

## SOCIETY OF ACTUARIES



## INDIVIDUAL UNDERWRITING

**Overview**

The underwriting process can be thought of as comprising two elements: selection and classification. Applications for individual life and health insurance products are typically underwritten, requiring that applicants satisfy certain selection criteria so that the underwriter can evaluate whether the risk is insurable and, if so, on what basis. This process minimizes antiselection by the applicant. Those accountable for the underwriting function must achieve objectives of mortality, morbidity and related selection expenses in delicate balance with appropriate recognition for the interdependencies and competing forces from within and outside the organization. A commitment to monitor/understand experience from underwriting and pricing viewpoints is needed to evaluate whether underwriting and pricing are on course with expectations.

We have tried to cover a broad range of underwriting issues, but necessarily have had to limit our review for purposes of this specialty guide. For example, we have chosen to ignore underwriting principles and guidelines appropriate to specialized markets, for example, credit insurance and direct response. Moreover, the HIV epidemic has had a significant impact in the actuarial/underwriting arena in the last few years; in few instances has the coordination between the actuarial and underwriting professions been more important to a company's long-term financial solvency.

**Actuary's Role**

Actuaries are responsible for all actuarial aspects of the underwriting process. A primary focus is to ensure that the economic and statistical bases for that process are likely to produce results close to those anticipated in the pricing of products. Pricing assumptions made with respect to mortality, morbidity, persistency, selection expenses, and reinsurance must be in concert with the elements of underwriting that influence those assumptions. A coherent underwriting philosophy must be established to balance the competing interests of product development actuaries, home office underwriters, agents, marketers, stakeholders, regulators, etc. Acknowledging the dynamics of these disciplines and their interactions, particularly in an open market, may result in changes to pricing, products, marketing, and/or underwriting. Although the actuary is responsible for setting pricing mortality/morbidity assumptions consistent with the underwriting process, the actuary shares with the chief underwriter the responsibility for achieving mortality expectations without adversely affecting marketing strategies.

The actuary who is heavily involved in the underwriting process may assist in more technical areas. The actuary's unique training facilitates valuable contributions to decisions ranging from setting underwriting requirement limits to actually developing the underwriting manual. Equity may be maintained by ensuring that the risk of loss presented by each applicant is commensurate with the risk classification assigned.

The recent use of smoking-history-distinct premium rates and the growing popularity of preferred risk classifications have introduced complexities and other challenges for the actuary to gain confidence in the ability of the underwriting process to effectively distinguish among truly different risks and to coordinate pricing with underwriting.

The Professional Actuarial Specialty Guides Committee of the Society of Actuaries provides these Specialty Guides for continuing education purposes. They are intended to provide the user with a summary of representative sources of current general knowledge. Neither the Society of Actuaries nor the Committee intends or represents these Specialty Guides to be complete or their use necessarily required or sufficient for meeting continuing education requirements or any other professional competency standards of any organization.

## Classification of Risk

Applicants for individual life and health insurance are required to satisfy a variety of criteria to qualify for insurance on some basis. Many factors influence the decision on whether to accept a risk and, if so, on what basis. These factors will vary among companies by product and external influences.

Black, Kenneth, Jr. and Harold Skipper, Jr., "Life and Health Insurance Underwriting: I," pp. 639–663 and "Life and Health Insurance Underwriting: II," pp. 664–691. In *Life Insurance*, 12th ed. Englewood Cliffs, N.J.: Prentice Hall, 1994.

The text explains the purpose of underwriting in modern life and health insurance; discusses underwriting philosophy, including the distinctions between standard and substandard classes and smoker/nonsmoker differentials in standard classes; analyzes factors that affect life and health risk classification (that is, age, sex, physical condition, personal history, family history, nonphysical factors, etc.); and explains substandard classification methods.

Also, this reference outlines and analyzes sources of underwriting information and the Medical Information Bureau (MIB), covers laws that affect underwriting, and discusses the roles of reinsurance.

Level: Basic Pages: 53

Morton, Alton P., "Individual Life Insurance Underwriting Principles and Practices: A 1976 Review," *Transactions of the Society of Actuaries* Vol. XXIX (1977): p. 315.

The paper discusses the relevancy of risk factors and mortality data to underwriting; analyzes the economic aspects of underwriting; examines the impact of rapid social and business changes on individual life insurance principles (that is, equity and discrimination concerns, information restrictions, and confidentiality); and speculates about future effects on market competition and underwriting.

Level: Basic Pages: 19

Actuarial Standards Board, "Concerning Risk Classification," *Actuarial Standard of Practice No. 12*. Washington, D.C.: American Academy of Actuaries, 1989.

The Standard establishes guidelines for actuaries to follow in developing, using, and updating risk classification systems. Definitions of common terms and concepts are provided. The purposes of risk classification and how to achieve those

goals are also succinctly stated. Finally, an analysis of pertinent issues is presented, and recommended professional practices are discussed.

Level: Intermediate Pages: 6

"Risk Classification: Statement of Principles." Washington, D.C.: American Academy of Actuaries, 1980.

The concept of risk classification—what it is as well as what it is not—is clearly stated. The primary purposes of any viable risk classification system and the basic principles necessary to achieve these purposes are outlined. Finally, considerations for designing a risk classification system, such as underwriting, marketing, operational influences, and statistical considerations, are developed.

Level: Intermediate Pages: 11

Balay, Ken, "Mastering the Underwriting Decision," *Reinsurance Reporter* No. 96 (Summer 1981): p. 9.

The author brings the reader into the decision-making process used by the underwriter to select and classify an individual applicant for life insurance. The importance of judgment, honed by a framework of knowledge about medicine and some basics of accounting, actuarial science, marketing, and economics, is individually and collectively essential in developing an underwriter who can serve autonomously and creatively. Judgment is the most important factor employed in making a decision. The reader emerges with an appreciation for the "art" of the risk selection/classification process and dispels impressions that these processes are precise and unambiguous.

Level: Basic Pages: 3

Cummins, J. David, et al., "Underwriting Medical Impairments" and "Nonphysical Underwriting Factors." In *Risk Classification in Life Insurance*. Boston, Mass.: Kluwer-Nijhoff Publishing, 1983, p. 131.

The medical underwriting procedures used by 22 companies are analyzed. This research was sponsored by the American Council of Life Insurance in light of concern about legislative and judicial activity in the area of risk classification and its potential effect on the life insurance industry. Impairments were selected for analysis based on whether they: (1) were controversial; (2) have had statutory restrictions developed for them; and/or (3) were the leading causes of death among individual life policyholders.

Differences among procedures are noted and discussed. For nonphysical underwriting factors, the authors chose ones considered to be controversial, such as financial status, use of alcohol/drugs, occupation, aviation, and foreign residence and travel.

Level: Intermediate

Pages: 83

Promislow, S. David, "Measurement of Equity," *Transactions of the Society of Actuaries* Vol. XXXIX (1987): p. 215.

The concept of equity is one that is frequently encountered in actuarial terminology. When an insurer classifies risks for the purpose of setting rates, one of the goals is to achieve equity. In general, however, inequities can be introduced only when certain factors are considered and others ignored. The paper proposes a method of measuring this inequity. The proposed method is then used to investigate the effect on inequity of refining the classification of risks. An understanding of risk theory and statistics is required.

Level: Advanced

Pages: 41

Brackenridge, R.D.C. and W. John Elder, eds., *Medical Selection of Life Risks*, 3rd ed. New York: Stockton Press, 1992.

The previous edition of this book was published in 1985. The current edition is apt to be the most authoritative reference book available on selection of medical risks and medical underwriting. Results from numerous follow-up studies and analysis of advances in medicine are included with many references. The principles of risk selection and classification (chap. 3 by H.A. Woodman) and the rating of substandard lives (chap. 5 by M.W. Kita) are excellent updates and particularly relevant. New material is included on: the application of life table methodology to risk appraisal (chap. 4 by R.B. Singer); the underwriting of life products with knowledge-based systems (chap. 7 by A.W. DeTore); the use and interpretation of laboratory data (chap. 11 by B.R. Kay and M.W. Kita); HIV/AIDS (chap. 28 by R.K. Gleason); and drug abuse, alcohol and tobacco (chap. 30 by R.H. Butz and W.J. Elder). The remaining chapters deal primarily with the description, diagnosis, treatment, expected mortality, ratings, and other underwriting considerations for specific medical conditions.

Level: Advanced

Pages: 975

Balay, Kenneth A., "Introduction to Financial Underwriting." In *ALU I Examination Text*. Claymont, Del.: Academy of Life Underwriting, 1981, p. IA-1.

In general, financial underwriting is a process that develops and interprets financial information. Recognizing that the purpose of life insurance should be to protect the attainment of normal, desirable and attainable financial objectives against the threat of untimely death, the author outlines a structured approach for minimizing the possibility of speculation and maximizing the legitimacy of the application for insurance. This is accomplished through a structured method of analysis involving the identification of financial objectives, testing for vulnerability to untimely death, determining the attainability of objectives, and testing for normalcy and desirability of objectives. The analytic approach is discussed from comprehensive viewpoints by application to examples of a variety of purposes of insurance.

Level: Intermediate

Pages: 21

### Cost Implications

The underwriting process incurs expenses that require justification and balance with corresponding benefits to achieve equity among applicants for insurance and to enhance the company's ability to meet financial objectives. A variety of methods are available for evaluating benefits versus costs.

Ormsby, Charles A., "The Economics of Risk Selection," *Proceedings*, Vol. XLIV, Reginald Vappie, ed. Plymouth, Minn.: Prudential Insurance Company, 1963, p. 171.

This seminal paper illustrates the need to develop the economics of underwriting along scientific lines and provides some of the principles to use in planning a study, such as the value of inspection reports. Results are presented from a study used to evaluate the financial returns on John Hancock's investment in inspection reports. The methodology and related considerations are shared in detail.

Level: Intermediate

Pages: 28

Reitano, Robert R., "Mortality Cost Valuation of Underwriting Requirements," *Transactions of the Society of Actuaries* Vol. XXXIV (1979): p. 277.

The paper provides a unified theory for the evaluation of underwriting requirements based on the measurement of the levels of mortality costs associated with such requirements. The two underwriting models presented are used to develop identities between the observed differentials in the screening potential of the requirements under study and the expected differentials in the mortality costs associated with the various resultant issue classes. The distinguishing feature between the two models is the assumption about historical mortality experience data. One model assumes the existence of such data for each of the resultant issue classes. The other model assumes the existence of historical mortality experience data only for the combined issue block. The practical considerations involved in the application of each model are explored in detail.

Level: Advanced Pages: 51

Bergstrom, Richard L., "A Report on the Protective Value of Laboratory Testing," Milliman & Robertson, 1989; available from the Society of Actuaries Library.

The paper develops an approach to determining the protective value of the blood chemistry profile and urinalysis testing in the underwriting of life insurance applications. Return on investment (ROI) values are developed for several testing limits (amounts applied for) for various testing components, including paramedical examinations, urinalysis, blood chemistry profiles, HIV antibody tests, and cocaine tests. The paper also develops hypothetical break-even policy amounts above which laboratory testing and paramedical services are cost-justified.

Level: Intermediate Pages: 24

Bergstrom, Richard L., "A Report on the Protective Value of Laboratory Testing When Evaluating Risk for Major Medical Coverages," Milliman & Robertson, 1991; available from Society of Actuaries Library.

The paper develops an approach to determining the protective value of the blood chemistry profile and urinalysis testing in the underwriting of major medical applications. Return on investment (ROI) values are developed for \$300 and \$500 deductible plans with an 80/20 percent coinsurance feature for various testing components, including paramedical examinations, urinalysis, blood chemistry profiles, HIV antibody tests, and cocaine tests. The paper also develops hypothetical break-even years, discusses the methodology of the computations, and highlights the assumptions used to determine the values.

Level: Intermediate Pages: 40

Mills, Gregory M., "A General Model for Conducting Protective Value Studies," *Journal of Insurance Medicine* Vol. 23, No. 1 (1991): p. 12.

It is axiomatic that a particular underwriting procedure has positive economic value if its cost is less than the expected savings in mortality (or morbidity) made possible by its use. Making this fundamental comparison is the essence of any protective value study. The paper presents a simple and general model for conducting a protective value study. Hypothetical data are used for illustrating the principles being presented. Also discussed are the appropriateness and choice of selected assumptions: mortality/ morbidity, interest/discount rates, time period, prevalence, and decision criteria.

Level: Intermediate Pages: 4

Mast, Jess, "Nonmedical Limits: Balancing Mortality with Other Expenses," *Reinsurance Reporter* Issue No. 86 (Winter 1978): p. 8.

The author addresses the question: Where should a company set coverage limits for considering applications on a nonmedical underwriting basis? This question is studied from a variety of viewpoints, offering both actuarial- and underwriting-related considerations based on a cost-benefit analysis of Lincoln National Life's business and a perspective of historical versus future mortality to anticipate.

Level: Intermediate Pages: 6

Woodman, Harry A., "Paramedical: A Current Assessment," *On the Risk, Journal of the Academy of Life Underwriting* Vol. 9, No. 1 (1992): p. 27.

The author reviews the history of the paramedical examination, discusses its relevance in today's marketplace, and evaluates its role in the future. The cost/benefit value of the paramedical examination is also estimated, and comparisons of such values to those of medical and nonmedical experience are made.

Level: Intermediate Pages: 8

Several underwriting-related issues that require special consideration currently face the industry. The most notable among these are the process of distinguishing the nonsmoker and other "preferred" risks from less attractive risks, as well as the extension of traditional insurance ages from the seventh decade of life into the eighth and ninth decades. Note that reinsurers provide a variety of services that enable companies of virtually any size to manage risk as well as compete with other companies on the basis of underwriting and pricing expertise.

Cowell, Michael J. and Brian L. Hirst, "Mortality Differences between Smokers and Nonsmokers," *Transactions of the Society of Actuaries* Vol. XXXII (1980): p. 185.

Following the publication of the first Surgeon General's report "Smoking and Health" in 1964, the life insurance industry became interested in mortality differences between smokers and nonsmokers selected for individual coverage. The interest was heightened after the Surgeon General's more comprehensive report was released in 1979. In their landmark paper, Cowell and Hirst trace the background of the 1979 report, highlight its main conclusions about mortality and summarize its findings on smoking-related differences in socioeconomic factors and demographics. The significance of smoking habits as a criterion for risk classification is evaluated, reaching the conclusion that the differences in mortality on smokers versus nonsmokers are too great to be ignored in pricing or underwriting. The discussion of this paper is equally intriguing.

Level: Intermediate

Pages: 29

Brown, K. S., and Robert L. Brown, "Toward Computerized Underwriting: A Biological Age Model," *Transactions of the Society of Actuaries* Vol. XXXV (1983): p. 393.

To achieve the lowest possible costs for their products, life insurance companies must pursue diligently all possible avenues for reducing expenses. The paper presents a theoretical basis for a computerized methodology for estimating biological age—a measure of time to death. Further, the paper asserts that it is feasible to computerize much of the underwriting process and, with continuous monitoring of the computerized system, not sacrifice any significant level of underwriting accuracy, thereby lowering underwriting costs significantly and shortening the time from application to issue of the policy. An understanding of statistical functions is required.

Level: Advanced

Pages: 25

Fiederlein, W. Taylor, "Preferred Risk Underwriting," *Reinsurance Section News* No. 29 (December 1991): p. 8.

Increasingly, life insurance companies are granting premium discounts to individuals who are in exceptional good health and do not participate in activities or exhibit lifestyle factors that increase the risk of violent death. Therefore, by the proper structuring of premium schedules and underwriting guidelines, preferred risk underwriting programs may allow companies to be more price-competitive without increasing their mortality risk exposure. The article discusses both the positive and potential negative aspects of preferred risk programs as well as specific guidelines companies can use to determine a preferred risk.

Level: Basic

Pages: 3

Mast, Jess, "Recognizing the Smoking Factor: Should the Risk Classification Be Changed?" *Reinsurance Reporter* No. 108 (November 1985): p. 8.

Depending on the degree to which premium rates for life insurance products have been loaded to reflect the increase in mortality due to cigarette smoking, alternative strategies are offered for the underwriter to recognize the smoking factor in underwriting without compromising financial objectives. The analysis illuminates an important way in which the actuarial and underwriting disciplines interlock. The need to coordinate the underwriting and product-pricing functions is emphasized as essential to achieve financial objectives. Also, opportunities are identified for strengthening the fairness of the risk classification system.

Level: Intermediate

Pages: 3

Pokorski, Robert J., "Predicting Morbidity and Mortality in the Elderly," *Reinsurance Reporter* No. 124 (Second Quarter 1990): p. 2.

The demands for life and health insurance products will increase as the number of people over age 65 in the U.S. swells from 30 million in 1990 to 39 million in 2010. Aggressive pricing or marketing practices leave little margin for error, so medical underwriting plays a crucial role in determining the profitability of business written on the elderly. Given that the primary causes of death among the elderly are associated with cardiovascular risk factors such as blood pressure, cholesterol, cigarette smoking, and/or pulmonary function status, it's appropriate to estimate associations between these risk factors and health outcomes. Findings from studies using multivariate statistical analyses are helpful in isolating the impact of single risk factors versus interactions among multiple factors. Risk factors distinguish high-

low-risk groups among the elderly but may not be sufficient predictors of health outcome to permit fine distinctions of mortality and morbidity risks in pricing.

Level: Intermediate

Pages: 15

Woodman, Harry A., "An Actuarial View of the Older Insurance Population," *Journal of Insurance Medicine* Vol. 22, No. 2 (1990): p. 98.

The author reviews underwriting perceptions of older age applicants, charts mortality improvements in insured lives experience since 1951, and corrects misconceptions about older age mortality risk. He also distinguishes between chronological and physiological age, argues against excessive substandard risk classification at older ages, and explains why specialists are needed in older age underwriting. Special expenses, persistency, and the proportion of applications that result in placed business in older age markets are discussed and predictions made about mortality, profitability, product design, and market considerations for older age business.

Level: Intermediate

Pages: 4

Tiller, John E., Jr., and Denise Fagerberg, "Automatic Reinsurance," Chapter 2 and "Underwriting and Facultative Reinsurance," Chapter 3. In *Life, Health, and Annuity Reinsurance*. Winsted, Conn.: ACTEX Publications, 1991, p. 21.

A detailed discussion of automatic reinsurance is provided in the first chapter, covering the normal requirements for automatic reinsurance, the methods of determining the amounts of automatic reinsurance, and the methods of allocating automatic reinsurance. Chapter 3 outlines considerations related to underwriting and the development of a facultative program.

Level: Basic

Pages: 31

### Monitoring Experience

To the extent feasible, it is imperative to quantify and monitor a company's mortality and morbidity experience to determine or at least estimate whether the underwriting process is producing results compatible with corresponding pricing and underwriting expectations. In addition to the articles listed below, the *Transactions, Society of Actuaries Reports on Mortality, Morbidity and Other Experience* contains mortality results on nonmedical, paramedical and medical issues, cigarette smoking, policies for large amounts, and other studies of underwriting interest.

Lew, Edward A., and Jerzy Gajewski, eds., *Medical Risks: Trends in Mortality by Age and Time Elapsed*. Vol I and II. Westport, Conn.: Praeger Publishers, 1990.

A compendium of mortality statistics highlighting mortality rates relative to specific causes of death, including alcohol, drugs, cancer, weight, and a dozen other primary medical conditions or types of hazards are analyzed. The principal mortality findings from the *Build Study 1979* and *Blood Pressure Study 1979*, published by the Society of Actuaries and ALIMDA in 1980, and *The Medical Impairment Study 1983*, Vol. I, published by the Society of Actuaries and ALIMDA in 1986, are presented. Each chapter begins with an overview of the information developed on the subject and then focuses on the actual deaths or mortality rates experienced in relation to contemporaneous death rates among ostensibly healthy persons or those in the general population. Many useful references are included in extensive bibliographies on articles covered in detail. The first two chapters discuss methodology and the interpretation of results. The remaining chapters discuss mortality statistics comprehensively.

Level: Intermediate

Pages: 1,453

Avery, John R., "Center for Medico-Actuarial Statistics (CMAS) of MIB, Inc.," *Journal of Insurance Medicine* Vol. 24, No. 2 (1992): p. 117.

An introduction and history of CMAS (a section of MIB, Inc.), which is responsible for coordinating many of the intercompany experience studies, are presented. Brief summaries of major past, present and future intercompany studies are included. This material is extremely useful for anyone involved with contributing to or using intercompany mortality and/or morbidity studies.

Level: Basic

Pages: 9

Mast, Jess, "Recent Mortality on Large-Amount Cases: Implications for the Future," *Reinsurance Reporter* No. 114 (October 1987): p. 13.

Findings from a study of Lincoln National Reinsurance's mortality experience on reinsured large-amount cases are shared and interpreted. Comparisons are drawn between the experience on automatic and facultative cases. Supplementary data on facultative business are given to facilitate comparisons with the Society of Actuaries large-amount policy mortality studies by plan of insurance, age at issue, purpose of insurance, cause of death, and the amount of insurance carried in all companies.

Level: Basic

Pages: 6

Mast, Jess, "Claim Trend Analysis: How to Read the Bottom Line on Today's Business," *Reinsurance Reporter* No. 122 (Fourth Quarter 1989): p. 2.

The timing of feedback on mortality experience from traditional studies often seems to be "too little, too late," at least in terms of helping the product development actuary understand how closely pricing mortality assumptions are coming to hitting their targets. Actuaries and underwriters need to work in tandem to identify the kinds of information that might serve as leading indicators of how mortality is emerging long before traditional studies demonstrate a pattern straying from expectations. Being able to exploit information that may serve as leading indicators to use in obtaining such feedback has become more imperative than ever in maintaining coordination between pricing and underwriting. A sample report is illustrated with examples of "indicators" that may be particularly useful. Corresponding comments are given as possible interpretations of what the indicators reveal and suggestions are included for clarifying apparent trends.

Level: Intermediate

Pages: 5

## Regulatory Issues

Such issues vary by the jurisdiction in which a company operates, consumer trends, risk selection tools used, and public perceptions about privacy and confidentiality as well as affordability and entitlement of coverage. These issues amplify the importance of understanding the need for selection and classification of risk and articulating their rationale effectively to the public to defend the industry's need to underwrite.

Corliss, Gary L., "Underwriting and the Privacy Issues," *Society of Actuaries Study Note No. 9LB-611-81*. Chicago, Ill.: Society of Actuaries, 1981.

The privacy issue requires—and is an opportunity for—companies to educate the public about the need for the underwriting process. Periodic analysis of the relevance and value of information obtained in underwriting is increasingly becoming part of the due diligence expected from individuals with responsibility for the underwriting process. The text of the NAIC Insurance Information and Privacy Protection Model Act, as revised in December 1980, is included along with a historical perspective that is based on consumer opinions about what information insurance companies should *not* gather on applicants for life and health insurance.

Level: Basic

Pages: 31

Black, Kenneth, Jr. and Harold Skipper, Jr., "Laws Affecting Underwriting" and "Regulations and Laws Related to Unfair Discrimination." In "Life and Health Insurance Underwriting: II." In *Life Insurance*, 12th ed. Rev. Englewood Cliffs, N.J.: Prentice Hall, 1994, p. 680.

Some important laws and regulations that limit insurers' freedoms in collecting, maintaining, using, and disclosing personal information on applicants for life and health insurance are discussed. Also, a variety of state laws are noted that prohibit discrimination among applicants for insurance such as on the basis of sex, sexual preference, physical or mental impairment, or blindness.

Level: Basic

Pages: 5

Meletzke, R. Otto, "Confidentiality of Medical Information from the Perspective of the Life Insurance Business," *Journal of Insurance Medicine* Vol. 25, No. 2 (Summer 1993): p. 279.

This paper was prepared for the U.S. Department of Health and Human Services Task Force on the Privacy of Private Sector Health Records and was presented during the Genetic Testing Issues Forum on February 9, 1993. Strong support is expressed for the ACLI's voluntary confidentiality guidelines for insurers' use of information about genetic testing, testing for the human immunodeficiency virus, and other medically sensitive areas. A historical perspective of related legislation and the ethics of confidentiality in information related to personal insurance transactions is included.

Level: Basic

Pages: 26

"Risk Classification for Individual Health Insurance," *Record of the Society of Actuaries* Vol. 7, No. 2 (1981): p. 695.

The panel discusses the evolution of the present system of underwriting health insurance, including the rationale for risk classification, benefit limits, and "equity." Social goals that drive legislative and regulatory trends and the restrictions insurers must tolerate are reviewed. Future issues such as risk-sharing pools are previewed. Actuarial goals and participation in public deliberations about health insurance underwriting are also addressed.

Level: Basic

Pages: 18

Rudy, Donald V., "Due Diligence Comes of Age in Underwriting," *Reinsurance Reporter* No. 127 (First Quarter 1991): p. 7.

The author examines the role due diligence plays in underwriting, opening to question the risk-selection practices of insurers just as the loan-underwriting policies of savings and loan institutions came under scrutiny during the recent savings and loan crisis. The chief underwriter is urged to examine internal policies and practices, risk-selection standards and reinsurance to determine whether all phases of the risk-selection process meet the interests of four constituent groups, that is, shareholders, agents, policyholders, and regulators.

Level: Basic

Pages: 3

### Selected Underwriting-Related Referemces

*Blood Pressure Study 1979.* Chicago, Ill.: Society of Actuaries, 1980.

*Build Study 1979.* Chicago, Ill.: Society of Actuaries, 1980.

Will, Charles A., *Does It Make Sense?* Cincinnati, Ohio: National Underwriter Company, 1973.

*Medical Impairment Study 1983.* Chicago, Ill.: Society of Actuaries, 1986.

Singer, Richard B. and Louis Levinson, eds., *Medical Risks: Patterns of Mortality and Survival.* Lexington, Mass.: D.C. Heath and Company, 1976.

*Medical Section Proceedings*, published annually. American Council of Life Insurance, 1001 Pennsylvania Avenue, N.W., Washington, D.C. 20004-2599.

*1967 Occupation Study.* Chicago, Ill.: Society of Actuaries, 1967.

*On The Risk, Journal of the Academy of Life Underwriting*, published quarterly. Henry C. George, Editor-in-Chief, P.O. Box 285, Greendale, Wis. 53129-0285. Phone: (414) 423-0967.

*Proceedings of the Institute of Home Office Underwriters*, published annually. Paul E. McDaniel, Editor, General American Life Insurance Company, P.O. Box 396, St. Louis, MO 63166-0396. Phone: (314) 525-3579.

Shepherd, Pearce and Andrew Webster, *Selection of Risks.* Chicago, Ill.: Society of Actuaries, 1957.

Society of Actuaries Fellowship Exam Course I-542: "Selection of Risks." Schaumburg, Ill.: Society of Actuaries, Fall 1993.

*Transactions of the American Academy of Insurance Medicine*, published annually, Neal A. Pickett, Jr., M.D., Metropolitan Life, Tulsa Customer Service Center, P.O. Box 500, Tulsa, OK 74121-0500. Phone: (918) 252-

8400. Note: Beginning in 1993, *Transactions of the American Academy of Insurance Medicine* will be published in the *Journal of Insurance Medicine*. 1991 and 1992 volumes of the *Transactions* are available from Dr. Pickett.

*Transactions, Society of Actuaries, Reports of Mortality, Morbidity and Other Experience*, Society of Actuaries, Schaumburg, Ill.

*Underwriter Alert*, published bimonthly, 8 issues/year. John J. Krinik, Editor and Publisher, P.O. Box 2990, Binghamton, NY 13902. Phone: (607) 724-3992

### Publishing and Ordering Information

For the following publications, please contact the publishers directly for books or reprints of articles.

*ALU I, ALU II, and ALU III Examination Texts* revisions annually

Denny Fagan, Administrator  
Academy of Life Underwriting  
P.O. Box 267  
Claymont, DE 19703-0267  
Phone: (302) 421-8956

American Academy of Actuaries  
Actuarial Standards Board  
1720 I Street, NW, 7th Floor  
Washington, DC 20006  
Phone: (202) 223-8196  
FAX: (202) 872-1948

*Journal of Insurance Medicine*  
R.H. Butz, M.D., Editor  
Creative Concepts Publishing  
P.O. Box 82446  
Kenmore, WA 98028-0446  
Phone: (206) 365-5366  
FAX: (206) 365-5366

*Life Insurance*  
Prentice Hall  
Orders to: Simon & Schuster  
200 Old Tappan Rd.  
Old Tappan, NJ 07675  
Phone: (201) 767-5937

*Life, Health, and Annuity Reinsurance*  
ACTEX Publications  
P.O. Box 974  
Winsted, CT 06098  
Phone: (203) 379-5470



*Medical Risks: Trends in Mortality by Age and Time Elapsed*

Praeger Publishers  
Division of Greenwood Publishing Group  
88 Post Road West  
Westport, CT 06881  
Phone: (203) 226-3571  
FAX: (203) 222-1502

*Medical Selection of Life Risks*

Stockton Press  
Orders to: Groves Dictionaries of Music, Inc.  
Division of Macmillan Pubs.  
257 Park Avenue, South  
New York, NY 10010  
Phone: (212) 673-4400

*On the Risk*

*Journal of the Academy of Life Underwriting*  
c/o Henry C. George, Editor-in-Chief  
5937 Sugarbush Lane  
Greendale, WI 53129  
Phone: (414) 423-0967

*Proceedings*

Home Life Office Underwriters Association  
c/o Reginald Vappie, Editor  
Prudential Insurance Company  
13001 County Road 10  
Plymouth, MN 55442-1199  
Phone: (612) 553-8885

*Reinsurance Reporter*

Barbara W. Warden, Editor  
Lincoln National Reinsurance  
P.O. Box 7808  
Fort Wayne, IN 46801-7808  
Phone: (219) 455-2480  
FAX: (219) 455-4124

*Risk Classification in Life Insurance*

Kluwer-Nijoff Publishing  
Orders to: Kluwer Academic Pubs.  
P.O. Box 358 Accord Station  
Hingham, MA 02018-0358  
Phone: (617) 871-6600

Photocopies of Society of Actuaries Publications, that is, Fellowship Exam Course I-542, *Record of the Society of Actuaries*, *Reinsurance Section News*, and the *Transactions of the Society of Actuaries*, may be obtained by calling or writing:

Assistant Librarian  
Society of Actuaries Library  
475 N Martingale Rd., Suite 800  
Schaumburg, IL 60173  
Phone: (847) 706-3538  
FAX: (847) 706-3599

This Actuarial Specialty Guide on Individual Underwriting was developed under the auspices of the Professional Actuarial Specialty Guides Committee by:

Richard L. Bergstrom, Co-Editor  
Jess L. Mast, Co-Editor\*  
John J. Krinik\*\*

and reviewed by:

Jeffrey S. Marks  
Harry A. Woodman

\* Mr. Mast, not a member of the Society, is Director of Research and Analysis for Lincoln National Reinsurance Companies.

\*\* Mr. Krinik, not a member of the Society, is editor and publisher of *Underwriter Alert*.