The authors then study in more detail the economic theory of demand for annuities. A simple example (assuming no inflation, pensioners that can only live one or two more periods, no bequest motive, only bonds and annuities available for investment) illustrates Yaari's main result that risk-averse individuals faced with uncertain duration of life should fully annuitize their portfolio, if annuities are sold at actuarially fair prices in a perfect annuity market – a market where a full set of assets with life-contingent returns is available for every maturity without transaction costs. Readers unfamiliar with Yaari's result may regret that no formal proof of the theorem is provided. This main theorem may have little value in practice given the facts that perfect annuity markets do not exist (temporary and deferred annuities are rarely sold), and that annuities prices include expense and profit loadings.

The concept of money's worth, interesting as it is, fails to take into account annuitants' aversion to risk and spending preferences as a function of time. To incorporate these elements in the reasoning, models based on utility theory are introduced to show the value of annuities using different assumptions of preferences. They also show the limitations of utility theory, particularly in the case of time-additive separability and geometric discounting. For one thing, Yaari's theorem suggests that demand for annuities should be high, even if some assumptions are not realistic. In practice, annuity markets around the world are fairly small. Explanations for this discrepancy between theory and observations ("the annuity puzzle") include: there may be valid reasons to spend more early in retirement than later; annuities are usually backed by bonds that earn low rates of return compared with equities; most governments provide a basic survival annuity to all retirees; adverse selection; bequests; and lack of financial knowledge from potential annuity purchasers.

The book concludes with a summary of international research presenting evidence of adverse selection, and on the type of annuities purchased. There is also a discussion on the supply of annuities, with major issues being the small number of providers, the inadequate supply of long-term government bonds, and the modest development of markets to pool longevity risks.

This book is a good, self-contained, overview of annuity markets and issues at a basic level. Mathematically-inclined readers may wish to consult some of the referenced papers for more advanced topics; actuarial and financial techniques, in particular, are only briefly sketched. There is, for instance, little discussion of the hedging role of annuities in insurance markets. The book could be used as a text for a one-semester introductory undergraduate course on pensions or annuities. A large number of chapters and results are British-specific, which may limit the adoption of the book in other countries. Also a sizable number of imprecise or incorrect mathematical statements may preclude this book from inclusion in actuarial examinations.

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Demographic Forecasting. Federico Girosi and Gary King. Princeton University Press, 2008, ISBN 978-0-691-13095-8, 288 pages. doi:10.1017/S1474747210000181

This book describes a framework for projecting mortality rates by age groups (17), sex (2), causes of death (24), and countries (191). The framework is composed of statistical models that generalize linear regression for time-series analysis. New methods are introduced for incorporating prior information, and mortality data were mostly derived from the World Health Organization database. The authors also include various explanatory variables such as gross domestic product, tobacco consumption, fat consumption, etc. Given the enormous task at hand, the authors acknowledge the lack of data and the need to pool data from similar cells. Instead of the traditional practice of pooling based on similar coefficients, the authors pool based on similarities across the expected values of the dependent variables.

In addition to describing the framework proposed by the authors, this book illustrates some model results of age-sex-country-cause-specific mortality projections, including illustrations of choices available to the user. Many existing methods currently used in projecting mortality are described in the book and a comparison of model results between the new framework and some existing models is given. This book was intended to be accompanied by a software package that allows the user to use this mortality framework, but to include many of their own choices on a variety of adjustable settings (degree of smoothness, explanatory variables, and model specifications). This software would be very helpful in understanding the framework and potential user choices and evaluating results. This reviewer cannot comment on the software package, since it was not included with the review copy provided.

I found the book informative and interesting and a positive contribution to projection methodology. It is useful to develop and examine alternative ways of projecting mortality and this book presents some novel approaches. It also allows the user to choose a number of model specifications, thereby adding flexibility to the model. However, it is difficult to prove that one model can be said to outperform others without explaining what criteria would be used to judge the winning model, and whether the criteria would include subsequent outcomes, fewer input assumptions, historical fits, etc. It would also have been helpful to have expanded on the data descriptions used for the modeling.

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US Pension Reform: Lessons from other Countries. Martin Neil Baily and Jacob Funk Kirkegaard. Peterson Institute for International Economics, 2009, ISBN 978-0-88132-425-9, 384 pages. doi:10.1017/S1474747210000193

This book provides a wealth of information and analysis relevant to social security reform. The authors survey the demographic and fiscal background and their implications for retirement income distribution and employment, in the US and other industrialized countries. Drawing heavily on OECD data and research, they cover topics such as government pension liabilities, household pension wealth, and the impact of fertility rates and immigration. A discussion of retirement age – its causes and effects – is a focal point of the book. Other topics covered include poverty alleviation, inter-generational transfers, and public sector employee pensions. Extensive tables, figures, references, and illustrative cases from various European countries are especially useful.

The authors' analysis leads to a set of reform proposals for the US: raise future retirement ages by automatically linking them to longevity increases; cut benefits of high earners by offsetting part of the benefits they receive from tax-advantaged retirement saving accounts; and increase revenues for social security to fill in the remaining gap (they don't specify the revenue source). They also recommend supplementing social security with add-on quasi-mandatory retirement saving accounts with automatic enrollment and opt-out provisions. These accounts would be low-cost, collected through the government, and would have limited and privately-managed investment options with age-adjusted portfolios as the default.

Overall I generally agree with these proposals. The emphasis on automatic adjustments is welcome, especially as the response to persistent situations including on-going longevity growth. In my view, this is the best way to take difficult decisions out of the political arena and get fast – and therefore more timely and less costly – actions. I am not sure that cutting social security benefits proportional to tax advantages received from retirement saving accounts is the best way to go, as this might deter such saving. Further, high earners who lack such accounts may find other (more effective) ways to exploit tax advantages. The authors do not propose cutting spousal benefits to middle and upper-class wives, although the current US situation is