

Managing Pension Liability Credit Risk: *Maintaining a Total Portfolio Perspective*

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Widening credit spreads during the 2007–2009 credit crisis significantly impacted pension fund liabilities and funding ratios. U.S. interest rates fell over 100 basis points (bps) in the 15-month period ending September 30, 2009, while pension discount rates rose. Pension discount rates increased over this period because corporate bond credit spreads widened over 200 bps—more than offsetting the drop in interest rates—and pension liabilities are discounted using yields on high-quality corporate bonds. Rising pension discount rates caused the present value of pension liabilities to decrease, boosting pension funding ratios as equity markets fell severely. Plan sponsors who implemented liability hedges via interest rate swaps and/or Treasuries saw their liability hedge appreciate in value as interest rates fell. Their liability has actually decreased in value, however, as corporate bond yields and the corresponding pension discount rates rose, causing, in this case, a liability-hedging gain.

The widening of credit spreads during the credit crisis has raised a very important question for those who have implemented a liability-driven investing (LDI) solution or are considering LDI: How should a plan sponsor manage the risk of corporate bond credit spreads widening or narrowing? I believe many practitioners have taken too narrow a view of this question and have evaluated liability credit

risk as a pure liability-hedging issue. The main point of this article is that in order to construct efficient LDI solutions and avoid pure funding ratio outcomes, it is essential to view the liability credit risk from a total portfolio perspective (inclusive of the “risky” asset component (i.e., equities) of an LDI solution).

This article is not an endorsement for including a credit spread in pension liability discount rates. I agree with the economists who argue that there is no economic justification for doing so. In fact, incorporating a credit spread leads to chronic underfunding on a riskless basis and, as discussed in detail throughout this article, makes it more difficult to hedge liability discount rate risk. However, the current regulatory environment does utilize a credit spread in pension discount rates, and this article should be viewed as a guide for how best to manage credit spread risk for plan sponsors who choose to incorporate it.

UNDERSTANDING PENSION LIABILITY DISCOUNT RATE RISK

I start with an in-depth discussion of pension liability discount rate risk. The present value of a liability is determined in two steps—establishing the cash flow profile of expected benefit payments and then discounting the future payments at the appropriate discount rate. Liability return is the change in the present value of liabilities from one period to the

Optimality In Pension Funding The Risk And Return Perspective

**David Blitzstein, Olivia S.
Mitchell, Stephen P. Utkus**



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Pension Fund Risk Management Marco Micocci,Greg N. Gregoriou,Giovanni Batista Masala,2010-01-25 As pension fund systems decrease and dependency ratios increase risk management is becoming more complex in public and private pension plans Pension Fund Risk Management Financial and Actuarial Modeling sheds new light on the current state of pension fund risk management and provides new technical tools for addressing pension risk from an integr **Risk**

Management for Pension Funds Francesco Menoncin,2021-02-09 This book presents a consistent and complete framework for studying the risk management of a pension fund It gives the reader the opportunity to understand replicate and widen the analysis To this aim the book provides all the tools for computing the optimal asset allocation in a dynamic framework where the financial horizon is stochastic longevity risk and the investor s wealth is not self financed This tutorial enables the reader to replicate all the results presented The R codes are provided alongside the presentation of the theoretical framework The book explains and discusses the problem of hedging longevity risk even in an incomplete market though strong theoretical results about an incomplete framework are still lacking and the problem is still being discussed in most recent literature

Sovereign Wealth Funds Abdullah Al-Hassan,Mr.Michael G Papaioannou,Martin Skancke,Cheng Chih Sung,2013-11-11 This paper presents in a systematic normative manner the salient features of a SWF s governance structure in relation to its objectives and investment management that can ensure its efficient operation and enhance its financial performance In this context it distinguishes among the various governing bodies and analyzes key aspects of the investment policy and setting of the risk tolerance level in order to ensure consistent risk bearing capacity and greater accountability Further it discusses the important role of SWFs in macroeconomic management and the need for close coordination with other macroeconomic and financial policies as well as their role in global financial stability

Restructuring Retirement Risks David Blitzstein,Olivia S. Mitchell,Stephen P. Utkus,2006-08-03 Highlighting retirement security as a major policy concern this book addresses the question What are the risks rewards in pensions what paths can stakeholders chose to solve these problems It deals with employees needs expectations employers intentions realizations policymakers efforts to resolve the many challenges *The Oxford Handbook of Pensions and Retirement*

Income Gordon L. Clark,Alicia H. Munnell,J. Michael Orszag,2006-07-20 This handbook draws on research from a range of academic disciplines to reflect on the implications for provisions of pension and retirement income of demographic ageing it reviews the latest research policy related tools analytical methods and techniques and major theoretical frameworks ,

Hedge Funds and Financial Markets Julian Holler,2012-01-02 Hedge funds have started to play an important role in financial markets during the last decade They have affected important aspects of financial intermediation such as asset allocation decisions and corporate governance Julian Holler provides an excellent theoretical and empirical analysis of these issues His analysis offers strong support that hedge funds enable investors to improve asset allocation decisions

Consequently hedge funds are an interesting alternative asset class for institutional investors In contrast to results for the U S capital market his research provides evidence that hedge fund activism does not persistently increase the value of firms in Germany This result suggests that the institutional environment has a strong influence on the effectiveness of corporate governance mechanisms

Perspectives on Investment Management of Public Pension Funds Frank J. Fabozzi, CFA, 1999-02-15 Perspectives on Investment Management of Public Pension Funds covers all aspects of the management of public pension funds Experts in the field provide practical guidelines for managers on the implications of investment strategies behind these funds

Corporate Risk Management Donald H. Chew, 2008 More than thirty leading scholars and finance practitioners discuss the theory and practice of using enterprise risk management ERM to increase corporate values ERM is the corporate wide effort to manage the right hand side of the balance sheet a firm s total liability structure in ways that enable management to make the most of the firm s assets While typically working to stabilize cash flows the primary aim of a well designed risk management program is not to smooth corporate earnings but to limit the possibility that surprise outcomes can threaten a company s ability to fund its major investments and carry out its strategic plan Contributors summarize the development and use of risk management products and their practical applications Case studies involve Merck British Petroleum the American airline industry and United Grain Growers and the conclusion addresses a variety of topics that include the pricing and use of certain derivative securities hybrid debt and catastrophe bonds Contributors Tom Aabo Aarhus School of Business Alb ric Braas and Charles N Bralver Oliver Wyman Keith C Brown University of Texas at Austin David A Carter Oklahoma State University Christopher L Culp University of Chicago Neil A Doherty University of Pennsylvania John R S Fraser Hyrdo One Inc Kenneth R French University of Chicago Gerald D Gay Georgia State University Jeremy Gold Jeremy Gold Pensions Scott E Harrington University of South Carolina J B Heaton Bartlit Beck Herman Palenchar Joel Houston University of Florida Nick Hudson Stern Stewart Christopher James University of Florida A John Kearney and Judy C Lewent Merck Robert C Merton and Lisa K Meulbroek Harvard Business School Merton H Miller University of Chicago Jouahn Nam Pace University Andrea M P Neves CP Risk Management LLC Brian W Nocco Nationwide Insurance Andr F Perold Harvard Business School S Waite Rawls III Continental Bank Kenneth J Risko Willis Risk Solutions Angelika Sch chlin University of St Gallen Betty J Simkins Oklahoma State University Donald J Smith Boston University Clifford W Smith Jr University of Rochester Charles W Smithson Continental Bank Ren M Stulz Ohio State University D S All the articles that comprise this book were first published in the Journal of Applied Corporate Finance Morgan Stanley s ownership of the journal is a reflection of its commitment to identifying outstanding academic research and promoting its application in the practicing corporate and investment communities

Toward Better Regulation of Private Pension Funds Hemant Shah, 1997

Pension Fund Investment Management Frank J. Fabozzi, 1997-08-15 Every investment professional involved with the management of pension funds will embrace this wide ranging handbook Consisting of articles by an

esteemed panel of contributors it covers the basics as well as the latest on pension fund governance operations and value creation

Perspectives on Equity Indexing Frank J. Fabozzi, CFA, 2000-06-15 This is the second edition of Professional Perspectives on Indexing Contents include the active versus passive debate Standard and Poor's U.S. equity indexes medium and small capitalization indexing global equity index families investing in index mutual funds and more

Optimal Financial Decision Making under Uncertainty Giorgio Consigli, Daniel Kuhn, Paolo Brandimarte, 2016-10-17 The scope of this volume is primarily to analyze from different methodological perspectives similar valuation and optimization problems arising in financial applications aimed at facilitating a theoretical and computational integration between methods largely regarded as alternatives Increasingly in recent years financial management problems such as strategic asset allocation asset liability management as well as asset pricing problems have been presented in the literature adopting formulation and solution approaches rooted in stochastic programming robust optimization stochastic dynamic programming including approximate SDP methods as well as policy rule optimization heuristic approaches and others The aim of the volume is to facilitate the comprehension of the modeling and methodological potentials of those methods thus their common assumptions and peculiarities relying on similar financial problems The volume will address different valuation problems common in finance related to asset pricing optimal portfolio management risk measurement risk control and asset liability management The volume features chapters of theoretical and practical relevance clarifying recent advances in the associated applied field from different standpoints relying on similar valuation problems and as mentioned facilitating a mutual and beneficial methodological and theoretical knowledge transfer The distinctive aspects of the volume can be summarized as follows Strong benchmarking philosophy with contributors explicitly asked to underline current limits and desirable developments in their areas Theoretical contributions aimed at advancing the state of the art in the given domain with a clear potential for applications The inclusion of an algorithmic computational discussion of issues arising on similar valuation problems across different methods Variety of applications rarely is it possible within a single volume to consider and analyze different and possibly competing alternative optimization techniques applied to well identified financial valuation problems Clear definition of the current state of the art in each methodological and applied area to facilitate future research directions

Pension Revolution Keith P. Ambachtsheer, 2011-07-05 Praise for Pension Revolution When Keith Ambachtsheer puts his keen mind to work on a problem watch out Here he exposes today's fragile arrangements for the most serious social dilemma of our times financing retirement Then he provides a compelling and powerful set of solutions His writings are essential reading for all who care about the future of American living standards Peter Bernstein founder and President Peter L. Bernstein Inc. and author of Capital Ideas and Against the Gods This book describes one of the most ingenious inventions in the history of mankind pension funds offering credible promises about old age income It reads like a thriller how can well governed pension funds be created in an imperfect world in which mortals wrestle with foibles and moral shortcomings One of the

world's leading experts on pensions searches for the answer and finds it. Lans Bovenberg, Scientific Director, Network for Studies on Pensions, Aging and Retirement, Tilburg University, The Netherlands. Pension Revolution exposes the inadequacies of current pension systems and persuasively makes the case for the fundamental changes that are needed. It is essential reading for both the pension industry and policymakers.

Elizabeth Bryan, Chair, Investment Committee, Unisuper Management PM Ltd, Australia. Most analyses of complicated issues deal with complexity by simplifying or only looking at one piece part and in doing so provide limited value. In stark contrast, Keith Ambachtsheer boldly wades into the complexity in Pension Revolution to come up with a valuable integrative solution. He is a most welcome revolutionary.

Roger Martin, Dean, Joseph L. Rotman School of Management, University of Toronto, Canada. We have known Keith for over ten years and consistently over that time he has constructively and comprehensively challenged conventional wisdom. He has done this so effectively that many of his initial thoughts have now become universally accepted norms. Such is his energy, however, that he continues to push the boundaries of pension and investment thinking.

Peter Moon, Chief Investment Officer, Universities Superannuation Scheme Ltd, UK. Pension Revolution not only explains the shortcomings of the existing pension system and the underlying design features that have resulted in the current pension upheaval. It also offers thoughtful and creative suggestions for prospective pension design. A must read for anyone interested in the future of retirement finance.

James Poterba, Professor of Economics, Massachusetts Institute of Technology and a member of the TIAA-CREF Board of Trustees. Alternative Investments

CAIA Association, Hossein B. Kazemi, Keith H. Black, Donald R. Chambers, 2016-09-27. In depth Level II exam preparation direct from the CAIA Association. CAIA Level II is the official study guide for the Chartered Alternative Investment Analyst professional examination and an authoritative guide to working in the alternative investment sphere. Written by the makers of the exam, this book provides in depth guidance through the entire exam agenda. The Level II strategies are the same as Level I but this time you'll review them through the lens of risk management and portfolio optimisation. Topics include asset allocation and portfolio oversight, style analysis, risk management, alternative asset securitisation, secondary market creation, performance and style attribution and indexing and benchmarking with clear organisation and a logical progression that allows you to customise your preparation focus. This new third edition has been updated to align with the latest exam and to reflect the current practices in the field. The CAIA designation was developed to provide a standardized knowledge base in the midst of explosive capital inflow into alternative investments. This book provides a single source repository of that essential information tailored to those preparing for the Level II exam. Measure, monitor and manage funds from a risk management perspective. Delve into advanced portfolio structures and optimisation strategies. Master the nuances of private equity, real assets, commodities and hedge funds. Gain expert insight into preparing thoroughly for the CAIA Level II exam. The CAIA Charter programme is rigorous and comprehensive and the designation is globally recognised as the highest standard in alternative investment education. Candidates seeking thorough preparation

and detailed explanations of all aspects of alternative investment need look no further than CAIA Level II *Managing Investment Portfolios* John L. Maginn, Donald L. Tuttle, Dennis W. McLeavey, Jerald E. Pinto, 2010-03-18 A rare blend of a well organized comprehensive guide to portfolio management and a deep cutting edge treatment of the key topics by distinguished authors who have all practiced what they preach The subtitle *A Dynamic Process* points to the fresh modern ideas that sparkle throughout this new edition Just reading Peter Bernstein's thoughtful Foreword can move you forward in your thinking about this critical subject Martin L. Leibowitz Morgan Stanley *Managing Investment Portfolios* remains the definitive volume in explaining investment management as a process providing organization and structure to a complex multipart set of concepts and procedures Anyone involved in the management of portfolios will benefit from a careful reading of this new edition Charles P. Jones CFA Edwin Gill Professor of Finance College of Management North Carolina State University Handbook of Asset and Liability Management Stavros A. Zenios, William T. Ziemba, 2007-08-08 The *Handbooks in Finance* are intended to be a definitive source for comprehensive and accessible information in the field of finance Each individual volume in the series presents an accurate self contained survey of a sub field of finance suitable for use by finance and economics professors and lecturers professional researchers graduate students and as a teaching supplement It is fitting that the series *Handbooks in Finance* devotes a handbook to Asset and Liability Management Volume 2 focuses on applications and case studies in asset and liability management The growth in knowledge about practical asset and liability modeling has followed the popularity of these models in diverse business settings This volume portrays ALM in practice in contrast to Volume 1 which addresses the theories and methodologies behind these models In original articles practitioners and scholars describe and analyze models used in banking insurance money management individual investor financial planning pension funds and social security They put the traditional purpose of ALM to control interest rate and liquidity risks into rich and broad minded frameworks Readers interested in other business settings will find their discussions of financial institutions both instructive and revealing Focuses on pragmatic applications Relevant to a variety of risk management industries Analyzes models used in most financial sectors CFA Program Curriculum 2017 Level III, Volumes 1 - 6 CFA Institute, 2016-08-01 Apply CFA Program concepts and skills to real world wealth and portfolio management for the 2017 exam The same official curricula that CFA Program candidates receive with program registration is now publicly available for purchase CFA Program Curriculum 2017 Level III Volumes 1 - 6 provides complete authoritative guidance on synthesizing the entire CFA Program Candidate Body of Knowledge (CBOK) into professional practice for the 2017 exam This book helps you bring together the skills and concepts from Levels I and II to formulate a detailed professional response to a variety of real world scenarios Coverage spans all CFA Program topics and provides a rigorous treatment of portfolio management all organized into individual study sessions with clearly defined Learning Outcome Statements Visual aids clarify complex concepts and practice questions allow you to test your understanding while reinforcing major content areas Levels I and II

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Optimal Bank Recovery Mr.C. A. E. Goodhart,Miguel A. Segoviano Basurto,2015-09-30 Banks living wills involve both recovery and resolution Since it may not always be clear when recovery plans or actions should be triggered there is a role for an objective metric to trigger recovery We outline how such a metric could be constructed meeting criteria of i adequate loss absorption ii distinguishing between weak and sound banks iii little susceptibility to manipulation iv timeliness v scalable from the individual bank to the system We show how this would have worked in the U K during 2007 11 This approach has the added advantage that it could be extended to encompass a whole ladder of sanctions of increasing severity as capital erodes

Asset and Liability Management Handbook G. Mitra,K. Schwaiger,2011-03-29 Recent years have shown an increase in development and acceptance of quantitative methods for asset and liability management strategies This book presents state of the art quantitative decision models for three sectors pension funds insurance companies and banks taking into account new regulations and the industries risks

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