Summary

Introduction

Chapter 1: Risks and risk management for hedge funds, Lars Jaeger
Lars Jaeger lays out the special challenges of hedge fund risk management and introduces an integrated risk management approach, explaining how this interacts with the overall investment process for a hedge fund portfolio (for example in a fund of funds). He elaborates on the necessary requirements for proper hedge fund portfolio and risk management, in particular the subjects of transparency and liquidity.

Part I: Hedge fund risk

Chapter 2: Hedge fund risk, Alexander M. Ineichen
Alexander M. Ineichen contrasts the risks of hedge funds, and approaches to managing them, with traditional risk measures and risk management techniques. He discusses, among other issues, absolute versus relative risk measures, asymmetric returns, and systematic versus unsystematic risks in hedge funds.

Chapter 3: Understanding return sources of hedge funds and private equity investments, Lars Jaeger and Patrik Säfvenblad
Lars Jaeger and Patrik Säfvenblad explain how hedge funds and private equity funds earn large parts of their returns by assuming systematic risks, risks that can be readily analysed and understood by investors. They further discuss the implications of their return source analysis for investors and portfolio managers.

Chapter 4: Measuring risk in hedge fund portfolios, John St Hill
John St Hill discusses various risk and performance measurement issues for hedge funds. His chapter focuses on the pre-investment risk measurement problems faced by investors who wish to purchase hedge funds.

Chapter 5: The risk in hedge fund strategies: alternative alphas and alternative betas, William Fung and David Hsieh
William Fung and David Hsieh outline the development of asset-based style (ABS) factor models for hedge fund risk and return sources. They present empirical results on ABS factors, and explain the application of ABS factors in portfolio analysis and risk management of hedge fund portfolios.

Chapter 6: Funds of hedge funds, Sohail Jaffer
Sohail Jaffer shares some insights and perspectives on the fast-growing proliferation of funds of hedge funds; their establishment and value-added, evolving institutional investor demand; and concerns relating to investment and risk transparency, liquidity, leverage, disclosures, and reporting.

Chapter 7: Due diligence, Leslie Rahl
Leslie Rahl illustrates the key issues in a due diligence process for hedge fund managers. She explains how successful due diligence must be integrated into the investment management process, and that it needs to occur both before making an investment and on an ongoing basis.

Chapter 8: Convertible arbitrage strategy, William Feingold
William Feingold summarises how convertible arbitrage strategies work and elaborates on the risks involved. Some of these are fairly obvious, but many are subtler.

Chapter 9: Fixed income arbitrage, Michael Pintar
Michael Pintar explains the fixed income arbitrage strategies, some of the risks pertaining to these strategies and how to mitigate them. His chapter also explores different approaches that can be taken to minimise some risks inherent in fixed income arbitrage portfolios.

Chapter 10: Managing risks of long/short equity strategies, Tolga Demir
Tolga Demir walks the reader through the basics of general long/short investing, identifies the main sources of risk and illustrates how to monitor them. He touches on long/short equity, short selling, equity market neutral, statistical arbitrage and merger arbitrage.

Chapter 11: Global macro and managed futures strategies, Patrik Säfvenblad
Patrik Säfvenblad gives an overview of the problems that face an investor wishing to invest in global macro and managed futures. He discusses some of the main trading approaches that should help investors with due diligence, risk characterisation and performance evaluation.

Chapter 12: Trend following: performance, risk and correlation characteristics, Michael Rulle
Michael Rulle discusses how trend following achieves positive performance and why it should continue to be a viable strategy. He discusses, in particular, its empirical return and volatility characteristics, return sources, and correlation structure. Michael points out how these are vital elements for the decision-making process of constructing hedge fund portfolios with trend-following strategies.

Chapter 13: The risks of commodity investing, Hilary Till and Joseph Eagleeye
Hilary Till and Joseph Eagleeye cover investing in commodities through futures contracts. They describe the unique sources of risk and return for such investments, and discuss the factors that one should take into consideration before deciding upon how much of their portfolio should be in commodities.

Part II: Private equity risk

Chapter 14: Quantitative private equity risk management, André Frei and Michael Studer
André Frei and Michael Studer describe some of the distinctive characteristics of private equity funds and their associated cash flows. They discuss the various private equity risks and the major challenges in managing them, and elaborate specifically on the problem of capital commitment and over-commitment that has proven particularly nettlesome in private equity investments.

Chapter 15: Risk management for private equity funds of funds, Bradley Atkins and Mario Giannini
Bradley Atkins and Mario Giannini discuss the structure of private equity funds of funds and methods to manage risks throughout the investment process. They explain some of the unique challenges in measuring and managing the associated risks.

Chapter 16: The risks of mezzanine, Martin Conder
Martin Conder describes the return sources and risks of leveraged buy-out transactions. He elaborates on key issues when making investment decisions and mitigating risks. He thereby points out some of the unique challenges and opportunities of this type of private equity investment.

Chapter 17: Risks of venture capital, Sir David Cooksey
Sir David Cooksey describes the details of the investment and risk management process for venture capital investments, and elaborates on key criteria that a venture capitalist should require to be satisfied by potential investee companies before he commits himself to an investment.

Chapter 18: Understanding and managing risk in leveraged buy-out fund investing, William Schmidt
William Schmidt describes the return sources and risks of leveraged buy-out transactions. He elaborates on key issues for making investment decisions and mitigating risks.

Part III: The perspective of investors, consultants and third parties

Chapter 19: The fiduciary's perspective on alternative assets and institutional risk management, Mark Anson
Mark Anson highlights several risks associated with hedge fund investing and examines examples of concentrated investment portfolios, as well as hedge fund performance during periods of market turmoil and fraud. He points out that diversification, reasonable expectations and ongoing due diligence are integral parts of successful risk management. He further discusses a common-sense process that a plan fiduciary should implement as part of its risk management programme.

Chapter 20: A consultant's perspective on hedge fund and private equity risk, Geoff Singleton
Geoff Singleton describes a consultant's perspective on the investment characteristics of hedge funds and private equity, and specifically elaborates on the function and role of alternative investments in the global portfolio of pension funds.

Chapter 21: The perspective of consultants on hedge fund and private equity risk, Alan H. Dorsey
Alan H. Dorsey focuses on endowments and foundations, which have been early adopters of AIS, and explains best practice for managing risk from the point of view of a consultant. He discusses some distinct differences between the approach of foundations and endowments in their incorporation of AIS compared with other types of organisations.

Chapter 22: Specific issues for pension funds and other institutional investors, Markus Schaub
Markus Schaub describes how requirements from a new but increasingly large class of institutional investors are starting to change the face of the industry, as hedge fund managers are confronted with new demands for disclosure, more clearly defined risk profiles, independent risk management, greater transparency about performance attribution and return sources, and higher liquidity.

Chapter 23: Hedge funds: special issues for financial institutions, Dr Franz Feldmann
Franz Feldmann shows the major challenges financial institutions face by adding hedge funds to the product and service offer. He highlights the strategic decision process that the financial institution should go through, with a specific focus on risk management issues.

Chapter 24: Hedge fund and private equity securitisation, Michael Romer, Michael Moise and Richard Hrvatin
The authors describe the process of securitising hedge fund and private equity portfolios. They look at how the structured finance market analyses and tries to mitigate the various risks of alternative investment funds of funds.

Part IV: Risk management techniques

Chapter 25: Simulation-based risk management systems for hedge funds, Curt Burmeister, Helmut Mausser and Dan Rosen
The authors propose a simulation-based system, which values financial instruments over a set of possible future scenarios, as an effective way to meet increasing demands on a risk management system. They discuss specific examples for non-normal pay-off structures in option strategies, dynamically changing trading models, hedging techniques for callable convertible bonds and emerging market securities.

Chapter 26: Risk measurement for hedge funds, Allan M. Malz
Allan M. Malz provides an overview of the risks in hedge funds and distinguishes those that can be identified via quantitative and statistical techniques from those that can be identified by due diligence and judgemental criteria. He also touches on the subject of transparency and discusses the usefulness of prevailing risk measurement approaches.

Chapter 27: Style drifts: monitoring, detection and control, Pierre-Yves Moix
Pierre-Yves Moix discusses the importance of style and strategy drift monitoring within the context of hedge fund investing. He points out how the analysis of main rationales for potential style drifts aids the implementation of adequate approaches for the monitoring, detection and control of style and strategy drifts.

Chapter 28: VaR, stress testing and related risk management techniques for hedge funds, Paul Embrechts and Hansjörg Furrer
Paul Embrechts and Hansjörg Furrer discuss the merits and limitations of Value-at-Risk (VaR) and other risk measures in the realm of hedge funds. Their discussion elaborates on the subjects of dependence, nonlinearities and heavy-tailedness of risk factors, elliptical distributions and stress tests.

Chapter 29: Performance and risk measurement challenges for hedge funds: empirical considerations, Peter Blum, Michel Dacorogna and Lars Jaeger
Peter Blum, Michel Dacorogna and Lars Jaeger discuss various alternative measures of risk and describe their properties, particularly in extreme situations, or so-called 'tail events'. They discuss the importance of unstable correlations and introduce some concepts for measuring dependences as they apply to hedge funds. Their chapter also provides some empirical estimates of 'tail risk' measures for various hedge fund strategies.

Part V: Legal and regulatory issues

Chapter 30: Legal and fiscal risks in structuring and selling hedge funds in Germany, Achim Pütz
Achim Pütz describes the efforts of developing a practicable and competitive regulatory structure for a new and unknown asset class such as hedge funds – one that is suited to sellers and prospective buyers alike. He explains the considerable legal and fiscal risks involved by elaborating the example of the changing regulatory framework in Germany.

Chapter 31: Regulatory issues for hedge funds, Simon Firth, Victoria Schonfeld and Isha Youhas
Simon Firth, Victoria Schonfeld and Isha Youhas look at hedge fund regulatory issues and developments, first in general terms, and then in the United Kingdom, the United States and the EU. They discuss how investors have become increasingly alert to the risks in hedge fund investing and seek greater transparency in the investment process, as well as disclosure that is clear and not misleading.

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[1] Peter Bernstein, *Against the Gods – The Remarkable Story of Risk*, New York, John Wiley & Sons, 1996.

[2] Following the recent economic downturn, asset inflow to private equity dropped to only six times the 1991 amount in 2002. However, due to the capital overhang from excessive fund-raising in the late 1990s, investments by private equity funds reached levels close to the peak even in 2001 and 2002.

[3] Concerning liquidity: while most investor like to have liquidity, one should distinguish between liquidity provided by the fund manager and the market liquidity of the instruments traded. While hedge funds generally operate in rather liquid markets, private equity investments, by their nature, cannot be redeemed quickly without a significant price impact.

[4] See also the results of the survey conducted by the Barra Strategic Consulting Group published in *Fund of Hedge Funds – Rethinking Resource Requirements*, Barra Internal Publication, September 2001.