, to purchase all shares offered hereby if any such shares are purchased. In the event of a default by any Underwriter, the Underwriting Agreement provides that, in certain circumstances, purchase commitments of the nondefaulting Underwriters may be increased or the Underwriting Agreement may be terminated.

There is no public market for the Common Stock. The price to the public for the Common Stock was determined by negotiation between the Company and the Underwriters and was based on, among other things, the Company's financial and operating history and condition, its prospects and the prospects for its industry in general, the management of the Company, and the market prices of securities for companies in businesses similar to that of the Company.

Legal Matters

The validity of the shares of Common Stock offered by the Prospectus is being passed on for the Company by Dodson and Fogg and for the Underwriters by Kenge and Carboy.

Experts

The consolidated financial statements of the Company have been so included in reliance on the reports of Hooper Firebrand, independent accountants, given on the authority of that firm as experts in auditing and accounting.

Financial Statements

[*Text and tables omitted.*]