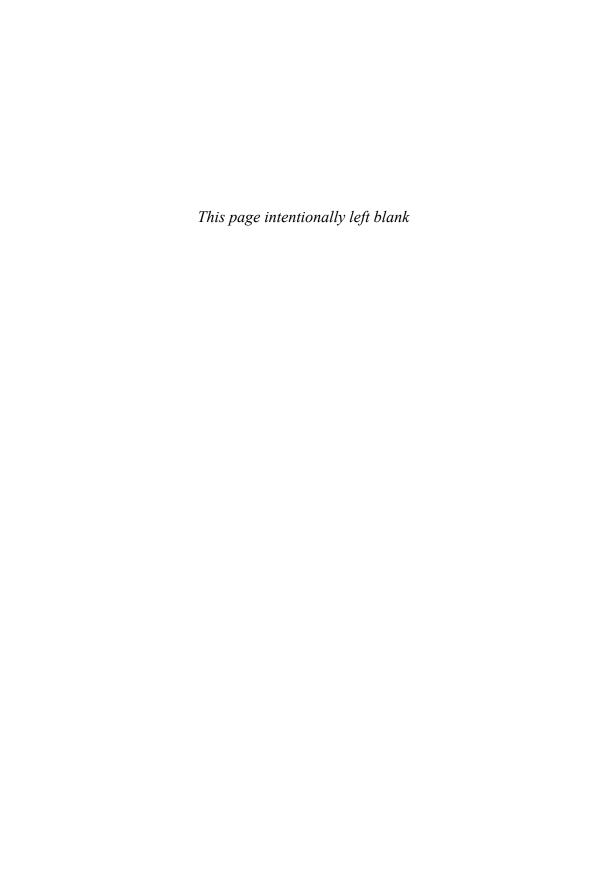
ASWATH DAMODARAN

STRATEGIC RISK TAKING

A FRAMEWORK
FOR
RISK MANAGEMENT

STRATEGIC BISK TAKING

A FRAMEWORK
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RISK MANAGEMENT



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ASWATH DAMODARAN

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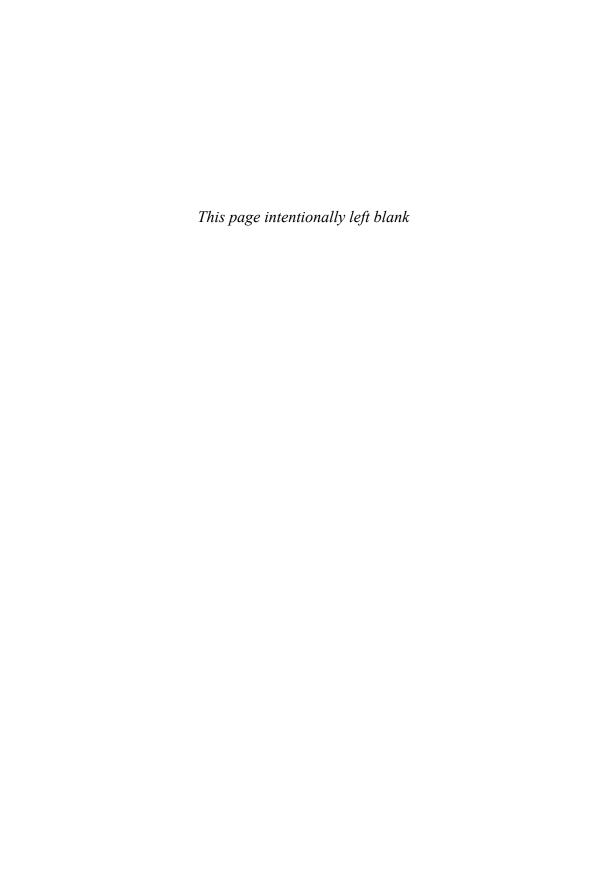
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To my wife, Michele, and my children, Ryan, Brendan, Kendra, and Kiran, who make it all worthwhile.



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ACKNOWLEDGMENTS

To risk takers everywhere.

ABOUT THE AUTHOR

Aswath Damodaran is a professor of finance and David Margolis teaching fellow at the Stern School of Business at New York University. He teaches the corporate finance and equity valuation courses in the MBA program. He received his MBA and PhD from the University of California at Los Angeles. His research interests lie in valuation, portfolio management, and applied corporate finance. He has been published in the Journal of Financial and Quantitative Analysis, the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies. He has written three books on equity valuation (Damodaran on Valuation, Investment Valuation, and The Dark Side of Valuation) and two on corporate finance (Corporate Finance: Theory and Practice, Applied Corporate Finance: A User's Manual). He has coedited a book on investment management with Peter Bernstein (Investment Management) and has written a book on investment philosophies (Investment Philosophies). His newest book on portfolio management is titled Investment Fables and was published in 2004. He was a visiting lecturer at the University of California, Berkeley, from 1984 to 1986, where he received the Earl Cheit Outstanding Teaching Award in 1985. He has been at NYU since 1986 and received the Stern School of Business Excellence in Teaching Award (awarded by the graduating class) in 1988, 1991, 1992, 1999, 2001, and 2007, and was the youngest winner of the University-wide Distinguished Teaching Award (in 1990). He was profiled in Business Week as one of the top 12 business school professors in the United States in 1994.

A ROADMAP FOR UNDERSTANDING RISK

his book is written for three very diverse and different audiences—people who have to manage and make the big decisions on risk (risk managers), analysts and others whose job it is to assess risk (risk assessors), and students of risk who are interested in getting a perspective on how the thinking on risk has evolved over time.

The study of risk has its deepest roots in economics and insurance. For centuries, researchers have attempted to grapple with the basic question of what risk is and how to measure risk aversion. Chapters 1 through 4 represent my attempt to give some historical perspective on how our thinking has evolved over the past few centuries, with a healthy dose of what psychologists have discovered in recent years about how human beings react to risk. In particular, these studies find that human beings are neither as rational nor as easy to categorize when it comes to behavior when confronted with risk as traditional economists had assumed them to be. Although much of this work would usually be categorized as behavioral economics or finance, understanding the findings is the first step to managing risk.

The next four chapters (Chapters 5–8) look at how risk assessment techniques have evolved over time. Chapter 5 has its roots in portfolio theory and examines ways in which we can adjust the value of risky assets for that risk. Chapter 6 borrows heavily from the decision sciences and statistics and discusses ways in which probabilistic approaches can be used to evaluate risk. Chapter 7 takes a closer look at value at risk (VaR), an extension of the probabilistic approach that has acquired a substantial following particularly in commercial and investment banks. Chapter 8 returns to financial theory and looks at how extensions of option pricing models can be used to incorporate the potential upside from risk exposure.

The last four chapters of this book represent an attempt to meld traditional finance and corporate strategy to arrive at a complete story for risk management, which goes beyond just risk hedging (which has been the finance focus) or competitive advantages (which has been the strategic imperative). These chapters represent the most innovative part of

this book, because they attempt to bring together analyses and insights from different functional areas into a big picture of risk management.

The three groups—economists, risk assessors, and risk managers—have different skills and interests, and the tension shows in the book, with each part of the book reflecting these differences. Each group will find a portion of the book most attuned to their interests with the other parts representing more of a hike into unfamiliar but rewarding territory.

This book is modular and can be read in parts. In other words, there is little in the first eight chapters that I draw on in the last four chapters. Much as I would love to believe that you will buy this book and read it cover to cover, I am a realist. Given your time constraints and interests, you may skip through sections to get to the parts you want to read. In other words, if you are already familiar with risk assessment tools and are more interested in the big picture of risk management, skip forward to Chapter 9. If, on the other hand, you are more interested in risk assessment and how the different approaches fit together, you can browse through Chapters 5 through 8. Having said that, there is value added to looking at the parts not specifically aimed at you. In other words, risk assessors and analysts will be able to do their jobs better if they understand how what they do (from risk adjusting discount rates to simulations) fits into the big picture of risk management. At the same time, risk managers will be able to define what risk assessments they need if they can see the whole array of choices. Finally, economists studying risk aversion may gain from knowing the practical issues facing both risk assessors and risk managers. As I note, there is an extraordinary number of basic and critical questions that are unanswered in the theory.

There are excellent books and papers in each of the three areas right now, but they focus on one of the three, largely because different disciplines have been involved in each one: traditional economics and behavioral economics for the first part, corporate finance for the second, and corporate strategy for the third. I have tried to bridge the different functional areas across this book. It is entirely possible that people in any one of these functional areas will view what I say (in the section directed at them) as too simplistic or already well established, but I hope I have been able to bring insights into each of the three areas from being aware of the other two.

I do not claim that anything in this book, standing by itself, is new and revolutionary. In fact, I will concede that each chapter covers a topic that has been covered in more depth elsewhere, with entire books dedicated to some topics; there are several books on real options and quite a few on VaR, for instance. What I think is lacking in the areas of risk management is a spanning of work done in different areas with a link to practical risk management. Consequently, I used my own biased perspectives to try to create a narrative that would be useful to a decision maker involved in risk analysis and management. I hope you find it useful.

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