

Many authors have identified the hazards of ignoring event-induced variance in event studies. To determine the practical extent of the problem, we simulate an event with stochastic effects. We find that when an event causes even minor increases in variance, the most commonly-used methods reject the null hypothesis of zero average abnormal return too frequently when it is true, although they are reasonably powerful when it is false. We demonstrate that a simple adjustment to the cross-sectional techniques produces appropriate rejection rates when the null is true and equally powerful tests when it is false. *Journal of Financial Economics*, Vol. 30 (December 1991), pp. 253-72. (Reprinted with permission of the North-Holland Publishing Company).

(20) (*)

RUIN THEORY

Computational Methods in Risk Theory: A Matrix-Algorithmic Approach. by Søren Asmussen (Aalborg University, Denmark) and Tomasz Rolski (Wrocław University, Poland)

This paper is concerned with the numerical computation of the probability $\psi(u)$ of ruin with initial reserve u . The basic assumption states that the claim size distribution is phase-type in the sense of Neuts. The models considered are: the classical compound Poisson risk process, the Sparre Andersen process and varying environments which are either governed by a Markov process or exhibit periodic fluctuations. The computational steps involve the iterative solution of a non-linear matrix equation

$Q = \psi(Q)$ as well as the evaluation of matrix-exponentials $e^{\cdot}$. A number of worked-out numerical examples are presented. *Insurance: Mathematics and Economics*, Vol. 10, No. 3 (December 1991), pp. 259-274. (Reprinted with permission of the North-Holland Publishing Company).

21 (*)

HEALTH CARE ISSUES

Efficacy of Statistical Outlier Analysis for Monitoring Quality of Care. by K. D. Gillis and J. S. Hixson

Researchers have proposed that hospitals with excessive statistically unexplained mortality rates are more likely to have quality of care problems. The U.S. Health Care Financing Administration uses this statistical "outlier" approach to screen for poor quality hospitals. Little is known, however, about the validity of this technique because direct quality measures are difficult to obtain. Monte Carlo methods are employed to evaluate outlier technique performance as parameters of the true mortality process are varied. Results suggest that screening performance is very sensitive to variation in quality related mortality across hospitals, but

insensitive to other factors generally thought to be important. *Journal of Business and Economic Statistics*, Vol. 9, No. 3 (July 1991), pp. 241-52. (Reprinted with permission of the *Journal of Economic Literature*).

22 LxJ

GOVERNMENT INSURANCE PROGRAMS

Is Fairly Priced Deposit Insurance Possible?, by Yuk-Shee Chan (University of Southern California, Stuart I. Greenbaum (Northwestern University) and Anjan V. Thakor (Indiana University)

We analyze risk-sensitive, incentive-compatible deposit insurance in the presence of private information and moral hazard. Without deposit-linked subsidies it is impossible to implement risk-sensitive, incentive-compatible deposit insurance pricing in a competitive, deregulated environment, except when the deposit insurer is the least risk averse agent in the economy. We establish this formally in the context of an insurance scheme in which privately informed depository institutions are offered deposit insurance premia contingent on reported capital: the result holds for alternative sorting instruments as well. This suggests a contradiction between deregulation and fairly priced, risk-sensitive deposit insurance. *The Journal of Finance*, Vol. XLVII, No. 1 (March 1992), pp. 227-45. (Reprinted with permission of *The Journal of Finance*).

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SOCIAL INSURANCE

The Role of Unemployment Insurance in an Economy with Liquidity Constraints and Moral Hazard, by Gary D. Hansen (University of California, Los Angeles) and Ayse Imrohoroglu (University of Southern California)

The potential welfare benefits of unemployment insurance, along with the optimal replacement ratio, are studied using a quantitative dynamic general equilibrium model. To provide a role for unemployment insurance, agents in our economy face exogenous idiosyncratic employment shocks and are unable to borrow or insure themselves through private markets. In the absence of moral hazard, replacement ratios as high as .65 are optimal and the welfare benefits of unemployment insurance are quite large. However, if there is moral hazard and the replacement ratio is not set optimally, but is instead set to an empirically plausible value, the economy can be much worse off than it would be without unemployment insurance. *Journal of Political Economy*, Vol. 100, No. 1 (February 1992), pp. 118-41. (Reprinted with permission of the *Journal of Political Economy*).

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