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BOOK REVIEWS AND NOTICES

Dan M. McGill, *Fundamentals of Private Pensions* (fifth edition), pp. 754, published for the Pension Research Council by Richard D. Irwin, Inc., Homewood, IL, 1984, $26.50.

McGill's *Fundamentals of Private Pensions* is well-known to many actuaries. For almost twenty years, actuarial students have been developing their initial understanding of private pension plans from the various editions of this text. The title page of the fifth edition lists Donald S. Grubbs, Jr. as collaborator. Dr. McGill's preface explains Donald Grubbs' part in the revision and states, "It is my hope and expectation that he will assume primary responsibility for future editions of the book."

The fifth edition contains about one hundred pages more than the fourth. The new material consists mainly of one chapter on accounting for pension cost, three chapters on the management of pension plan assets and a chapter on individual retirement plans and voluntary employee contributions. Also, the chapter on pension plan benefits insurance has been expanded through the addition of material on the liabilities of a multiemployer plan sponsor. Other changes comprise an updating of rules through TEFRA, the addition of two examples illustrating the integration of pension plans with Social Security, and a description of a stochastic (or monte carlo) approach to forecasting pension costs.

The most significant change is the introduction of material on plan assets. The first of the three chapters reviews the regulations applicable to pension investments, the investment characteristics of pension plans, and the elements of investment policy. The next two chapters describe the management of pension plan assets including an outline of the various forms of investment: common stock, debt instruments, etc. A concise discussion of asset valuation problems and accountability for pension results is presented next.

The chapter on accounting for pension costs introduces the reader to another significant current issue. The discussion takes the reader through Opinion No. 8 and the development of FASB Statement numbers 35 and 36. The underlying propositions and the conclusions of the FASB relating to the financial reporting for pension costs for single employer defined benefit plans are explored.

The section on actuarial cost methods is virtually unchanged from the previous edition. A useful addition is a table showing the terminology of the text compared to that of ERISA and that given in the 1981 report of the Joint Committee on Pension Terminology adopted by the American Academy of Actuaries, the American Society of Pension Actuaries, the Conference of Actuaries in Public Practice, and the Society of Actuaries. The previous editions gave no indication which cost methods were allowed under ERISA. Now the terminology table indicates that one of the methods developed in the text is not so allowed. Ideally, the actuarial cost methods section should be of particular interest to actuarial students. However, students find the treatment clumsy, preferring a more concise and complete description in terms of formulas or symbols.

There are a few errors, which is not surprising considering the scope of the text. However, the fifth edition contains extensive citations to statutes, regulations, rulings and judicial decisions making it easier to examine such rules carefully.

The value of the illustrations on integration, which have been added to this edition, suggests that this valuable work could become more useful if many more illustrations were introduced. This could, of course, greatly increase the size of the text, which is still growing through the introduction of new developments. Thus it is possible McGill's *Fundamentals of Private Pensions* will develop into a multivolume work.

The new material is organized and presented in the same manner as the original material. It is clearly written with well-developed reasoning. It is more than ever a necessary text for a serious student of private pensions in the United States.

GEOFFREY CROFTS

SELECT CURRENT BIBLIOGRAPHY

In compiling this list, the Committee for Review of Literature has digested only those items that appear to be of direct interest to members of the Society of Actuaries. In doing so, the Committee offers no opinion on the views that the various authors express.

SOCIAL SECURITY NOTES

Bruce D. Schobel, *Administrative Expenses Under OASDI*, pp. 20, Actuarial Note No. 101, Social Security Administration, Baltimore, MD, November, 1980.

Presents a summary of OASDI administrative expenses, 1940–79. Expenses are measured by several denominators: contribution income, benefit payments, taxable payroll. An administrative expense index is developed and used to analyze the changes in expense levels 1960–79.

Bruce D. Schobel, *A Comparison of Social Security Taxes and Federal Income Taxes*, pp. 8, Actuarial Note No. 102, Social Security Administration, Baltimore, MD, April, 1981.

Compares Social Security taxes against Federal income taxes for single and married workers (without additional dependents) at three different wage levels for selected years 1937–80. Both kinds of taxes have gone up substantially, with income taxes going up more rapidly. Before 1950 Social Security taxes exceeded income taxes for most of the cases analyzed, but from 1950 on the reverse has been true.

Eli N. Donkar, *Average Wages for Indexing Under the Social Security Act and the Automatic Determinations for 1979–81*, pp. 26, Actuarial Note No. 103, Social Security Administration, Baltimore, MD, May, 1981.

Describes the Social Security wage-indexing series and the automatic determinations under the Social Security Act which depend on average wages. An analysis of the construction of the 1951–79 average wage series is presented, along with a summary of the corresponding automatic determinations of program amounts for 1979–81. These amounts include such widely used figures as (1)

the contribution and benefit base, (2) the retirement test exempt amounts, and (3) the bend points in the formulas for computing primary insurance amounts and maximum family benefits.

Bruce D. Schobel, *A Comparison of Retirement Benefits Under the U.S. and Canadian Social Insurance Systems*, pp. 5, Actuarial Note No. 104, Social Security Administration, Baltimore, MD, June, 1981.

Compares retirement benefits at age 65 under the U.S. and Canadian social insurance systems for hypothetical workers at several earnings levels. Although different values of the dollar limit strict comparability, this comparison indicates relative levels of earnings replacement under two fairly similar programs. At average earnings levels the two systems provide very similar levels of benefits. At low earnings levels the benefits under the Canadian system are more generous, while for workers with high earnings the reverse is true because of the much higher creditable earnings base in the United States.

Francisco R. Bayo and Joseph F. Faber, *Equivalent Retirement Ages: 1940–2050*, pp. 11, Actuarial Note No. 105, Social Security Administration, Baltimore, MD, June, 1981.

Analyzes how much the normal retirement age for Social Security (which has been 65 since monthly benefits were first paid in 1940) should be increased to keep pace with mortality improvements which have occurred since 1940 and which are projected to occur in the future. Four different ways of measuring the appropriate increase are presented, all based on life table functions. For example, assuming that age 65 was appropriate in 1940, the equivalent retirement age according to these four standards is 69 or higher in 1980, and 71 or higher in 2000.

Joseph A. Applebaum, *Comparison of Actual Economic Experience and Assumptions in Trustees Reports, 1971–80*, pp. 3, Actuarial Note No. 106, Social Security Administration, Baltimore, MD, August, 1981.

Analyzes deviations of actual experience from what had been projected in the 1971 through 1980 Trustees Reports, with respect to unemployment rate, CPI increase, and average wage increase including both nominal and real wages. During this period the short-range projections of such variables turned out to be rather consistently optimistic in comparison to what actually occurred, especially regarding prices and wages.

Robert J. Myers, *Were Benefits Under the Original Social Security Program On An Individual-Equity Basis?*, pp. 4, Actuarial Note No. 107, Social Security Administration, Baltimore, MD, August, 1981.

Analyzes Social Security benefits under the original law, using calculations first published in 1938. It disproves the notion that each worker was to be entitled to retirement benefits based on strict individual equity. Rather, the 1935 law (which was changed in 1939, before monthly benefit payments began) gave benefits which contained a substantial element of social adequacy, especially for older workers and low earners. The analysis bears a surprising resemblance to modern computerized studies of the "money's-worth" topic that use benefit/tax ratios based on actuarial present values.

Steven F. McKay, *Long-Range Projection of Average Benefits Under OASDI*, pp. 13, Actuarial Note No. 108, Social Security Administration, Baltimore, MD, September, 1981.

Describes many of the modeling methods used to evaluate the long-range OASDI financial status. These methods use large sample populations of workers and beneficiaries which must later be appropriately weighted to produce cost estimates.

Dwight K. Bartlett, III and Joseph A. Applebaum, *Economic Forecasting: Effects of Errors on OASDI Fund Ratios*, pp. 14, Actuarial Note No. 109, Social Security Administration, Baltimore, MD, September, 1981.

Expands upon the analysis in Note No. 106 to analyze the pattern of deviations between actual and expected short-range economic factors, and the effect of such deviations on the ratio of OASDI funds to annual outgo. The authors also develop a formula for estimating roughly the sensitivity of this fund ratio to such deviations in future years.

Robert J. Myers, *Actual Costs of the Social Security System Over the Years As Compared With Those Estimated in 1935*, pp. 6, Actuarial Note No. 110, Social Security Administration, Baltimore, MD, November, 1981.

Compares the actual cost of the OASI program during 1940–80 against estimated costs developed in 1935. The cost in dollars was much higher than anticipated, because of inflation and expansions of coverage. As a percentage of covered payroll, however, the actual 9.4 percent cost for 1980 comes amazingly close to the 9.3 percent originally estimated, with many elements of experience counterbalancing one another. The author concludes, first, that the program exclusive of Disability Insurance and Medicare does not now require tax rates far higher than originally anticipated, and second, that the percentage-of-payroll estimates can absorb very substantial shifts in program experience over the long run.

Steven F. McKay, *Computing a Social Security Benefit After the 1980 and 1981 Amendments*, pp. 23, Actuarial Note No. 111, Social Security Administration, Baltimore, MD, February, 1982.

Gives details of the various possible ways of computing a primary insurance amount, superseding Note No. 100.

Eli N. Donkar, *Average Wages for 1980 for Indexing Under the Social Security Act and the Automatic Determinations for 1982*, pp. 10, Actuarial Note No. 112, Social Security Administration, Baltimore, MD, April, 1982.

Gives the annual update of the wage index, superseding Note No. 103.

John C. Wilkin, Ronald V. Gresch, and Milton P. Glanz, *Growth in Fringe Benefits*, pp. 7, Actuarial Note No. 113, Social Security Administration, Baltimore, MD, June, 1982.

Discusses the assumption, implicit in long-range Social Security cost estimates, of the fringe benefit portion of employee compensation. As employees receive more of their pay in the form of nontaxable fringe benefits, mainly noncash items such as group insurance and pension plan contri-

butions, the payroll tax rates applying to the taxable part of compensation must be set correspondingly higher. The authors review trends in the past growth of such fringe benefits and analyze the future growth implied in current projections, including reasons for expecting continued growth of the fringe benefit component of pay.

Wilfredo Cruz, *Social Security Coverage in 1972 by Marital Status, and Reasons for Non-Coverage*, pp. 11, Actuarial Note No. 114, Social Security Administration, Baltimore, MD, September, 1982.

Uses detailed samples of wage data to analyze percentages of the population aged 16 and over who worked in covered employment during 1972. The percentage thus covered was much higher among men than women, 76 percent vs. 44 percent, with the highest percentages occurring among men in their early 30's (90 percent) and women in their early 20's (67 percent). Reasons for non-coverage were analyzed separately for people with earnings in non-covered employment and those without any earnings.

Eli N. Donkar and James P. Buchman, *Average Wages for 1981 for Indexing Under the Social Security Act and the Automatic Determinations for 1983*, pp. 11, Actuarial Note No. 115, Social Security Administration, Baltimore, MD, December, 1982.

Gives the annual update of the wage index, superseding Note No. 112.

Steven F. McKay, *A FORTRAN Program for Computing Primary Insurance Amounts*, pp. 33, Actuarial Note No. 116, Social Security Administration, Baltimore, MD, December, 1982.

Contains a FORTRAN program for computing primary insurance amounts precisely based on the law in effect as of December 1982. The 1614-line program uses the calculation procedures described in Actuarial Note No. 111.

Harry C. Ballantyne, *Long-Range Projections of Social Security Trust Fund Operations in Dollars*, pp. 4, Actuarial Note No. 117, Social Security Administration, Baltimore, MD, October, 1983.

Gives dollar figures that underlie the long-range cost estimates in the 1983 Trustees Reports for OASDI and HI. These dollar figures are of limited use because of inflation, although the Note gives several indices which might be used to adjust for inflation. Social Security policy makers generally rely instead on the long-range percentages given in the trustees report.

Steven F. McKay and Clare M. Albrecht, *Maximum Primary Insurance Amounts in 1983*, pp. 3, Actuarial Note No. 118, Social Security Administration, Baltimore, MD, October, 1983.

Gives data on initial primary insurance amounts payable in certain unusual cases that exceed the $709.50 usually cited as the maximum (for age 65 retirement in 1983). These cases involve either retirement above age 65, especially for workers with recent earnings, or disability and survivor cases, which can use a shorter wage-averaging period.

Eli N. Donkar and Clare M. Albrecht, *Average Wages for 1982 for Indexing Under the Social Security Act and the Automatic Determinations for 1984*, pp. 5, Actuarial Note No. 119, Social

Security Administration, Baltimore, MD, January, 1984.

Gives the annual update of the wage index as announced in November 1983, superseding Note No. 115.

Harry C. Ballantyne, *Long-Range Projections of Social Security Trust Fund Operations in Dollars*, pp. 4, Actuarial Note No. 120, Social Security Administration, Baltimore, MD, May, 1984.

Updates by one year the dollar figures presented in Note No. 117.

SOCIAL SECURITY STUDIES

Francisco R. Bayo and Joseph F. Faber, *United States Population Projections for OASDI Cost Estimates, 1980*, pp. 54, Actuarial Study No. 82, Social Security Administration, Baltimore, MD, June, 1980.

Presents the population projections used for the 1980 OASDI Trustees Report projections under the three alternative sets of assumptions. Also gives the underlying birth and fertility rates, mortality rates, life expectancies, etc.

Steven F. McKay, *Long-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance System, 1980*, pp. 82, Actuarial Study No. 83, Social Security Administration, Baltimore, MD, September, 1980.

Describes the latest long-range cost estimates prepared by the Office of the Actuary, which were included in the 1980 Trustees Report. Assumptions, methods, and results of the cost estimates are discussed. Also shown are results of sensitivity tests for selected assumptions, and cost estimates under alternative assumptions.

John C. Wilkin, *United States Population Projections by Marital Status for OASDI Cost Estimates, 1980*, pp. 40, Actuarial Study No. 84, Social Security Administration, Baltimore, MD, October, 1980.

Presents the 75-year population projections by marital status used to analyze potential financial commitments of the OASDI Trust Funds appearing in the 1980 Trustees Report based on the Alternative II projection. Tables give estimated future marriages, divorces, and new widowhoods by year.

Joseph F. Faber and John C. Wilkin, *Social Security Area Population Projections, 1981*, pp. 79, Actuarial Study No. 85, Social Security Administration, Baltimore, MD, July, 1981.

Presents population projections used in the 1981 OASDI Trustees Report, based on three sets of mortality assumptions, superseding Study No. 82. These sets incorporate average annual improvements in the age-adjusted death rate during 1978–2055 of 0.32 percent, 0.59 percent, and 1.12 percent, respectively. The observed rate of improvement during 1900–78 averaged 1.20 percent.

Stephen F. McKay and Bruce D. Schobel, *Effects of the Various Social Security Benefit Computation Procedures*, pp. 20, Actuarial Study No. 86, Social Security Administratio, Baltimore, MD, July, 1981.

Explains the various alternative formulas that apply to different groups, largely for historical reasons, and shows how benefits will be generated under each formula. The emphasis is on principles and exceptions to them, rather than on the technical details needed to compute a benefit exactly as given in Note No. 111.

Joseph F. Faber, *Life Tables for the United States: 1900–2050*, pp. 86, Actuarial Study No. 87, Social Security Administration, Baltimore, MD, September, 1982.

Gives the historical and projected mortality tables derived from census statistics used in long-range OASDI 1982 cost estimates, including the rates of mortality improvement assumed.

John C. Wilkin, *Social Security Area Population Projections, 1983*, pp. 74, Actuarial Study No. 88, Social Security Administration, Baltimore, MD, August, 1983.

Gives the population projections used in the long-range Social Security 1983 cost estimates, superseding Study No. 85 from 1981 and 1982.

Joseph F. Faber and Alice H. Wade, *Life Tables for the United States: 1900–2050*, pp. 86, Actuarial Study No. 89, Social Security Administration, Baltimore, MD, December, 1983.

Gives the historical and projected mortality tables used in long-range Social Security 1984 cost estimates, differing only slightly from the ones for 1983 given in Study No. 87.

John C. Wilkin, Milton P. Glanz, Ronald V. Gresch and Seung H. An, *Economic Projections for OASDI Cost Estimates, 1983*, pp. 105, Actuarial Study No. 90, Social Security Administration, Baltimore, MD, February, 1984.

Presents for the first time the methods and analyses underlying the long-range economic projections. Pension actuaries may find these especially instructive, and may wish to respond to the authors' request for comments and suggestions.

Stephen C. Goss, *Long-Range Estimates of the Financial Status of the Old-Age, Survivors, and Disability Insurance Program, 1983*, pp. 97, Actuarial Study No. 91, Social Security Administration, Baltimore, MD, April, 1984.

Updates the 1980 analysis given in Study No. 83, including several completely new projection methods and procedures. These changes include projections of the fully insured population, the covered population, the initial primary insurance amount, the impact of changes in the normal retirement age, and the income to the program from taxation of benefits.

Alice H. Wade, *Social Security Area Population Projections, 1984*, pp. 80, Actuarial Study No. 92, Social Security Administration, Baltimore, MD, May, 1984.

Gives details of the basic data, assumptions, methods and results for the population projections used in the 1984 Trustees Report, superseding the 1983 projections given in Study No. 88.