

## PART I

# The Products

**W**ALL-STREET BASHING IS a time-honored practice, even among economists. In the chapter that begins this book, “Financial Innovation: Achievements and Prospects,” Merton Miller, Nobel laureate and widely regarded as “the father of modern finance,” traces the popular skepticism about Wall Street and financial innovation to an 18th-century economic doctrine known as “Physiocracy.” According to this theory, the ultimate source of national wealth lies in the production of physical commodities. All other forms of commercial activity are considered nonproductive, if not parasitic. “Modern-day Physiocrats,” as Miller wrote, “automatically and enthusiastically consign to that nonproductive class all the many thousands on Wall Street and LaSalle Street now using the new instruments.”

The subject of Miller’s chapter is “the new instruments”—that is, the proliferation since the early 1970s of all variety of futures, swaps, and options. It is Miller’s contention—and one of the major recurring themes of this book—that the social benefits of financial innovation far outweigh the costs.

What are these benefits? Perhaps the principal source of gain from the many securities innovations over the past 20 years has been an improvement in the allocation of risk within the financial system—which in turn has enabled the capital markets to do a better job of performing their basic task of channeling investor savings into productive corporate investment of all kinds. The foreign exchange futures market that started in 1972, together with the host of “derivative” products that have risen up since then, have dramatically reduced the cost of transferring risks to those market participants with a comparative advantage in bearing them. “Efficient risk-sharing,” as Miller put it, “is what much of the futures and options revolution has been all about.” By functioning much like “a gigantic insurance company,” the options, futures, and other derivative markets also effectively raise the price investors pay for corporate securities, thus adding to corporate investment and general economic growth.

Consider, for example, the development of a national mortgage market that was made possible by investment bankers' pooling and repackaging of individual mortgages into securities. Such asset securitization, which in turn was made possible by the development of financial futures necessary to hedge the investment bankers' interest rate and prepayment exposures, has accomplished a massive transfer of interest rate risk away from financial institutions to well-diversified institutional investors. Besides lowering interest rates for homeowners (by as much as 100 basis points, according to some estimates), such risk-shifting has also helped prevent a repeat of the savings and loan debacle of the 1980s.

Futures, options, and the practice of risk management with derivatives in general continue, of course, to have a public relations problem—one that stems mainly from the fact that derivatives are used by “speculators” as well as “hedgers.” But economists know that speculators serve a purpose: Besides keeping markets “efficient” by channeling information rapidly into prices, they also help supply the liquidity essential to these markets. And, as Miller argues further, the widespread charges that index futures and options were the cause of growing stock price volatility in the 1980s (including the “crash of 1987”) have been contradicted by a growing weight of academic evidence. In short, popular indictments of the “new instruments” confound the messenger with the message. When price volatility shows up within the system, it is largely the reflection of fundamental events. Index futures, options, and other derivatives are simply methods that allow companies and investors to cope with the volatility.

In “The Evolution of Risk Management Products” (chapter 2), Waite Rawls and Charles Smithson point to sharp increases in uncertainty about oil prices and inflation that began in the early 1970s as the main catalyst for the wave of derivatives innovation that followed during the next two decades. In the face of this unprecedented price volatility, capital markets responded by creating new instruments to help investors and corporations in managing their exposures. The 1970s and 1980s saw the introduction of the following:

- futures contracts on foreign exchange contracts, interest rates, metals, and petroleum;
- currency, interest rate, and commodity swaps;
- options on futures and options; and
- hybrid securities combining standard debt issues with option- or forward-like features.

Most of these products, as the authors point out, were not entirely new when they appeared but, rather, were variations of basic instruments, some of which had been around for centuries. What was new, however, was the formation of

active market exchanges that dramatically reduced the costs to individuals and corporations of using such risk management tools.

In “The Revolution in Corporate Risk Management: A Decade of Innovations in Process and Products” (chapter 3), Christopher Culp begins by describing the explosion of corporate risk management programs in the early 1990s as a hasty and ill-conceived reaction by U.S. corporations to the great “derivatives disasters” of that period. Anxious to avoid the fate of Barings and Procter & Gamble, most top executives were more concerned about crisis management than risk management. Many companies quickly installed expensive value-at-risk systems without paying much attention to how such systems fit their specific business requirements. Focused myopically on loss avoidance and technical risk measurement issues, the corporate risk management revolution of the 1990s thus got under way in a disorganized, ad hoc fashion, producing a curious amalgam of policies and procedures with no clear link to the corporate mission of maximizing value.

But as the risk management revolution unfolded over the last decade, the result has been the “convergence” of different risk management perspectives, processes, and products—and along with these developments, a coming together of insurance and capital markets. Culp begins by observing, “Before the 1990s, the worlds of insurance and capital markets were about as far apart as Mozart’s Vienna and the Nashville of the Dixie Chicks.” Insurance companies focused mainly on insuring their corporate clients against property and casualty losses, product liability suits, and other “insurable” events. And with the exception of private placements, the financing of corporate America was the near-exclusive province of commercial and investment banks. Moreover, this divide between insurance and capital markets was mirrored by a corporate structure that included a corporate risk manager who acted pretty much independently of the corporate treasury.

But starting around 2002, insurers like Swiss Re and American International Group (AIG) went into the business of providing their corporate clients with “contingent capital”—sub debt and equity lines of credit, if you will—while capital market investors began offering what amounts to hurricane and earthquake insurance in the form of catastrophe-linked (or “CAT”) bonds. At around the same time, industrial companies began joining banks and other financial institutions in embracing “enterprise-wide risk management,” which requires not only integration of risk management with the corporate treasury but far greater coordination between the finance function and the business operations of the firm. And, as the case of United Grain Growers illustrates (see the case study in Part III of the book), insurance companies have even come up with new “integrated risk management” products that combine protection against financial (e.g., currency and interest rate) risks and conventional insurance risks.

But underlying—and to a large extent driving—these outward forms of convergence is a more fundamental kind of convergence: the integration of *risk management* with corporate finance. As first corporate finance theorists and now practitioners have come to realize, decisions about a company's optimal capital structure, as well as the design of the securities it issues, cannot be made without first taking account of the firm's risks and its opportunities for managing them. Indeed, Culp argues in his chapter that a comprehensive approach to corporate finance must begin with a risk management strategy that incorporates the full range of available risk management products, including new risk finance products as well as well-established risk transfer instruments like interest rate and currency derivatives. The challenge confronting today's chief financial officer is to maximize firm value by choosing the mixture of securities and risk management products and solutions that give the company access to capital at the lowest possible cost.

In short, the function of risk management has now become an integral part of corporate strategic and financial planning. And as if to confirm Culp's argument, Lisa Meulbroek provides, in "A Senior Manager's Guide to Integrated Risk Management" (chapter 4), an enterprise-wide framework that aims to integrate risk management with corporate strategy. As Meulbroek points out at the outset, companies have three basic ways of managing risk: changing operations; adjusting capital structure; and using derivatives to manage any firm-wide net exposures that remain (after the optimal operational and debt structure have been decided on). The word "integration" refers here both to the combination of these three risk management techniques and the aggregation of all risks faced by the firm. In illustrating this functional analysis of integrated risk management, the chapter uses a wide-ranging set of illustrative situations to show how the risk management process influences, and is influenced by, a company's overall strategy and business activities.