INTRODUCTION

The current volume in the *Research in Finance* series features an international set of contributors. The overall theme of the volume is a timely topic capturing one of the leading issues of the year: coping with "systemic" risk.

Sarah von Helfenstein (of Braver PC, a professional services firm near Boston, Massachusetts) addresses real options within economic systems. This chapter offers very interesting insights into the so-called systemic risks within global financial markets. Instead of tying these risks into accounting issues, this chapter argues that the systemic risks arise from rational exercise of the various real options that are inherently present within a global system of inter-related financial players (including state-sponsored and private players). Certain patterns of option exercise could manifest symptoms consistent with so-called systemic failure.

The incoming series editor, John Kensinger (University of North Texas, USA), who has been involved in developing real options tools for several decades, offers the case of decisions about creation and utilization of shell space as a means of gaining insight into how non-profit organizations use the real options approach. His coauthor, Stanley Crawford (an administrator in the Richardson, Texas Independent School System who is working toward his doctorate in education with a minor in finance) offers valuable insights into the different criteria that influence decisions in secondary education organizations (and other non-profit entities), compared with similar decisions in business organizations. Shell space is created during new construction when spaces are enclosed from the elements but with interiors left unfinished, often with plumbing and heating, ventilation, and air conditioning systems not fully operational. Such shell space offers an option for later expansion of useable space at lower cost than new construction would require. Acquiring this option to expand is a classic case of buying a real option with clearly identifiable underlying asset (the potential for additional finished space) and readily measureable exercise price (the cost of completion). Options to defer choices until more information becomes available, plus options to abandon with partial recovery of capital may also be present.

In the case of a business, the decisions about acquisition and utilization of such options would be based on market value maximization. In the case of a

school system, hospital, or other non-profit organization, a major concern is holding the cost of adding new space from increasing strongly. Management motivation may also be different, with concern about reducing the difficulty of getting approval for expansion in future years. Therefore, compared with business executives, non-profit administrators have incentives to spend more on the acquisition of expansion options, while exercising expansion options earlier, and exercising abandonment options later (or not at all).

In Chapter 3, a team of accounting professors and a finance professor offer new evidence that traditional accounting "indicators" of impending financial distress may not work well at predicting difficulties. This team consists of Syou-Ching Lai, Hung-Chih Li, (accounting professors at the Graduate Institute of Finance and Banking, National Cheng Kung University, Tainan, Taiwan), James A. Conover (a finance professor and former department chair at the University of North Texas, Denton, Texas, USA), and Frederick Wu (an accounting professor and former chair of the Accounting Department at the University of North Texas). They examine statistical tools used to foresee financial distress, finding that the established tools have difficulty reliably predicting financial distress. They offer insight into the difficulties analysts have experienced recently in their efforts to anticipate the financial crisis. The difficulties they reveal in the efforts to anticipate financial distress show the flaws present in any hope of gaining early warning from accounting data to avert "systemic" shortfalls.

Then, the outgoing series editor, Andrew H. Chen (Southern Methodist University, USA), with coauthors Jack Penm and R.D. Terrell (College of Business and Economics, The Australian National University), offer new insight into recent economic upheavals. They examine the time series interactions of gross domestic product and industrial production, with the utilization and consumption of important metals such as copper and steel. They find very worthwhile insights not just from data about major industrial economies but also several emerging economies.

Helen Xu (Holy Names University, Oakland, California) offers new evidence that crude oil prices consistently display negative correlation with common stock. Thus, crude oil offers improved diversification when it is included in a portfolio with stock. She lays out a simple procedure using futures contracts so that ordinary investors could garner the various benefits that are available for bulk dealers in physical oil. These findings offer significant insight for investors trying to decide how to achieve better diversification during periods of economic turmoil.

The last three chapters have derivatives and stock market indices in common. Eric Lin (California State University, Sacramento) investigates

what happens to a stock when it is brought into a major index such as the S&P 500 or removed from the index. When a stock is in the index, it is subjected to all of the influences that result when arbitrage traders buy the index and sell the individual stocks in the correct proportions to offset the risk inherent in holding the equities (or conversely, sell the index and buy the individual shares). Eric develops clear evidence for a volume effect and a volatility effect. When stocks are included in the index, trading volume increases and variability of returns shifts slightly (but the reverse does not occur when stocks are removed from the index). Although there is a small and statistically significant shift in beta (the measure of market risk) when stocks enter the index, this beta shift is so small that it is not economically significant. So it can be said that market-adjusted volatility does not increase. These results should be reassuring for investors who might be fearful about the rationality of equity markets in the presence of derivatives.

Jonathan Batten (of the Hong Kong University of Science & Technology, and Macquarie Graduate School of Management, Sydney, Australia) offers new insights into the yield difference between a US Treasury bond and a swap of equivalent maturity. He and coauthors Han-Lun Chung (Hong Kong Polytechnic University) and Wai-Sum Chan (Chinese University of Hong Kong) analyze how the swap spread is affected by macroeconomic sentiment – such as inflation expectations or business cycle effects. During periods of economic downturn, spreads typically widen due to portfolio rebalancing into Treasury bonds and away from riskier instruments. This chapter could be very interesting for readers seeking better insight into current economic difficulties.

In the closing chapter, we hear more about stock index products from Guanghua Cao (recent graduate of the doctoral program in applied mathematics at Southern Methodist University, Dallas, Texas), Andrew Chen (Distinguished Professor of Finance at Southern Methodist University, Dallas, Texas), and Zhangxin Chen (Schulich School of Engineering, University of Calgary, Canada). They focus on variable annuities and equity-indexed annuities, which have embedded put and call options. Analyzing these embedded options from an engineering perspective, they find an optimum product mixture of those contracts for insurance companies (optimal in the sense of facilitating the deployment of capital in the most efficient manner).

John W. Kensinger
Series Editor