The Actuary

The Newsletter of the Society of Actuaries

VOLUME 4, No. 10 DECEMBER, 1970

CANADIAN INSTITUTE ON CONTINUING EDUCATION

by Donald Fischer

At its October meeting in Winnipeg, the Canadian Institute of Actuaries held a session on how the C.I.A. can contribute to continuing education.

The members attending this session expressed concern that actuaries were in many cases restricting the roles they could play in the life insurance industry. It was felt that many actuaries were not expanding their knowledge once they had attained acceptance as an actuary through actuarial exam requirements.

Suggestions were made as to how the C.I.A. could encourage further education. One method was the use of reading lists. It was felt that these reading lists should include both actuarial and non-actuarial topics. It was considered necessary to include any information that would assist the actuary in his management role.

The biggest problem of the reading list is that it has a tendency to expand in length past the point where it is really useful. It appeared that it would be necessary that this list not be limited in topic, but that it definitely be limited to the highest quality articles. Any member of the C.I.A. who found a particularly interesting and useful article would submit it to be included on the reading list. The first suggestion was therefore to participate in establishing periodic lists of the highest quality and greatest breadth of subject material.

Another suggestion was the use of a periodic publication of the nature of *The Actuary*.

The opinion seemed to be that the actuary must recognize the changing nature of the insurance industry. It was felt the actuary must redefine his role;

(*Continued on page* 8)

To All Our Readers,
A Happy New Year!
The Editors

THE STATE OF THE SOCIETY TODAY

by Gathings Stewart

Editor's note: President Moorhead had requested Gathings Stewart to close the Society's Denver meeting with a quick summary. Gath's lighthearted verse delivered in response to this request brought down the house. The Actuary *reproduces excerpts below, but we cannot (alas) reproduce the sparkling delivery which delighted the audience.*

Copies of the complete text may be obtained from the poet.

* * * *

It's Colorado—one thousand strong,
With a hundred new Fellows joining the throng!
A hundred new Fellows with charming spouses.
And baby sitters at their houses.

* * * *

The state of the Society? Now? Today?
The President asks and what do you say?
You answer him with some impressions
About our program and general sessions.

Expressing opinions and alternate routes,
And other things where some have doubts.
An annual budget in the black
To save the Treasurer's aching back.

About pollution and social roles,
Long range planning and ultimate goals.
Indexed products and adjusted earnings,
Product development and other yearnings.

(*Continued on page* 8)

THE NEW WISCONSIN INSURANCE CODE

by George H. Davis

Proposed changes in certain important provisions of the Wisconsin Insurance Code should be of great interest and concern to actuaries working directly or indirectly for life insurance companies. These changes are contained in a recently released draft of one chapter of the new code.

The Wisconsin Legislature in 1965 created the Insurance Laws Revision Committee, to prepare a revision of the Wisconsin Insurance Code. The Committee is composed of members of both houses of the Legislature, the Commissioner of Insurance, and representatives of the public. The work of preparing the code has been delegated to a staff headed by Spencer L. Kimball, Dean of the School of Law of the University of Wisconsin, and Herbert S. Denenberg, Professor of Insurance at the University of Pennsylvania.

Public statements and articles by Professors Kimball and Denenberg indicate that the Committee regards its assignment as requiring a thoroughgoing revision of the Wisconsin Code and that it intends to retain provisions and approaches of the present code only when it is firmly convinced of their validity. Professors Kimball and Denenberg appear to feel that considerable portions of the existing insurance laws of Wisconsin and also of other states have been developed somewhat haphazardly and that those should now be regarded as obsolete. They indicate a clear intention to develop new provisions and approaches in many areas but only after thorough research.

The work of the code revision has proceeded by the preparation of drafts of

(*Continued on page* 6)

The Actuary

Editor . . . . . . ANDREW C. WEBSTER
Associate Editors . . KENNETH T. CLARK
PETER L. HUTCHINGS
FREDERIC SELTZER
EDWARD H. WELLS

Correspondence should be addressed:
The Actuary
14th Floor, 1740 Broadway
New York, N. Y. 10019

Published monthly (except July and August) by the SOCIETY OF ACTUARIES, 208 S. LaSalle St., Chicago, Illinois 60604, Edwin B. Lancaster, President; Robert C. Dowsett, Secretary, and Robert H. Hoskins, Treasurer.

The Society is not responsible for statements made or opinions expressed in the articles, criticisms, and discussions in this publication.

EDITORIAL

THE Denver meeting of the Society was in many ways an unusual and memorable gathering. To mention but one unusual item it is, to the best of our knowledge, the first meeting of the Society or of either of the precedent bodies that has been memoralized in verse (See page 1). Then it seems to have had perhaps the most elaborate and comprehensive program of any Society meeting. That such a program was a success is a tribute to the Program Committee and they deserve an accolade. It is also peculiarly pleasing to note that this elaborate and involved scheme was successfully carried out by human hands and minds alone *without* the aid of a computer! (but with the aid of Barry Watson and the staff.)

Two subjects on the program are of more than usual interest. Indeed they may well be termed historic because of their importance to the future of the Society. First of these was the discussion of the Alternate Route. Copies of this discussion have been sent to all members for study and comment. Hitherto the Society has properly prided itself on the results of the self-study method which has characterized the examinations from the earliest days of the profession on the North American continent. Perhaps there are more roads to an actuarial degree than the path of self-study and self-discipline and the Society is well advised to investigate these. There are many problems to be solved as even the proponents of the Alternate Route will admit. Whatever the outcome of this investigation it is of the greatest importance that the actuarial profession shall remain in control of the examination system, that the standards be set and maintained by the profession and not by academic institutions.

Perhaps of even greater immediate importance was the other subject, the passage of the Amendment to the Constitution providing for expression of opinion (we still hold that "opinion" is an unfortunate word since "opinion" is generally a personal matter). The Society can now speak as a professional body on matters involving actuarial knowledge and we expect this privilege to be used to the benefit of the public and the enhancement of the Society. The Board of Governors will not, we are sure, act hurriedly or lightly, and will give full weight to the views expressed by the minority. The *opinion* to be expressed publicly shall be confined to "matters within the special professional competence of actuaries" and does not include the support of or even opposition to any particular proposition before the public in any area. We take issue with our correspondent who suggests elsewhere in our columns that the Society take a stand favoring a certain proposed mode of action. By its motto the society is concerned with demonstrations but not with the kind of demonstration that our correspondent seems to envisage. The Society should crusade for competence and comprehension and not for causes.

On both subjects the columns of *The Actuary* are open to comment from our readers.

A.C.W.

LETTERS

First Time Ever

Sir:

The 1969 instalment of that thrilling serial, "Mortality under Standard Ordinary Issues," had to be omitted from the recently published 1969 Reports Number of the *Transactions.* In apologizing to our myriad disappointed readers, the Committee would also scotch the rumor that the omission was attributable to the actions of the Women's Liberation movement, who objected to the division of the data by sex. We can promise a more thrilling instalment in the 1970 Reports Number (which according to custom will appear in 1971). It will be worth waiting for!

Joseph C. Sibigtroth

* * * *

Trend in Math

Sir:

As a member of a strictly undergraduate college faculty and as one who has long taken an interest in the academic preparation of future actuaries, I would like to comment about the trend in mathematics courses.

As many of your "older" readers know, a common mathematical preparation for a future actuary used to consist of standard courses in elementary and advanced calculus, the theory of equations, differential equations, mathematical statistics and perhaps a course in geometry such as projective geometry. Because of developments within the mathematical world, the student who formerly had the above mathematical background would probably find the following changes today. The "standard" course in elementary calculus is replaced by a first course in functions of a single variable. Advanced calculus is often replaced by a course in functions of several variables or perhaps calculus on manifolds. The theory of equations is often replaced by a course in the abstract algebra of groups, rings and fields. The recipe type course in differential equations is often replaced by a course in linear analysis (sometimes a short name for a course in linear topological spaces). Mathematical statistics is often replaced by a course in combinatorics. Finally, the geometry course is often replaced by a course in point-set topology or even algebraic topology.

(Continued on page 3)

Letters

(Continued from page 2)

I do not cite such typical course changes to arouse antagonism among older actuaries who have had a strong background in classical mathematics. Indeed, I have lived through the mathematical revolution in higher education with some scars of my own. My own field of algebraic geometry, one of the oldest branches of mathematics, has undergone some of the greatest changes in both content and point of view. A standard algebraic tool in this field is now the theory of sheaves, and the classical theory of algebraic curves and surfaces has been replaced by the theory of schemes!

What I am concerned about, and what is the concern of many mathematicians who would like to encourage talented young people to enter the actuarial profession, is the great need for making wider use of the different mathematical background now being brought to the insurance companies by recent graduates with an A.B. in mathematics. I know that the computer centers in the insurance companies have found that some of these young actuarial assistants have shown that they are able to introduce exciting new procedures in numerical analysis. I am hopeful that the insurance companies will be able to find other ways of making wider and more exciting use of the strong mathematical background with which these young people enter the profession. I am afraid that if this does not happen, many college graduates will turn to such new careers as computer science and operations research. Needless to say, I think such a turn of events would do great damage to the actuarial profession.

Vincent O. McBrien

(Mr. McBrien is Professor of Mathematics at the College of Holy Cross, Worcester, Mass.)

* * * *

Policy Loan Cash Flow

Sir:

Much attention has recently been given to the problem of increase in policy loans. One large life insurance company has even increased the premium rates on their high early duration cash value line of policies. The October issue of *The National Underwriter* discussed the effect of policy loans on cash flow.

Since our organization has been working on developing corporate forecasting models for investments, interest has been given to a forecasting approach toward predicting policy loan cash flow.

Actuarial Meetings

Jan. 14, Baltimore Actuaries Club
Jan. 18, Chicago Actuarial Club
Jan. 20, Seattle Actuarial Club
Feb. 11, Baltimore Actuaries Club
Feb. 16, Actuaries Club of Philadelphia
Feb. 17, Seattle Actuarial Club
Feb. 22, Chicago Actuarial Club

By testing the correlation between the average prime interest rate during a calendar year and the policy loan cash flow during the same calendar year for each of the last six years, a correlation coefficient of .89 was calculated. The table below shows the actual and estimated policy loan cash flow using a regression formula based on the above calculated correlation coefficient.

Year	Average Prime Interest Rate*	Actual Cash Flow*	Estimated Cash Flow**
1964	4.4%	4%	4%
1965	4.5	4	5
1966	5.25	10	8
1967	5.0	7	7
1968	6.25	8	12
1969	7.0	17	15

* "1969 Economic and Investment Report," Life Insurance Association of America, December, 1969.

**As percentage of total cash flow.

Since any decline in long term interest rates is expected to be moderate, probably within a range of one to one and one-half percentage points, ("1969 Economic and Investment Report," page 16), I estimate that the policy loan cash flow will vary between 11 and 23 percent of total cash flow within the next five years.

Sandra Illies

* * * *

Comments on Over-Population

Sir:

I was pleased to see the article on population by E. Allen Arnold in *The Actuary* October 1970. We are only now being awakened to the potential disasters of continued population growth. At the very least, it is not hard to look around us and see the rapid deterioration of the quality of life. While this deterioration is often not directly caused by population growth, it is usually exacerbated by it.

I would like to second Mr. Arnold's suggestion that a committee be set up within the Society that "could apply actuarial talent and skills to the analysis of the population crisis." There is indeed need for expert opinion. However, I would expand the Society's role into a more active one by including the issuance of policy statements on this as well as other subjects.

For example, if the members of the Society were convinced of the dangers of unchecked population growth, then why not support proposed legislation for family planning? To quote from the October editorial in *The Actuary*: "As financial demographers our professional knowledge and skill should be at the service of our fellow citizens." Certainly we must apply our collective expertise wherever possible to social problems, even if they do not affect the current everyday operations of the insurance industry, or even if the solutions to these problems may affect the long-term growth rates of the industry.

One additional suggestion: Why not invite Dr. Paul Erlich, or a similarly qualified individual, to address a meeting of the Society? This would allow those members who doubt the seriousness of the problem a first-hand opportunity to hear and question the views on the other side of the issue.

Norman Oslik

American Academy of Actuaries

At the annual meeting in November in Chicago, the following were elected to the Board of Directors for a three-year term: John H. Biggs, W. Harold Bittel, Thomas P. Bowles, Jr., Louis Garfin, Richard L. Johe, and Frederick P. Sloat.

The Board consists of 18 elected members, one third of whom retire each year, plus the officers and two past presidents.

H. Raymond Strong took office as President at the close of the meeting, succeeding Walter L. Rugland. The Board elected the following officers: *President-Elect,* Robert J. Myers; *Vice Presidents,* Harold E. Curry, John K. Dyer, Jr., Morton D. Miller; *Secretary,* William A. Halvorson; *Treasurer,* Robert E. Bruce.

Editor's Note: The following two contributions are a continuation of a series of articles which began in the October issue of The Actuary on the subject, "Accountants and Adjusted Earnings."

Accountants and

MUTUAL COMPANIES

by Paul H. Knies

Mutual life companies have only recently been included in the adjusted earnings developments. Presumably, the accountants feel that the matching of expenditures (especially acquisition costs) with revenue has relevance for mutuals as well as for stock companies. Until this development, criticism of mutual life-insurance company reports has been negligible. It is not surprising that there is some difference of opinion among actuaries and accountants as to how to solve a heretofore nonexistent problem.

A Natural Premium Approach

Non-participating premiums can be analyzed into two segments: a natural premium based on *realistic assumptions* as to mortality, interest, expenses and withdrawal rates; and a premium for expected profit. The natural reserve is then developed from the natural premium.

However, in a mutual company the gross premium scale is designed with policyholder equity in mind. If each and every class of policy is to be self-supporting, the premium scale should be designed to be adequate under reasonable *floor assumptions*, that is the most unfavorable assumptions which might reasonably be anticipated to prevail over an extended period of time.

When this test is satisfied, each premium may be regarded as adequate, with a return to each class of policyholder (in the form of dividends) of any excess of the premium charged over the actual cost experienced. This concept of self-supporting classes prevails, of course, throughout the life of the class and not just at issue.

A "natural mutual premium" might be described as the premium generated by reasonable floor assumptions. While we may expect basic agreement on the use of reasonable floor assumptions in mutual companv premiums, we would expect some disagreement as to the precise reasonable floor. In any event, the natural mutual premium would appear to be equal to the gross premium, since there is no justification for profit.

Next, the natural mutual reserve might be calculated by considering the natural mutual premium together with realistic assumptions as to investment income, expenses, and payments to policyholders (including dividends). Alternatively, the natural mutual reserve might be calculated by considering the natural mutual premium and the reasonable floor assumptions of income and outgo. The two approaches will produce essentially the same natural mutual reserve.

A Direct Approach

The actuary might by-pass the natural mutual premium and attempt to directly determine the natural mutual reserve in the aggregate. At this point he might well consider why surplus is needed in a mutual company. Perhaps surplus would be considered as the amount required to protect against contingencies which might or might not arise over the life of a current inforce, but which must be anticipated over the life of the company. Another approach might consider surplus to be a general reserve for contingencies which was accumulated over the years from all policy classes, and which is retained for the benefit of continuing and future policyholders of the company.

On the other hand, consideration of surplus might be by-passed in favor of considering the total fund which a company deems necessary to have on hand to meet all future obligations to current policyholders. When policies terminate, these approaches would frequently provide for the release of surplus or funds to policyholders, in accordance with the manner in which the amounts were contributed.

Having considered the need for surplus, an actuary could return to the task of defining natural mutual reserve. He might choose the amount contributed by current policyholders, or by current and past policyholders, or the portion of contributed amounts which are expected to be expended or returned in the form of payments to policyholders (again including dividends).

A Balance Sheet Approach

Apart from techniques for matching expenditures with income, an actuary could approach the problem from the point of view of the balance sheet of the annual report of insurance companies. The balance sheet is expected to divide total funds into three parts: one part dealing with policyholders, a second part dealing with others who are creditors, and a third dealing with proprietors. If the second part is known, we might boil the problem down to a division, in accordance with generally accepted accounting principles, of the remaining funds as between policyholders and proprietors.

Noting that a mutual company cannot hold any more or less than the amount that it deems advisable in light of its obligations to policyholders and that in a mutual company there are no proprietors, an actuary might come to the conclusion that there is really no reason to divide the fund. However, if the funds are subdivided between reserves and surplus, or otherwise, the income statement can readily follow the fund subdivision.

To What End?

Given that the objective sought by adjusting earnings of stock companies is to provide the investing public with a more meaningful measure of earnings, what objectives might be served by adjusting the earnings of mutual companies? More useful reports to supervisory authorities? To management? To policyholders?

The supervisory authorities have determined that the statutory report best suits their purpose, which is the protection of the insuring public. Management can obtain analyses of earnings without external pressure. In the absence of other objectives, we are left with the questionable hypothesis that the interests of policyholders would be better served by adjusted earnings.

While there are some superficial ownership aspects for policyholders of mutual companies, their basic interest is

(Continued on page 6)

Adjusted Earnings

A SAMPLE CALCULATION

by Richard A. Swift

It appears that the Audit Guide will specify that the natural reserves are to be calculated using interest, mortality, expense and lapse assumptions used in the development and testing of premium rates. One definition of a natural reserve is:

"A natural reserve is that amount which will be exactly sufficient to pay all death claims, all cash values and all expenses as they arise in the future, if premiums are paid, deaths occur, lapses occur, expenses arise and interest is earned, exactly as assumed in computing these premiums."

Through the use of model office techniques, we have applied our interpretation of the natural reserve method to the Stock Department of our Company: this should show the effect which adjusting earnings using natural reserves would have on a seasoned stock company. Comments and calculations are intended for information only and do not represent final results to be developed by the AICPA either in the Audit Guide or in its application to the industry.

For our Company, the applicable insurance law requires that the payment of dividends to shareholders may be made only from Stock Department earnings and surplus. Thus earnings from the two departments must be reported separately. The Stock Department had approximately $1.5 billion of life insurance in force, $200 million of assets and a strong surplus position at the end of 1969. Calculations were made for the purpose of determining earnings per share for 1969 as they would have emerged under the natural reserve approach.

Assumptions and Methods

The first step required to adjust earnings using the natural reserve method is to calculate the natural reserves per $M. We have used premium rate assumptions to calculate the natural reserve factors for all business since 1948. For policies issued before 1948 we have used the 1948 gross premium assumptions, because it is very difficult to determine the original assumptions on this older segment of the business. (This pre-1948 segment of the business accounts for less than 15% of the total reserves.) It appears that the guide will allow approximations for original premium assumptions on business issued many years ago.

Natural reserves per $M. were calculated for various key plans and issue ages. Approximately 100 sets were run on the computer using an existing asset share program with only minor modifications. Natural reserves per $M for other plans and issue ages were then approximated based on the natural reserves calculated on the key plans and issue ages.

The Model Office

The AICPA recognizes that it will be impractical for most companies to calculate a complete set of natural reserve factors. Therefore, methods using representative models will be acceptable. Our stock Department has about 400 "kinds" of insurance where kind is a function of reserve table and type of policy. Whole Life (1941 CSO 2½%), 20 Pay Life (1958 CSO 3%), and Term to 65 (1958 CSO 3%) are three examples of different kinds of insurance. These 400 kinds were condensed into about 175 kinds in the model office.

The amount of insurance in each of these 175 kinds was then broken down by year of issue and also into eleven issue age groups. An existing computer model used for forecasting and planning functions was used for this purpose. Natural reserves per $M were introduced into the computer program by issue age groups and by duration. Natural reserves were then calculated by multiplying the amount of insurance in each kind, issue age and year of issue group times the applicable natural reserve per $M.

Results

In the calculation of adjusted earnings, the increase in reserve is based on the increase in natural reserve rather than the increase in statutory reserve. The following table shows the adjusted earnings using the natural reserve method and compares the results with two methods of adjusting earnings commonly used.

Method	*Adjustment*	*Adjusted Earnings/ Share*
Natural Reserve	$ .78	$3.52
Financial Analysis	.94	3.68
Increase in In-Force	1.06	3.80

Statutory earnings were $2.74 throughout. The Financial Analysts' method is used by Best's and is explained in *Best's Review*, May 1969. The Increase In In-Force method, used by a number of stockbrokers, is $20 per $M for Whole Life and Endowment and $7.50 per $M for Term.

As can be seen from the above table, our Stock Department adjusted earnings for 1969 using the natural reserve method were slightly lower than the results obtained using some of the current methods of adjusting earnings. Using the natural reserve technique also produced a significant increase in surplus for the Stock Department. The surplus almost doubled when the reserves were adjusted to a natural reserve basis.

Administrative Cost

The cost of computing a company's exact natural reserve liability could be excessive. Thus most companies will probably run model office projections based upon principal blocks of insurance in force, similar to what we did for our Stock Department. Since we already have the necessary computer programs available, we will be able to keep to a minimum the cost of adjusting earnings using natural reserves. For companies that have to develop new computer programs to compute the natural reserve liability, the cost will be considerably higher. □

Editor's Note: The Joint Actuarial Committee on Financial Reporting has been named.

William Harold Bittel
Thomas P. Bowles, Jr.
N. Douglas Campbell
Gary E. Corbett (Vice Chairman)
H. Edward Harland
Richard G. Horn
W. James D. Lewis
Robert L. Lindsay (Secretary)
Ralph H. Niles
Robert H. Taylor
Frederick S. Townsend
Robert C. Winters (Chairman)

This is a committee of the Academy, the Conference, the Canadian Institute and the Society.

Mutual Companies

(*Continued from page 4*)

that of a purchaser of insurance. The interest of present and future policyholders is in the financial statement for the *insuring* public not the *investing* public. The statement form devised by regulatory authorities also serves to inform the insuring public, including policyholders of both mutual and stock companies—whether their policies be participating or non-participating.

Perhaps at this point an actuary might wish to consider two major statutory requirements that have been questioned as not in accordance with generally accepted accounting principles: statutory reserves are too conservative, and acquisition costs should not be charged against income when incurred.

Reserve Questions

Are the reserves in a mutual company too conservative? In answering this question, an actuary would only consider the interests of the insuring public, since there is no investing public for mutual companies. Clearly the supervisory authorities should not consider the "legal reserve" to be too conservative for the insuring public if they feel that the reserve system has resulted in the industry being relatively free of insolvencies. It seems that the interest of the policyholder is the same as that of the supervisory authorities, and that is the ability of the company to carry out its lifetime guarantees.

Another question which might be raised is whether or not it is too conservative to hold reserves at least as large as surrender values plus settlement expenses. Even if the answer is yes for stock companies in reports for the *investing* public, an actuary would want to consider whether or not it would be proper to show in a report to policyholders a liability to policyholders that did not cover their own surrender values.

Acquisition Cost Questions

Clearly, the value of a life company share might well depend on the amortization of acquisition costs and the probability of receiving future premiums payable by policyholders. On the other hand, the interest of policyholders is in *distributable* earnings, which have nothing to do with future premiums. While the amortization of acquisition costs has a material bearing on the financial position of a stock company for an investor, it might well confuse the financial position for a policyholder. The policyholder is looking for assurances that the company can carry out its policy obligations. A surplus that is increased by unamortized acquisition costs could be misleading to the insuring public.

Possible Conclusions

It would seem that the main interests of the insuring public—the ability of a company to carry out its guarantees, and the pricing of the insurance product—are also the main interests of the supervisory authorities, who have prescribed the form of the statutory statement.

An actuary might then conclude that the form of statement that best suits the supervisory authorities would best suit the insuring public. Indeed, some representatives of mutual companies have expressed the opinion that the end result should be the acceptance of the statutory statement by the accountants as being in accordance with generally accepted accounting principles for mutual companies. There are accountants, however, who feel that this is unacceptable, because there is no provision for matching of expenditures with revenue.

If the statutory statement is to be adjusted for mutual companies and for the participating business of stock companies, it would logically result in regarding most, perhaps all, of the surplus of such business as funds which should be recognized under generally accepted accounting principles as additional liabilities held for the benefit of policyholders and beneficiaries, over the above funds held as statutory reserves. □

Wisconsin Code

(*Continued from page 1*)

one chapter at a time. These drafts have been released to insurance companies, trade associations, and other interested persons and organizations for review and comment, and hearings were held by the Committee before the drafts were submitted to the Legislature as bills for introduction. Six chapters covering areas of relatively minor importance to life insurance have already been enacted by the Legislature, one in 1967 and five in 1969.

Drafts of chapters now being released contain provisions of substantially more importance to life insurance. Particularly important is Chapter 623, entitled *Accounting, Valuations and Reserves,* a first draft of which was released in July.

The covering memorandum released with Chapter 623 states that, for this chapter and for the chapters on Investments and Insurance Contracts, the various sections of the statutes have been written in general terms with authority delegated to the Commissioner to prescribe detailed provisions by means of rules and regulations. This practice will probably provoke different reactions from different persons, actuaries included. Lawyers, for example, may raise questions as to constitutionality. The ultimate regulatory effect of the practice would obviously depend to a significant degree on the details of the regulations promulgated by the Commissioner. In some areas, particularly those affecting valuation and nonforfeiture requirements, the proposed practice differs sharply from the pattern recommended by the National Association of Insurance Commissioners and now in effect in Wisconsin and in nearly all other states.

In addition to the general covering memorandum on Chapter 623, the release includes comments on the different sections of the chapter, and in an appendix are suggested rules recommended to the Commissioner for promulgation to implement the statutory provisions. There are also comments on the rules and suggestions as to how they might be modified at a later date to achieve the improvements the drafters believe to be desirable. One reason advanced for the desirability of the flexible approach of general statutory provisions with details to be prescribed by regulations, is that it is better adapted to the development of new ideas and new products such as variable life insurance.

The provisions of the more important sections of the draft of Chapter 623 relating to life insurance will now be briefly described. The chapter covers all lines of insurance, but some sections state specific requirements for life insurance.

Standards for Accounting Rules. In prescribing accounting rules the Commissioner is directed to "consider recommendations made by the National Association of Insurance Commissioners, customary accounting practices, both in the insurance industry and outside it,

(*Continued on page 7*)

Wisconsin Code

(Continued from page 6)

the requirements of the law and the needs of regulation, and the information needs of the insurers, investors and the public." Although no rule is suggested to implement this section and the NAIC annual statement blanks are not mentioned in the comments, it seems reasonable to assume that the promulgation of the NAIC blanks as the forms in which annual statements are to be filed is intended. Expressing accounting and annual statement requirements in general terms is the pattern followed by nearly all present state laws, although many refer to the NAIC annual statement blanks.

Valuation of Assets. The proposed statutory provision for valuation of assets completely delegates authority to the Commissioner with no guidelines specified. Here there is a suggested rule prescribing amortized values for all evidences of debt having a fixed term, interest rate, and face value, if amply secured and not in default. NAIC values are prescribed for other assets with the exception of nonadmitted assets and insurance subsidiaries. The suggested rule ends with a requirement that companies maintain records that will enable them, on request of the Commissioner, to furnish current market values of all assets. This would include hypothetical market values of private placement securities and would be distinctly a new departure in insurance regulation.

Valuation of Liabilities. The basic provision on valuation of liabilities also delegates complete authority to the Commissioner without guidelines. The section also permits the Commissioner to prescribe optional methods of valuing and reporting reserves, two specific optional methods being stated. These involve separation of reserves into minimum legal reserves and the difference between actual and minimum reserves and the separation of reserves into insurance and investment elements. It is suggested that the last mentioned method might serve as an alternative to the development of separate accounts. The comments indicate that the drafters regard these optional methods as desirable innovations.

The suggested rule on valuation of liabilities is the NAIC standard valuation law. The wording of the standard law is somewhat modified, the comment on this being that minor improvements have been made in the wording without changing the substance. The precise wording of the standard law has always been regarded as important, and it is possible that questions may arise as to whether the substance has actually been exactly retained. A much more serious question is raised, however, by a new provision contained in the rule which would require a company to keep records to enable it to furnish, on request of the Commissioner, the reserves calculated on a gross premium valuation basis. The comments suggest that use of gross premium reserves may become desirable in the future if the need is recognized in the states generally.

Amount of Compulsory Surplus and Amount of Security Surplus. These are two related sections which state that the Commissioner shall determine the amount of compulsory surplus and shall set the amount of security surplus at 110% to 140% of the amount of compulsory surplus. The compulsory surplus section is long and lists the factors and considerations to be taken into account in the determination of the amount. The comments on these sections are also extensive since they involve provisions which are largely innovations.

The term "compulsory surplus" is to be defined in another chapter the draft of which has not yet been released. However, the comments indicate that it is supposed to be the minimum amount of surplus required for operation of a company taking into account the volume and nature of its particular lines of business. No rules are suggested for the compulsory surplus or security surplus sections, but it appears that when the amount of a company's surplus is less than the prescribed amount of compulsory surplus, the company would be required to either reduce the volume of its business or take steps to acquire additional capital or surplus. The amount of security surplus is apparently intended to be the amount of surplus which a company ought to have to operate its particular volume and kinds of business with reasonable safety margins.

The provisions of the compulsory surplus section and the comments on it are mainly in property and liability insurance terms, and little real light is thrown on how the amount of compulsory surplus would be determined for a life insurance company. The concept of minimum surplus and its relation to the volume and kinds of business of an insurance company is one which has been debated for a long time in the field of regulation of property and liability insurance, although the debate seems to have produced little agreement as to what proper standards should be. This "surplus" concept has received relatively little discussion as to its application to life insurance.

Two other surplus standards are mentioned in the comments. One is "proper surplus," which is the amount of surplus decided upon as reasonable by management. The other is "maximum surplus," a statutory or regulatory maximum limit on the amount of surplus. No maximum surplus limit is proposed, but it is suggested that the desirability of one may deserve consideration in the future.

Cash surrender and nonforfeiture values. The provision on cash surrender and nonforfeiture values says simply that those shall be on bases approved by the Commissioner who is also permitted to prescribe methods of determining values. No rule to be promulgated is proposed, but the comments say that the commissioner may decide to continue the present statutory method and adopt the substance of the standard nonforfeiture law. He may, if he so wishes, specify the standard law as one alternative method of operation, allowing other options as well. It appears that accommodation to variable life insurance may be one of the intended purposes of the other options.

The comments on both the reserve and nonforfeiture provisions seem to indicate rather clearly that continuation of the present approach of prescribing minimum standards is intended. However, the possibility of rules which would prescribe the actual bases to be used rather than minimum standards does not seem to be definitely ruled out.

The requirement that a life insurance policy must contain nonforfeiture provisions is not part of Chapter 623, but is contained in the chapter on Insurance Contracts. The wording of the basic requirement here is interesting since it does not require that the policy provision state nonforfeiture benefits, but that it state "the conditions under which and the alternative ways in which the policy-

(Continued on page 8)

State of the Society

(*Continued from page* 1)

And always presenting available facts
Instead of impressions and debatable acts.

* * * *

The State of the Society? Now? Today?
The President asks and what do you say?
You answer him with many thanks
For all of his merry, happy pranks.

* * * *

The progress made throughout the year!
Jack's faithful guidance always near.
Now he passes on the gavel—
And lets our future plans unravel.

And wishes luck to Ed Lancaster.
He will not lead us to disaster.
He'll handle well the future fires,
Supported by our Robert Myers.

Our final thanks unto the staff.
Without them we can't take this gaff.
But with them all, including Barry,
Future burdens we can carry,
And come again with greetings sweet,
The very next time that we meet! □

Wisconsin Code

(*Continued from page* 7)

holder is entitled to share in the assets attributable to the class of policies to which his policy belongs." This is certainly a novel approach, although there seems no reason to suppose that it is intended to change radically the regulation of nonforfeiture benefits. The section contains certain other provisions corresponding to parts of the standard nonforfeiture law, such as the requirement for an explanation of the basis of calculation of benefits and a provision specifying which benefit is automatic.

The Insurance Laws Revision Committee is far behind in the schedule laid out by its staff when it started its work. In addition to Chapter 623, several more chapters have been released as drafts and are currently being reviewed and commented upon. Some of these are closer to the final draft for introduction in the Legislature than is Chapter 623, which is only in the first draft stage. Although the draft is worded so as to contemplate its becoming effective at the beginning of 1972, it appears that there is substantial doubt that effort will be made to put it into final draft form for introduction and enactment in 1971. □

1971 EXAMINATION CHANGES

The 1971 examinations edition of the *Requirements for Admission* booklet incorporated a number of changes of interest to actuarial students.

To ease the problem of obtaining suitable examination accommodations on college campuses, the Parts 1 and 2 examinations have been switched from Wednesday to Thursday and will be given on May 13 and Nov. 4. This change, plus the fact that Election Day in the U. S. falls in examination week, has resulted in day changes for the other examinations as well. For example, Part 3 will be given on Tuesday, May 11 and Wednesday, Nov. 3. A complete schedule appears in the *Requirements for Admission* booklet. Except for Part 2, which begins at 1:30 P.M. local time, all examinations begin at 9:00 A.M. local time.

The subject of Risk Theory has been transferred from Part 10I to Part 5, effective with the 1971 examinations. This transfer will not involve any part credit arrangements. A notice as to the Part 3 change from Finite Differences to Numerical Analysis appeared in the October issue of *The Actuary*. Part 5 students will be happy to know that the material on Sources and Characteristics will in 1971 be considerably reduced.

Students are advised to read the pertinent sections of the new *Requirements for Admission* booklet.

A new expanded edition of the booklet, *Preliminary Actuarial Examinations*, is now available. Reprinted in the booklet are complete, unexpurgated, recently given examinations for Parts 1 and 2.

Examination fees and study note charges have been increased for 1971 to help defray increased costs. Remittances must be in U. S. dollars or an equivalent amount in Canadian dollars. The new fee schedule is as follows:

		Study Note Service Charges	
Examination Part	Examination Fees	Complete Sets	Revisions Only
1, 2	$ 9.00	Not applicable	
3	12.50	$2.50	No charge
4	25.00	2.50	$1.25
5-8	25.00	7.50	2.50
9, 10	30.00	10.00	3.50

Late registration for Parts 3-10 will be $25 for each examination.

Canadian Institute

(*Continued from page* 1)

that he must decide to get more and more out of the supporting role of calculating premium rates, that he take the incentive, and move into all fields of management as a leader.

In many cases an actuary feels that because he had achieved recognition as an actuary and was able to tack F.S.A. to the back of his name, he can sit back, play his divine role, and ignore all progress around him. Such an actuary has to open his eyes and accept the fact that his F.S.A. is not going to guarantee him a continuing position in high level management. He must recognize that there is high quality talent in various fields and from various educational backgrounds.

It is time to start Part XI of the actuarial training program. That is, it is time to achieve further technical education and training in many areas. This is where a company training program should enter the picture. This is where actuarial meetings should be of greater benefit. Perhaps the C.I.A. can improve the educational usefulness of its meetings by preparing various reports, instead of just outlines, on the subjects to be covered. This would give attending members an opportunity to develop ideas and criticisms before the meeting and enable the discussion to develop faster and to cover the subject more completely.

There was agreement that the present actuarial exam requirements should only guarantee a junior executive level, and that it is a "must" that the C.I.A. attempt to contribute in as many ways as possible to the continuing education of the actuary. □