Stochastic Optimal Control and the U.S. Financial Debt Crisis

Jerome L. Stein
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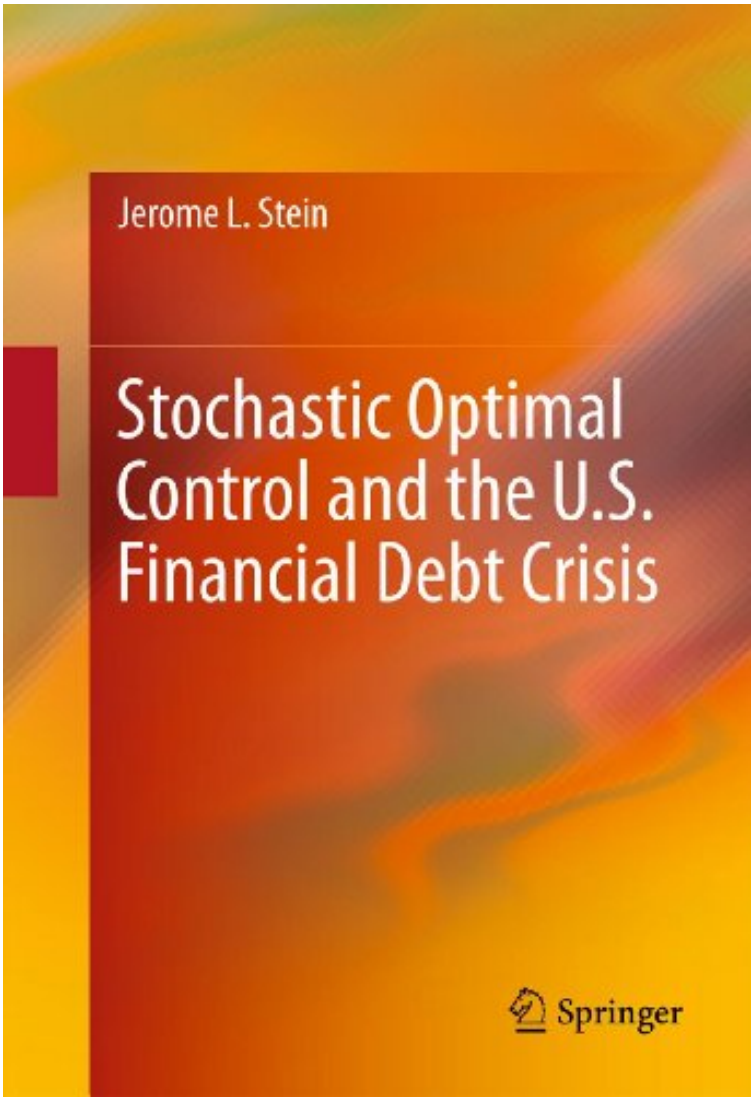

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Jerome L. Stein : Stochastic Optimal Control and the U.S. Financial Debt Crisis before purchasing it in order to gage whether or not it would be worth my time, and all praised Stochastic Optimal Control and the U.S. Financial Debt Crisis:

1 of 1 people found the following review helpful. peter clark cato/Kredit und Kapital review of J.L. SteinBy hadassahPeter Clark (IMF, ret.) Review of Jerome Stein's Stochastic Optimal Control and the U.S. Financial Debt CrisisKredit Kapital, No. 2 2012CATO Journal,Spring/Summer 2012.Peter Clark, Chevy Chase, MarylandAt one point during the recent financial crisis the Queen of England reportedlyasked economists at the London School of Economics a seemingly straightforwardquestion: Why did academic economists fail to foresee the crisis?1 This

question can bebroadened to include central banks, the IMF, and technical specialists on Wall Street("Quants"). Professor Stein's timely book provides a cogent and convincing answer tothis question. He devotes one chapter to why the Fed and the Fund failed to anticipate thecrisis, and another chapter to the failure of the Quants and their mathematical models toproperly measure the risks associated with the new financial instruments which they hadinvented. What sets the book apart from the burgeoning literature on the crisis (whichStein draws on) is that it develops a theoretically well-based measure of optimal debtwhich provides a yardstick against which to compare the actual debt level. As the latterrises significantly above the benchmark, there is a growing risk that the debt has becomeunsustainable, i.e., that a financial bubble has been generated which is increasingly likelyto collapse. Stein applies this approach to show that asset values became vastly out of linewith the fundamentals of the U.S housing market and with the balance sheet of theinsurance and financial firm, AIG. Stein's approach generates an early warning signal ofimpending financial collapse which he also applies to the bubble in agricultural landprices in the 1980s. Stein in addition provides a timely analysis of the (still ongoing in2012) financial crisis in Europe and makes a strong case that it reflected just as muchexcessive private debt as an over-indebted government sector.0 of 0 people found the following review helpful. Rational debt policyBy Carlo D'AddaThis book by Gerome Stein is really remarkable not only for being the most recent fruit of the restless research activity of a great scholar, but also for offering a smart setup in which the post debt crises economic policy discussions should take place. On both sides of the Atlantic it seems today that the unique virtue of governments is balancing public budgets. This book suggests a rational approach to economic policy. Growth and employment are the objectives of a sensible policy, whereas government and foreign deficits must be looked at to assure sustainability over the time.0 of 0 people found the following review helpful. A brilliant ideaBy kunzStochastic Optimal Control and the U.S. Financial Debt CrisisThere are many books on stochastic optimal control and many more (too many, I would say) on the debt crisis, but this is the first (and, for the moment, the only one) book that applies stochastic optimal control to the crisis. As all truly brilliant ideas, the idea at the basis of this book is simple, and can be understood by both mathematicians and economists. This book is a must for both categories.

Stochastic Optimal Control (SOC)mdash;a mathematical theory concerned with minimizing a cost (or maximizing a payout) pertaining to a controlled dynamic processnbsp;under uncertaintymdash;has proven incredibly helpful to understanding and predicting debt crises and evaluating proposed financial regulation and risk management.nbsp;Stochastic Optimal Control and the U.S. Financial Debt Crisisnbsp;analyzes SOC in relation to the 2008 U.S. financial crisis, and offers a detailed framework depicting why such a methodology is best suited for reducing financial risk and addressing key regulatory issues.nbsp; Topics discussed include the inadequacies of the current approaches underlying financial regulations, the use of SOC to explain debt crises and superiority over existing approaches to regulation, and the domestic and international applications of SOC to financial crises.nbsp; Principles in this book will appeal to economists, mathematicians, and researchers interested in the U.S. financial debt crisis and optimal risk management.

From the reviews:ldquo;This book is another piece in recent literature that proposes an early warning system (EWS). hellip; this book serves well as a lsquo;handbook of selected financial crisesrsquo; for those who want to understand better the two recent big crises, the 2008 U.S. crisis and the ongoing Eurozone one. This book is an easy read with minimal mathematics hellip; and ample figures, tables, quotes, and references. Each chapter has its own abstract and references. This makes each chapter individually readable hellip; .rdquo; (Youngna Choi, Mathematical s, March, 2013)ldquo;Stein has written a timely book on the financial crisis emanating from the collapse of the U.S. mortgage market, as well as on the European financial crisis. hellip; It should appeal both to economists and mathematicians interested in how SOC techniques could have been used to provide early warning signals of the recent crises, as well as to those interested in risk management. hellip; the book should also be read by policy makers.rdquo; (Peter Clark, Kredit und Kapital, Vol. 45 (2), 2012)From the Back CoverStochastic Optimal Control (SOC)?a mathematical theory concerned with minimizing a cost (or maximizing a payout) pertaining to a controlled dynamic processnbsp;under uncertainty?has proven incredibly helpful to understanding and predicting debt crises and evaluating proposed financial regulation and risk management.nbsp;Stochastic Optimal Control and the U.S. Financial Debt Crisisnbsp;analyzes SOC in relation to the 2008 U.S. financial crisis, and offers a detailed framework depicting why such a methodology is best suited for reducing financial risk and addressing key regulatory issues.nbsp; Topics discussed include the inadequacies of the current approaches underlying financial regulations, the use of SOC to explain debt crises and superiority over existing approaches to regulation, and the domestic and international applications of SOC to financial crises.nbsp; Principles in this book will appeal to economists, mathematicians, and researchers interested in the U.S. financial debt crisis and optimal risk management.Jerome L. Stein has been an emeritus professor of economics at Brown University since 1993, and has served as a visiting professor of applied mathematics since 1997. He is the author of nine research monographs, and has published over 100 journal articles in such leading publications as American Economic , of Economics and Statistics, Journal of Banking and Finance, and

Contemporary Mathematics.nbsp;He has served on the editorial boards of the Journal of Finance, American Economic , Journal of International and Comparative Economics, and the Journal of Banking and Finance.About the AuthorJerome L. Stein has been an emeritus professor of economics at Brown University since 1993, and has served as a visiting professor of applied mathematics since 1997.nbsp;He is the author of nine research monographs, and has published over 100 journal articles in such leading publications as American Economic , of Economics and Statistics, Journal of Banking and Finance, and Contemporary Mathematics.nbsp; He has served on the editorial boards of the Journal of Finance, American Economic , Journal of International and Comparative Economics, and the Journal of Banking and Finance.