

ELEMENTS OF INVESTMENTS

Even a cursory glance at *The Wall Street Journal* reveals a bewildering collection of securities, markets, and financial institutions. But although it may appear so, the financial environment is not chaotic: There is rhyme and reason behind the vast array of financial instruments and the markets in which they trade.

These introductory chapters provide a bird's-eye view of the investing environment. We will give you a tour of the major types of markets in which securities trade, the trading process, and the major players in these arenas. You will see that both markets and securities have evolved to meet the changing and complex needs of different participants in the financial system.

Markets innovate and compete with each other for traders' business just as vigorously as competitors in other industries. The competition between the

National Association of Securities Dealers Automatic Quotation System (Nasdaq), the New York Stock Exchange (NYSE), and a number of electronic and non-U.S. exchanges is fierce and public.

Trading practices can mean big money to investors. The explosive growth of online trading has saved them many millions of dollars in trading costs. Even more dramatically, new electronic communication networks promise to allow investors to trade directly without a broker. These advances will change the face of the investments industry, and Wall Street firms are scrambling to formulate strategies that respond to these changes.

These chapters will give you a good foundation with which to understand the basic types of securities and financial markets as well as how trading in those markets is conducted.



- 1 Investments: Background and Issues
- 2 Financial Securities
- 3 Securities Markets
- 4 Mutual Funds and Other Investment Companies



The market leading *Essentials of Investments*, 6/e by Bodie, Kane and Marcus is an undergraduate textbook on investment analysis, presenting the practical applications of investment theory to comes insights of practical value. The authors have annotated university mathematical detail and concentrate on the intuition and insights that will be useful to practitioners throughout their careers as new ideas and challenges emerge from the financial marketplace. *Essentials* maintains the theme of asset allocation (wealth) and securities markets that are grounded in risk-return relationships. *Essentials* continues to discuss modern topics, including more on behavioral finance. The major objective in this revision is to maintain the current text in current and coverage, with greater coverage of corporate governance, and ethics, and to increase the text's accessibility by enhancing presentation, pedagogy, and design.

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INVESTMENTS: BACKGROUND AND ISSUES

AFTER STUDYING THIS CHAPTER YOU SHOULD BE ABLE TO:

- ➔ Define an investment.
- ➔ Distinguish between real assets and financial assets.
- ➔ Describe the major steps in the construction of an investment portfolio.
- ➔ Identify major participants in financial markets.
- ➔ Identify types of financial markets and recent trends in those markets.

related WEBSITES

www.ceoexpress.com

Good set of links for all aspects of business, with many sites related to finance and investment.

www.thecorporatelibrary.com

www.corpgov.net

Dedicated to corporate-governance issues, these sites have extensive coverage and numerous links to other related sites.

www.finpipe.com

This is an excellent general site dedicated to finance education. It contains information on debt securities, equities, and derivative instruments.

www.financewise.com

This is a finance search engine for other financial sites.

www.federalreserve.gov/otherfrb.htm

This is an entry point to all of the Federal Reserve Bank sites, which provide economic data and

research as well as access to the St. Louis Fed's Federal Reserve Economic Data Base, FRED.

www.bea.gov

The Bureau of Economic Analysis site has links to data on the balance sheets of households, businesses, and government.

finance.yahoo.com

moneycentral.msn.com

www.reuters.com

These sites contain extensive information on all major financial markets. Some portfolio management tools are also available.

www.sec.gov

The Securities and Exchange Commission website has links to information about the services provided by the SEC as well as to data sources, including a tutorial on EDGAR, which allows you to access firms' SEC filings.

An investment is the *current* commitment of money or other resources in the expectation of reaping *future* benefits. For example, an individual might purchase shares of stock anticipating that the future proceeds from the shares will justify both the time that her money is tied up as well as the risk of the investment. The time you will spend studying this text (not to mention its cost) also is an investment. You are forgoing either current leisure or the income you could be earning at a job in the expectation that your future career will be sufficiently enhanced to justify this commitment of time and effort. While these two investments differ in many ways, they share one key attribute that is central to all investments: You sacrifice something of value now, expecting to benefit from that sacrifice later.

This text can help you become an informed practitioner of investments. We will focus on investments in securities such as stocks, bonds, or options and futures contracts, but much of what we discuss will be useful in the analysis of any type of investment. The text will provide you with background in the organization of various securities markets, will survey the valuation and risk-management principles useful in particular markets, such as those for bonds or stocks, and will introduce you to the principles of portfolio construction.

Broadly speaking, this chapter addresses three topics that will provide a useful perspective for the material that is to come later. First, before delving into the topic of “investments,” we consider the role of financial assets in the economy. We discuss the relationship between securities and the “real” assets that actually produce goods and services for consumers, and we consider why financial assets are important to the functioning of a developed economy. Given this background, we then take a first look at the types of decisions that confront investors as they assemble a portfolio of assets. These investment decisions are made in an environment where higher returns usually can be obtained only at the price of greater risk and in which it is rare to find assets that are so mispriced as to be obvious bargains. These themes—the risk-return trade-off and the efficient pricing of financial assets—are central to the investment process, so it is worth pausing for a brief discussion of their implications as we begin the text. These implications will be fleshed out in much greater detail in later chapters.

Finally, we conclude the chapter with an introduction to the organization of security markets, the various players that participate in those markets, and a brief overview of some of the more important changes in those markets in recent years. Together, these various topics should give you a feel for who the major participants are in the securities markets as well as the setting in which they act. We close the chapter with an overview of the remainder of the text.

1.1 REAL ASSETS VERSUS FINANCIAL ASSETS

real assets

Assets used to produce goods and services.

financial assets

Claims on real assets or the income generated by them.

The material wealth of a society is ultimately determined by the productive capacity of its economy, that is, the goods and services its members can create. This capacity is a function of the **real assets** of the economy: the land, buildings, machines, and knowledge that can be used to produce goods and services.

In contrast to such real assets are **financial assets**, such as stocks and bonds. Such securities are no more than sheets of paper or, more likely, computer entries and do not contribute directly to the productive capacity of the economy. Instead, these assets are the means by which individuals in well-developed economies hold their claims on real assets. Financial assets are claims to the income generated by real assets (or claims on income from the government). If we cannot own our own auto plant (a real asset), we can still buy shares in General Motors or Toyota (financial assets) and, thereby, share in the income derived from the production of automobiles.

While real assets generate net income to the economy, financial assets simply define the allocation of income or wealth among investors. Individuals can choose between consuming their wealth today or investing for the future. If they choose to invest, they may place their wealth in financial assets by purchasing various securities. When investors buy these securities from companies, the firms use the money so raised to pay for real assets, such as plant, equipment, technology, or inventory. So investors' returns on securities ultimately come from the income produced by the real assets that were financed by the issuance of those securities.

The distinction between real and financial assets is apparent when we compare the balance sheet of U.S. households, shown in Table 1.1, with the composition of national wealth in the United States, shown in Table 1.2. Household wealth includes financial assets such as bank accounts, corporate stock, or bonds. However, these securities, which are financial assets of households, are *liabilities* of the issuers of the securities. For example, a bond that you treat as an asset because it gives you a claim on interest income and repayment of principal from

table 1.1
Balance sheet of U.S. households

Assets	\$ Billion	% Total	Liabilities and Net Worth	\$ Billion	% Total
Real assets					
Real estate	\$16,547	30.5%	Mortgages	\$ 6,961	12.9%
Consumer durables	3,153	5.8	Consumer credit	2,040	3.8
Other	127	0.2	Bank and other loans	397	0.7
Total real assets	\$19,827	36.6	Other	359	0.7
			Total liabilities	\$ 9,757	18.0%
Financial assets					
Deposits	\$ 5,253	9.7%			
Life insurance reserves	1,005	1.9			
Pension reserves	9,304	17.2			
Corporate equity	5,709	10.5			
Equity in noncorp. business	5,414	10.0			
Mutual fund shares	3,292	6.1			
Personal trusts	932	1.7			
Debt securities	2,510	4.6			
Other	922	1.7			
Total financial assets	34,341	63.4	Net worth	44,411	82.0
Total	\$54,168	100.0%		\$54,168	100.0%

Note: Column sums may differ from totals because of rounding error.
Source: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, March 2004.

table 1.2

Domestic net worth

Assets

\$ Billion

Nonresidential real estate	\$12,264
Residential real estate	19,111
Equipment and software	5,138
Inventories	1,324
Consumer durables	3,153
Total	\$28,725

Note: Column sum may differ from total because of rounding error.

Sources: *Flow of Funds Accounts of the United States*, Board of Governors of the Federal Reserve System, March 2004; *National Economic Accounts*, Bureau of Economic Analysis, May 2004.

General Motors is a liability of General Motors, which is obligated to make these payments to you. Your asset is GM's liability. Therefore, when we aggregate over all balance sheets, these claims cancel out, leaving only real assets as the net wealth of the economy. National wealth consists of structures, equipment, inventories of goods, and land.¹

We will focus almost exclusively on financial assets. But you shouldn't lose sight of the fact that the successes or failures of the financial assets we choose to purchase ultimately depend on the performance of the underlying real assets.

1. Are the following assets real or financial?

- a. Patents
- b. Lease obligations
- c. Customer goodwill
- d. A college education
- e. A \$5 bill



1.2 A TAXONOMY OF FINANCIAL ASSETS

It is common to distinguish among three broad types of financial assets: fixed income, equity, and derivatives. **Fixed-income securities** promise either a fixed stream of income or a stream of income that is determined according to a specified formula. For example, a corporate bond typically would promise that the bondholder will receive a fixed amount of interest each year. Other so-called floating-rate bonds promise payments that depend on current interest rates. For example, a bond may pay an interest rate that is fixed at two percentage points above the rate paid on U.S. Treasury bills. Unless the borrower is declared bankrupt, the payments on these securities are either fixed or determined by formula. For this reason, the investment performance of fixed-income securities typically is least closely tied to the financial condition of the issuer.

Nevertheless, fixed-income securities come in a tremendous variety of maturities and payment provisions. At one extreme, the *money market* refers to fixed-income securities that are short term, highly marketable, and generally of very low risk. Examples of money market securities are U.S. Treasury bills or bank certificates of deposit (CDs). In contrast, the fixed-income *capital market* includes long-term securities such as Treasury bonds, as well as bonds

fixed-income securities

Pay a specified cash flow over a specific period.

¹You might wonder why real assets held by households in Table 1.1 amount to \$19,827 billion, while total real assets in the domestic economy (Table 1.2) are far larger, at \$28,725 billion. One major reason is that real assets held by firms, for example, property, plant, and equipment, are included as *financial* assets of the household sector, specifically through the value of corporate equity and other stock market investments. Another reason is that equity and stock investments in Table 1.1 are measured by market value, whereas the value of plant and equipment in Table 1.2 is valued at replacement cost.

issued by federal agencies, state and local municipalities, and corporations. These bonds range from very safe in terms of default risk (for example, Treasury securities) to relatively risky (for example, high yield or “junk” bonds). They also are designed with extremely diverse provisions regarding payments provided to the investor and protection against the bankruptcy of the issuer. We will take a first look at these securities in Chapter 2 and undertake a more detailed analysis of the fixed-income market in Part Three.

Unlike fixed-income securities, common stock, or **equity**, in a firm represents an ownership share in the corporation. Equity holders are not promised any particular payment. They receive any dividends the firm may pay and have prorated ownership in the real assets of the firm. If the firm is successful, the value of equity will increase; if not, it will decrease. The performance of equity investments, therefore, is tied directly to the success of the firm and its real assets. For this reason, equity investments tend to be riskier than investments in fixed-income securities. Equity markets and equity valuation are the topics of Part Four.

Finally, **derivative securities** such as options and futures contracts provide payoffs that are determined by the prices of *other* assets such as bond or stock prices. For example, a call option on a share of Intel stock might turn out to be worthless if Intel’s share price remains below a threshold or “exercise” price such as \$30 a share, but it can be quite valuable if the stock price rises above that level.² Derivative securities are so named because their values derive from the prices of other assets. For example, the value of the call option will depend on the price of Intel stock. Other important derivative securities are futures and swap contracts. We will treat these in Part Five.

Derivatives have become an integral part of the investment environment. One use of derivatives, perhaps the primary use, is to hedge risks or transfer them to other parties. This is done successfully every day, and the use of these securities for risk management is so commonplace that the multitrillion-dollar market in derivative assets is routinely taken for granted. Derivatives also can be used to take highly speculative positions, however. Every so often, one of these positions blows up, resulting in well-publicized losses of hundreds of millions of dollars. While these losses attract considerable attention, they are in fact the exception to the more common use of such securities as risk management tools. Derivatives will continue to play an important role in portfolio construction and the financial system. We will return to this topic later in the text.

In addition to these financial assets, individuals might invest directly in some real assets. For example, real estate or commodities such as precious metals or agricultural products are real assets that might form part of an investment portfolio.

1.3

FINANCIAL MARKETS AND THE ECONOMY

We stated earlier that real assets determine the wealth of an economy, while financial assets merely represent claims on real assets. Nevertheless, financial assets and the markets in which they trade play several crucial roles in developed economies. Financial assets allow us to make the most of the economy’s real assets.

Consumption Timing

Some individuals in an economy are earning more than they currently wish to spend. Others, for example, retirees, spend more than they currently earn. How can you shift your purchasing power from high-earnings periods to low-earnings periods of life? One way is to “store” your wealth in financial assets. In high-earnings periods, you can invest your savings in financial assets such as stocks and bonds. In low-earnings periods, you can sell these assets to provide funds for your consumption needs. By so doing, you can “shift” your consumption over

²A call option is the right to buy a share of stock at a given exercise price on or before the option’s expiration date. If the market price of Intel remains below \$30 a share, the right to buy for \$30 will turn out to be valueless. If the share price rises above \$30 before the option expires, however, the option can be exercised to obtain the share for only \$30.

equity

An ownership share in a corporation.

derivative securities

Securities providing payoffs that depend on the values of other assets.

the course of your lifetime, thereby allocating your consumption to periods that provide the greatest satisfaction. Thus, financial markets allow individuals to separate decisions concerning current consumption from constraints that otherwise would be imposed by current earnings.

Allocation of Risk

Virtually all real assets involve some risk. When GM builds its auto plants, for example, it cannot know for sure what cash flows those plants will generate. Financial markets and the diverse financial instruments traded in those markets allow investors with the greatest taste for risk to bear that risk, while other, less risk-tolerant individuals can, to a greater extent, stay on the sidelines. For example, if GM raises the funds to build its auto plant by selling both stocks and bonds to the public, the more optimistic or risk-tolerant investors can buy shares of stock in GM, while the more conservative ones can buy GM bonds. Because the bonds promise to provide a fixed payment, the stockholders bear most of the business risk but reap potentially higher rewards. Thus, capital markets allow the risk that is inherent to all investments to be borne by the investors most willing to bear that risk.

This allocation of risk also benefits the firms that need to raise capital to finance their investments. When investors are able to select security types with the risk-return characteristics that best suit their preferences, each security can be sold for the best possible price. This facilitates the process of building the economy's stock of real assets.

Separation of Ownership and Management

Many businesses are owned and managed by the same individual. This simple organization is well-suited to small businesses and, in fact, was the most common form of business organization before the Industrial Revolution. Today, however, with global markets and large-scale production, the size and capital requirements of firms have skyrocketed. For example, General Electric lists on its balance sheet about \$53 billion of property, plant, and equipment, and total assets in excess of \$640 billion. Corporations of such size simply cannot exist as owner-operated firms. GE actually has over one-half million stockholders with an ownership stake in the firm proportional to their holdings of shares.

Such a large group of individuals obviously cannot actively participate in the day-to-day management of the firm. Instead, they elect a board of directors which in turn hires and supervises the management of the firm. This structure means that the owners and managers of the firm are different parties. This gives the firm a stability that the owner-managed firm cannot achieve. For example, if some stockholders decide they no longer wish to hold shares in the firm, they can sell their shares to other investors, with no impact on the management of the firm. Thus, financial assets and the ability to buy and sell those assets in the financial markets allow for easy separation of ownership and management.

How can all of the disparate owners of the firm, ranging from large pension funds holding hundreds of thousands of shares to small investors who may hold only a single share, agree on the objectives of the firm? Again, the financial markets provide some guidance. All may agree that the firm's management should pursue strategies that enhance the value of their shares. Such policies will make all shareholders wealthier and allow them all to better pursue their personal goals, whatever those goals might be.

Do managers really attempt to maximize firm value? It is easy to see how they might be tempted to engage in activities not in the best interest of shareholders. For example, they might engage in empire building or avoid risky projects to protect their own jobs or overconsume luxuries such as corporate jets, reasoning that the cost of such perquisites is largely borne by the shareholders. These potential conflicts of interest are called **agency problems** because managers, who are hired as agents of the shareholders, may pursue their own interests instead.

Several mechanisms have evolved to mitigate potential agency problems. First, compensation plans tie the income of managers to the success of the firm. A major part of the total

agency problem

Conflicts of interest
between managers
and stockholders.

compensation of top executives is typically in the form of stock options, which means that the managers will not do well unless the stock price increases, benefiting shareholders. (Of course, we've learned more recently that overuse of options can create its own agency problem. Options can create an incentive for managers to manipulate information to prop up a stock price temporarily, giving them a chance to cash out before the price returns to a level reflective of the firm's true prospects. (More on this shortly.) Second, while boards of directors are sometimes portrayed as defenders of top management, they can, and in recent years increasingly do, force out management teams that are underperforming. Third, outsiders such as security analysts and large institutional investors such as pension funds monitor the firm closely and make the life of poor performers at the least uncomfortable.

Finally, bad performers are subject to the threat of takeover. If the board of directors is lax in monitoring management, unhappy shareholders in principle can elect a different board. They can do this by launching a *proxy contest* in which they seek to obtain enough proxies (i.e., rights to vote the shares of other shareholders) to take control of the firm and vote in another board. However, this threat is usually minimal. Shareholders who attempt such a fight have to use their own funds, while management can defend itself using corporate coffers. Most proxy fights fail. The real takeover threat is from other firms. If one firm observes another underperforming, it can acquire the underperforming business and replace management with its own team. The stock price should rise to reflect the prospects of improved performance, which provides incentive for firms to engage in such takeover activity.

1.1 EXAMPLE

The Hewlett-Packard/Compaq Proxy Fight

When Carly Fiorini, then the CEO of Hewlett-Packard, proposed a merger with Compaq Computer in 2001, Walter Hewlett, son of the company's founder and member of the HP board of directors, dissented. The merger had to be approved by shareholders, and Hewlett engaged in a proxy fight to block the deal. One estimate is that HP spent \$150 million to lobby shareholders to support the merger; even small shareholders of HP reported receiving 20 or more phone calls from the company in support of the deal.³ The merger ultimately was approved in an uncharacteristically close vote. No surprise that less than 1% of public companies face proxy contests in any particular year.

A Crisis in Corporate Governance

Despite these mechanisms to align incentives of shareholders and managers, the three years between 2000 and 2002 were filled with a seemingly unending series of scandals that collectively signaled a crisis in corporate governance. The nearby box provides a scorecard for many of the most prominent scandals, but it is far from exhaustive. These episodes suggest that agency and incentive problems are far from solved.

Most (but not all) of the scandals fell into three broad categories: manipulation of financial data to misrepresent the actual condition of the firm; systematically misleading and overly optimistic research reports put out by stock market analysts; and allocations of initial public offerings to corporate executives as a quid pro quo for personal favors or the promise to direct future business back to the manager of the IPO. Perhaps the underlying theme that ties these scandals together is distorted incentives that tilted decisions toward short-term payoffs rather than long-term value.

Accounting scandals The spate of accounting scandals was symbolized by Enron and its auditor Arthur Andersen. Enron used so-called special-purpose entities to hide massive amounts of debt, inflate reported profits, and funnel massive profits to corporate insiders. Arthur Andersen was convicted for obstructing justice by shredding documents. Enron proved to be only the tip of the iceberg, however. It soon emerged that other firms such as Rite Aid, HealthSouth, Global Crossing, Qwest Communications, and WorldCom also had manipulated

³See "Designed by Committee," *The Economist*, June 13, 2002.

table 1.3

Largest option exercises
by heads of major U.S.
companies

Executive	Company	Year of Exercise	Payout
Lawrence Ellison	Oracle	2001	\$706 million
Michael Eisner	Walt Disney	1998	570 million
Michael Dell	Dell Computer	2000	233 million
Sanford Weill	Citigroup	1997	220 million
Thomas Siebel	Siebel Systems	2001	175 million
Stephen Case	AOL Time Warner	1997	158 million
John Chambers	Cisco Systems	2000	156 million
Gerald Levin	AOL Time Warner	2000	153 million

Source: *The Wall Street Journal*, December 17, 2002.

and misstated their accounts to the tune of billions of dollars. Sunbeam, Xerox, and other firms used questionable sales assumptions to inflate profits.⁴

One reason this sort of manipulation paid is that executives commonly were compensated with potentially massive stock options. Even if the stock price could be propped up by misleading information for only a short period, this could give option holders enough time to cash out before the firm's true prospects were revealed. Table 1.3 lists some of the largest stock option payoffs in history; these were not of questionable propriety, but they do illustrate the temptation to "manage" information about the company even if the market can be fooled only temporarily.

What about the auditors who were supposed to be the watchdogs of the firms? Here too, incentives were skewed. Business practice in those years made the consulting arm of these firms more lucrative than the auditing function. It is not surprising that these auditors were lenient in their auditing work to protect their consulting contracts. For example, Andersen earned more money in 2000 consulting for Enron than auditing it.

WWW

WEB MASTER

Accounting Scandals

The largest accounting scandal in the world may not be Enron, WorldCom, Tyco, or Consecro. For now, Parmalat Finanziaria SpA of Italy is in the running for that record. Parmalat's founding family, the Tanzi family, may very well end up being the single largest recipient of money from a bankrupt firm. A major issue surrounding the accounting scandals is the level of compensation former executives received from their firms. In some cases employees and shareholders ended up with nothing. The details of the Parmalat accounting scandal can be found at www2.accountancyage.com/specials/1136019.

- Using the Web links provided in the chapter opener, find the amount of the compensation (include any money supposedly stolen from the firm or personal expenses paid for by the firm) for the top executives in each of the following companies.
 - Consecro
 - Enron
 - Parmalat
 - Tyco
 - WorldCom
- Estimate the amount of money lost by the firm's shareholders as a result of the bankruptcy. This can be measured in terms of decrease in share price from peak to today.
- Calculate the ratio of executive compensation per total shareholder loss in value.
- Rank order the executives, from highest ratio to lowest ratio, and provide an analysis of the results.

⁴We review some of these practices in Chapter 13.

Analyst scandals Wall Street stock analysts regularly publish research reports on a wide range of firms along with buy or sell recommendations. Yet only the smallest fraction of firms (less than 2%) were assigned sell recommendations, and as it turns out, many firms given buy recommendations were privately called dogs (or worse) by these market analysts. Rather than provide unbiased reports, analysts were pressed into the service of the investment bankers. In effect, favorable analysis was traded for the promise of future investment banking business. The most notorious of these episodes involved Jack Grubman of Salomon Smith Barney (part of Citigroup), who allegedly upgraded his rating of AT&T to win Salomon a role as co-manager of AT&T's massive stock sale. But he was hardly alone. Ten Wall Street firms paid \$1.4 billion (including \$475 million to fund independent stock research) to settle claims of improper behavior.

Again, conflicts of interest and distorted incentives—in short, agency problems—played a role in these scandals. Analysts were commonly compensated not for the accuracy or insightfulness of their analysis, but for their role in garnering investment banking business for their firms. And the payoffs could be huge.

Initial public offerings As we will see in Chapter 3, firms that wish to raise funds by selling stock to the public for the first time hire investment banking firms to manage their initial public offering, or IPO. The investment banker assesses demand for the offering and allocates shares to interested investors. Because IPOs typically provide excellent initial returns, these allocations are highly coveted. Some investment banking firms that managed IPOs made a practice of awarding allocations to favored clients in what resembled kick-back schemes. For example, CSFB allocated shares with the expectation that recipients would direct stock trading business to its brokerage arm. Other allocations were apparently granted to corporate executives given in return for their future promise of investment banking business.

These episodes indicate that many investment bankers were more focused on short-term profits than long-term reputations. (See Table 1.4 for a list of major recent scandals and their outcomes.) We will discuss in Chapter 3 some of the specific regulatory responses to these scandals. For the most part, new regulations focus on realigning incentives—for example, by severing the link between stock market analyst compensation and investment banking business; by making corporate executives and board members personally responsible for the accuracy of financial reports; by mandating a greater role for disinterested outsiders on the board of directors; by creating a new oversight board to oversee the auditing of public companies; by prohibiting auditors from providing various other services to clients; and by beefing up the budget of the SEC.

One proposal that has not yet been endorsed by regulators is for firms to move from option-based to stock-based compensation, with added restrictions that executives hold shares for longer periods. The goal would be to align their incentives with the long-term success of the firm and to eliminate the incentive to curry short-term advantage at the cost of long-term performance. In fact, while this has not yet been required, grants of such restricted stock to top executives have increased dramatically as high-profile firms such as Microsoft have replaced option compensation with restricted stock grants.

Wall Street and its regulators are seeking ways to restore credibility. There is (admittedly belated) recognition that markets require trust to function. In the wake of the scandals, the value of reputation and straightforward incentive structures has increased. As one Wall Street insider put it, "This is an industry of trust; it's one of its key assets . . . [Wall Street] is going to have to invest in getting [that trust] back . . . without that trust, there's nothing."⁵

⁵"How Corrupt Is Wall Street?" *BusinessWeek*, May 13, 2002.